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AUGSTĀKĀ IZGLĪTĪBA
Higher Education

INFORMATIZATION OF THE MODERN EDUCATIONAL SPACE OF HIGHER EDUCATION FROM THE POSITION OF THE CONSCIOUS APPROACH

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Abstract. *The accumulated human knowledge becomes available in electronic format. Universal access to the global network is changing modern methods of teaching, education, and management. Learners are ready to use network technologies quite consciously and intuitively. The aim of the study is to identify and design the links between the development of modern society and the higher education system via information and communication technologies. The novelty of the study lies in the identification of an informative-conscious approach in the higher education system as an independent one. The study was conducted on the basis of the application of theoretical research methods. The methodological basis of the study was conceptual approach and an appeal to the origins of modern education informatization. In the field of the conducted research, aimed at the social-philosophical analysis of pedagogical activities and education, the close causality of the development of education from the development of the modern society informatization was educed. In the higher education system was individualized informative-conscious approach, that is based on the field of information and communication technologies and has the basis of an informative identity.*

Keywords: *higher education, information space, information and communication technologies, content of education, informatization of modern educational space, informative-conscious approach.*

Introduction

The huge amount of knowledge accumulated by mankind forces us to look for other approaches to organize the learning process. The use of modern technologies in the field of higher education creates favorable conditions for the formation of the students' personality and meets the needs of modern society. The teacher of today does not simply apply new technical means in the old education system, but operates in a new educational environment, ensures the successful functioning of education in the modern world.

In the course of the study, a number of hypotheses were put forward:

- Nowadays we have a global rethinking of the role of information processes in the development of nature and society.
- The globalization of educational processes is depending on informatization.
- Conditions that satisfy the needs of any person in obtaining the necessary information have to be created.
- Modern information technologies make it possible to build an effective educational environment management system, they are relevant today for solving the problems of socio-economic development.
- The use of information technologies ensures a further increase in the volume of information processes and changes in the content of education.

The purpose of the study, aimed at a socio-philosophical analysis of the foundations of pedagogical activity and education, can be considered the allocation of an informative-conscious approach in the higher education system as an independent one. The object of research is explaining the reason for the existence of informative-conscious approach as a new direction in the higher education system.

The information revolution that began in the 70s of the XXth century gave an impetus to human civilization for the transition from an industrial to an information society, the society in which the most workers are engaged in the production, storage, processing and implementation of all forms of the information, especially its highest form, which is called knowledge. The author focuses on the fact that our society is no longer just informational, but information-conscious. 50 years after the beginning of the information revolution a new society has grown and the sphere of information interests for this society is simple and commonplace.

The development of modern info-communication technologies opens up new horizons and opportunities in the field of higher education. The transition to an informative-conscious level can provide a real breakthrough in the personification of the educational process, contribute to students' self-realization and overcome the costs of the mass reproductive training system. This level carries a pedagogically competent and psychologically correct application of info-communication technologies.

Mainly theoretical research methods were used by the preparation of this study, which is due to the formulation of the research problem. Deductive logic made it possible to draw a general conclusion about the informatization of the modern educational space of higher education from the position of a conscious approach.

Literature Review

The educational capabilities of modern information technologies (IT), like any teaching tools, are fully disclosed and implemented if they serve as an organic tool for the development of educational communications in the logic of the practice of university training due to the personal dimension. Information technologies in teaching process are rational means in the development of creative and constructive abilities of students. The inclusion of IT in the educational process affects the nature of the course of the pedagogical process.

In the author's assessment, an appeal to the origins of modern education informatization takes on an important aspect. However, we can't simply embed information technologies into the usual educational process and hope that they will revolutionize education. So, Shreider Yu.A., who was the first to propose the concept of the information environment, emphasizes the fact that the information environment doesn't work only as a conductor of information, but it has an active impacts on its participants (Shrader, 1976).

Modern info-communication technologies are introduced at virtually all levels of education. We can read about many problems of their use in modern didactics in numerous scientific publications on this subject (Babansky, 1989; Latyshev, 1995; Chernov, 2003; Melamud, 2004; Velichko, 2009).

Shutenko E.N., Derevianko Yu.P. (Shutenko & Derevyanko, 2016) bring to our attention that it is necessary to change the concept of the educational process, into which these technologies would organically fit as a new means of teaching. The conditions created with their help should contribute to the formation of holistic thinking and worldview of the students, orient them towards the search for systemic connections and patterns.

Having analyzed above-mentioned, we can state that the huge amount of knowledge accumulated by mankind forces us to look for other approaches to organize the learning process. The use of modern technologies in the educational process creates favorable conditions for the formation of the personality of students and meets the needs of modern society.

Methodology

The methodological basis of the study was a conceptual approach and an appeal to the origins of informatization of modern educational space. In the course of the research, a pedagogical experiment aimed at dialectical analysis of trends and contradictions in the use of info-communication technologies in the educational process was carried out. The effectiveness of the process of informatization of the modern educational space of higher education was proved from the position of a conscious approach.

In the course of the research, selective processing and analysis of empirical material, the method of observation, comparison and continuous sampling of the obtained data were being used. Structural and typological analysis of the found material, statistical methods of processing the obtained results were also reflected in the course of the conducted research.

Research Results

There are four stages of information revolutions in the history of mankind. During these revolutions not only the methods of information processing, but also lifestyle, value systems, methods of production have been changed. Having analyzed this fact the author concludes that at the moment, our society is no longer just informational, but information-conscious. By referring to the sphere of higher education, an informative-conscious approach is being emphasized. To substantiate this conclusion, we have to characterize the main stages in the history of human development (Bell, 1986; Dahrendorf, 1987; Toffler, 2002).

The first stage (4000 -3000 BC) is associated with the invention of writing. Knowledge has become possible to record and transmit from generation to generation through fixation in signs. *The second stage* is associated with the invention and spread of printing in the 15th century. Replication of knowledge has increased access to information for the people at large. *The third stage* (late 19th - early 20th centuries) is associated with the invention of electricity. By appearing the telegraph, telephone, radio and television it became possible to transmit and accumulate information quickly and in any volume.

The fourth stage (70s of the 20th century) is associated with the invention of microprocessor technology and personal computers. This latest revolution gave impetus to human civilization for the transition from an industrial to an information society (Bell, 1986; Dahrendorf, 1994; Toffler, 2002).

In the era of the development of the human civilization and scientific and technological development, modern civilization reached its peak in political systems, in the forms of economic life, in the system of law. The only area where progress continues to take place is science and technology (Fukuyama, 1990). We can't agree with this statement, since the volume of new knowledge in the last century has been growing exponentially. In order not to get lost in the flow of information, quickly find it and use it correctly, there is a whole area of activity - IT technologies. This area includes everything related to information, its search, storage, processing, transmission.

Information technologies are often understood as hardware and software for the implementation of information processes. The author gives the following definition of this concept: *Information technologies* are the processes based on the ability to collect, handle and transfer information in order to obtain a new

information product.

It is necessary to change the concept of the educational process, into which these technologies would organically fit in as a new teaching tool. The conditions created with their help should contribute to the formation of holistic thinking and worldview of the students, orient them towards the search for systemic connections and patterns. They must contribute to the disclosure, preservation and development of individual students' abilities, to the personal growth and to the constant dynamic updating of the content, forms and methods of the learning process.

In the concept of informatization (Concept of informatization of the sphere of education in the Russian Federation, 1998) is noted that the change in the content of education is possible in several directions:

- a) the formation of academic disciplines that provide general education and professional training of students in the field of computer science;
- b) the expansion of the use of informatization means that entail a change in the content of all academic disciplines at all educational levels;
- c) the modeling of qualitatively new learning goals in the direction of training members of the "future information society", for which the ability to human communications, active mastery of the scientific picture of the world, flexible change in their work's functions and creative thinking will become an obvious vital necessity.

The author in this research is speaking about the transition to such a "future information society", using the term informative-conscious in the field of higher education. The study of the information environment took place in various aspects, among which three main ones can be distinguished:

1. Information environment as an activity. In this case a person is a participant in the communication process, the focus is on his ability to present personal knowledge in the form in which it can be transmitted. Having perceived the information the person is ready to turn it again into his personal knowledge.
2. Information environment as a system of historically established forms of communication.
3. Information environment as an information infrastructure created by a society to carry out communication activities on a scale corresponding to the level of the development of this society.

The education system as a whole and in each individual educational institution can be understood and described as an information educational environment or space. One of the main features of educational information environments is their systemic nature. The formation of the educational information environment involves: the teacher, the teaching staff of an educational institution, the state as a public institution. The teacher determines the

content of the course program, the choice of educational literature, teaching methods, communication style. The teaching staff establishes the general requirements for students, the traditions of this educational institution, the form of relations between the teaching staff and students. The state determines the material support of education as a whole, the social order for the formation of a particular system of knowledge and views.

Summarizing all that has been said, let us give an author's definition to the concepts of information educational environment and information space.

Information educational environment is a set of conditions necessary for the development of the information space in which the educational activities of the subject are carried out.

Information space is the reality in which the subject exists and all information phenomena surrounding him.

It cannot be denied that info-communication technologies are undoubtedly the most important factor in the formation of the 21st century society. What just recently seemed like a miracle of technology turns out to be quite a common sphere of consumption. Students are ready to use network technologies quite consciously, on an intuitive level. Software has evolved into an intelligent support environment that guides user actions. It is very important to note that information technologies act precisely in the role of intellectual support, and not as a replacement for human intelligence or its component. The global communication network makes the student and the teacher of the 21st century an informatively conscious owner of information.

In Russia the historical transition was due to the origins and development of higher education; trends in the development of the education system and the formation of an unified educational space; the functioning and development of society; the constitutional right guarantee to get higher education; the transition to a modular structure of professional training in the higher education system; the active development of high-information technologies; the definition of uniform standards for previously various systems.

The implementation of the approach, proposed by the author, is aimed at:

- solving the problems of interaction between the education sector and the IT industry;
- analysis of the formation of new didactic paradigms;
- determining the role of information technologies in the educational process;
- building of a competitive specialists in the higher education system;
- considering the information environment as a component of the educational and pedagogical management system.

Conclusions

Information technologies occupy a unique position in modern society. Unlike other scientific and technological advances, means of computer technology and informatics are used in almost all areas of human intellectual activity, contributing to progress in technology and technics. They are intelligent components of technologies for the design, production and management of complex processes and structures. The global communication network is steadily expanding, it acquires ever-growing importance and new functions. It is increasingly being used not only to search for information and communication, but also to educate, to get information in other areas, marking the beginning of the formation of a global network community.

In the field of research aimed at the socio-philosophical analysis of the foundations of pedagogical activity and education, a close dependence of the development of education on the development of informatization of modern society was revealed and an informative-conscious approach in the system of higher education was showed up. This approach is based on the sphere of informatization and info-communication technologies, and has an informative essence in its foundation.

Detailed conclusions were included in numerous author's publications (Aleksandrova & Aleksandrov, 2013; Aleksandrova, 2015; Aleksandrova & Aleksandrov, 2018; Aleksandrova, 2020) which clearly indicate that the analysis of the relationship between the development of society and the use of modern information and communication technologies in education allows us to highlight the informative-conscious approach as an independent and reasonable one. Therefore, the informative-conscious approach, put forward by the author, leads to a fundamentally new educational environment that can ensure the provision of high-quality educational services based on information and communication educational technologies.

In the studies have been performed statistical calculations confirming the hypotheses that show us the strength of relationships between individual independent and dependent variables. All hypotheses have been accepted as true. All thorough analysis of the topic has been included in the published scientific monography (Aleksandrova, 2016).

Summing up, we conclude, that the higher education is becoming the most important mechanism for the reproduction of science and technology, and ultimately of the entire modern post-industrial civilization. The implementation of the paradigm of classical education – info-communication technologies of education from the standpoint of a conscious approach reveal the essence of the transition to a global information society and

the allocation of an informative-conscious approach in the higher education system as innovative and independent.

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ЗАНЯТИЯ КУРСАНТОВ ВОЕННЫМ ПЯТИБОРЬЕМ

Lessons of Coursants of Military Pentathol

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Abstract. *Military-applied sports are effective means of physical, moral and psychological training of servicemen for combat activities. A single universal program for training cadets by means of military pentathlon is not described in the special literature. The goal is to summarize the experience of building the training process in military all-around in military universities. 40 coaches of national teams in military pentathlon of 7 universities of Ukraine were surveyed. Results. Physical training of cadets by means of military pentathlon contributes to the formation of their professionalism - it improves applied skills, physical and functional readiness for combat operations. Sports result in military pentathlon to the greatest extent depends on the level of development of athletes' aerobic and speed-power endurance, as well as speed-power qualities. Most often, an obstacle course and throwing are combined in one workout. Regardless of the training period, most of the time is devoted to cross training. Conclusions. The opinions of the coaches on the key issues of building the training process differ significantly, which means that there is no single training methodology for military pentathletes in the universities of Ukraine. Research on the establishment of a scientifically grounded ratio of training volumes of military pentathletes is urgent.*

Keywords: *physical fitness, training process.*

Введение

Introduction

Успех решения боевых задач напрямую зависит от уровня развития физических и морально-психологических качеств, военно-прикладных навыков, умения военнослужащих владеть оружием. Сегодняшний опыт ведения боевых действий на востоке Украины свидетельствует о недостаточном уровне подготовленности личного состава Вооруженных сил Украины (ВСУ) к успешной боевой деятельности. Эффективными средствами улучшения физической, технической и морально-психологической

подготовленности военнослужащих являются военно-прикладные виды спорта (Gusak, 2015; Rolyuk, 2016), в частности военное пятиборье (Yuryev, 2020). Однако методика тренировочных занятий по этому виду многоборья не описана в методической литературе (Lotoc'kij, 2020). Поэтому, для повышения уровня боевой готовности ВСУ важно усовершенствовать учебно-тренировочный процесс по военному пятиборью; для этого надо изучить имеющийся опыт его построения. Применение эффективной программы учебно-тренировочного процесса по военному пятиборью для курсантов-спортсменов в условиях Высших военных учебных заведениях (ВВУЗ) позволит значительно улучшить физическую подготовленность военнослужащих, будет способствовать росту спортивных результатов сборных команд ВВУЗ по данному виду многоборья и увеличению количества занятых призовых мест на престижных международных соревнованиях, а также положительно отразится на показателях военно-профессиональной деятельности, окажет содействие повышению степени боевой готовности ВСУ.

Целью исследования было обобщить опыт построения тренировочного процесса по военному многоборью в высших военных учебных заведениях.

Участники – 40 тренеров сборных команд по военному пятиборью 7-ми высших военных учебных заведений Украины. Средний возраст тренеров колебался в больших пределах ($\max = 69$, $\min = 21$) и в среднем составил $40,75 \pm 12,07$ лет. Колебания показателя стажа тренировок команд по военному пятиборью тоже были значительными – от 0 до 30 лет, что в среднем составило $6,00 \pm 7,29$ лет. Общий стаж работы тренеров сборных команд в среднем составлял $21,31 \pm 11,57$ лет (значительно колебался – от 2 до 50 лет), общий стаж занятий спортом (в прошлом) тренеров был большим – $21,03 \pm 11,25$ лет (с большими колебаниями – от 3 до 50 лет). Таким образом, в нашем опросе были представлены ответы респондентов разного возраста и с различным стажем работы.

Методы. Провели опрос с помощью анкеты, разработанной нами. Анкета состояла из 3 частей: вступительной, основной и паспортной. Количественные показатели обрабатывали с помощью таблиц *Excel for Windows*, вычисляли среднее арифметическое (X), ошибку среднего арифметического ($\pm m$); согласованность ответов тренеров определяли с помощью коэффициента конкордации (W).

Организация исследования. Анкетирование провели во время всеукраинских соревнований. Для этого собрали тренеров всех команд, участников соревнований, провели инструктаж по заполнению анкеты и ответили на их вопросы. По истечению нужного времени собрали заполненные анкеты.

Основной текст работы *The Main Text of the Work*

Despite the significant increase in the number of cadets in military universities in connection with the Russian-Ukrainian military conflict in eastern Ukraine, the level of training of graduates still lags behind the ever-growing demands of military practice. The most effective means of solving the problems of special physical training of servicemen is the use of physical exercises and sports. The urgency of the problem is due to insufficient use of the potential of means and methods of military pentathlon to improve the physical fitness of cadets on the one hand and the lack of modern scientifically sound guidelines on the organization, training process of military pentathletes in military universities on the other.

The results obtained by us allow us to conclude that in Ukraine there is no single method of training military pentathletes.

One of the reasons for this situation is that military pentathlon is a new sport for our Ukrainian military (Yuryev, 2020). It differs from "traditional" military types of all-around not only in content, but also in the technique of performing the competitive exercises included in it.

The analysis of the survey results showed that in the key issues of building a training macrocycle and the selection of loads, the opinions of coaches differ significantly, the consistency of the answers is weak ($W = 0.06-0.44$). In the selection of loads during the macrocycle of military pentathlon in military universities there is no periodization either in terms of the development of physical qualities or in terms of individual disciplines of military pentathlon. One of the urgent problems is the scientific substantiation of the structure and content of the training process of military pentathletes in the conditions of the university.

Another reason for the lack of expressive periodization in the training of military pentathletes may be the lack of solid knowledge of national team coaches about the principles and patterns of formation of sports uniforms. Therefore, it is important to provide quality training to the heads of physical training in military universities, continuous training and improvement of skills throughout life.

Probably, it is worth reconsidering the existing opinion, widespread among coaches, about the amount of funds allocated for the development of certain physical qualities and disciplines of military pentathlon. (This was the only question - on the level of development of which physical qualities depends the sports result in military pentathlon – in the answers to which the coaches showed an average consistency of answers – $W = 0.51$). To determine the scientifically sound ratio of hours for improvement in various types of pentathlon, as well as for the development of various physical qualities, appropriate research should be conducted.

Тренеры утверждают, что изучение вопросов физической подготовки курсантов с помощью средств военного пятиборья являются актуальными в нынешних условиях ($4,53 \pm 0,60$ балла из 5 возможных), поскольку они способствуют профессиональной деятельности военнослужащих (рис.1). Прежде всего эти занятия способствуют формированию прикладных навыков военнослужащих, а также – созданию разносторонней физической подготовленности (2,9 баллов и 2,5 баллов). В несколько меньшей степени (2,0 балла) занятия военным пятиборьем способствуют формированию функциональной подготовленности к боевым действиям и комплексной подготовке к боевым действиям (1,9 балла). В формировании морально-психической подготовленности к боевым действиям тренеры отводят занятиям военным пятиборьем незначительную роль (0,8 балл). Однако, следует отметить, что ответы респондентов слабо согласованы между собой (коэффициент конкордации – $W = 0,245$). Это свидетельствует о том, что среди тренеров отсутствует единая точка зрения в вопросе размеров влияния занятий военным пятиборьем на различные стороны профессиональной деятельности военнослужащих.

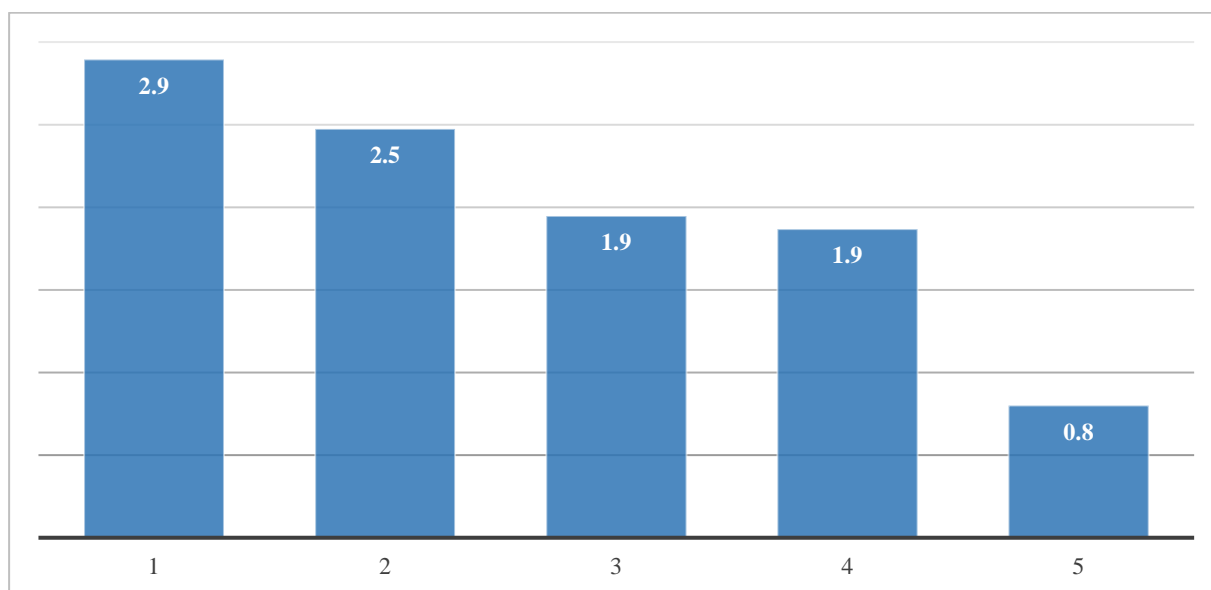


Рисунок 1. Влияние занятий военным пятиборьем на профессиональную деятельность военнослужащих

Figure 1 The Influence of Military Pentathlon Practice on the Professional Activities of Military Personnel

- 1-формирования прикладных навыков
- 2-разносторонняя физическая подготовленность
- 3-функциональная подготовленность к боевым действиям
- 4-комплексная подготовленность к боевым действиям
- 5-морально-психическая подготовленность к боевым действиям

В ответе на вопрос «Какие виды подготовки в военном пятиборье являются наиболее важными?» согласованности ответов тренеров была повыше, но все-таки недостаточно значительной ($W = 0,44$). Большинство из них считают наиболее важными физическую (4,2 баллов из 6 возможных), и техническую (3,7 баллов) подготовку.

Спортивный результат в военном пятиборье (рис.2) в наибольшей степени зависит от уровня развития у спортсменов скоростно-силовой выносливости (7,2 балла из 8 возможных). Для достижения максимального спортивного результата в военном пятиборье высокие значения имеет степень развития выносливости и скоростно-силовых качеств (5,6 и 5,4 балла соответственно). Средний уровень значимости тренеры придают уровню развития силовой выносливости пятиборцев (4,3 баллов из 8-ми). Развитию быстроты, ловкости, силы и гибкости спортсмена-пятиборца тренеры отводят небольшое значение (3,1-2,2 балла из 8 возможных). Но этим результатам можно доверять в средней степени, поскольку согласованность ответов тренеров – посредственная ($W = 0,51$).

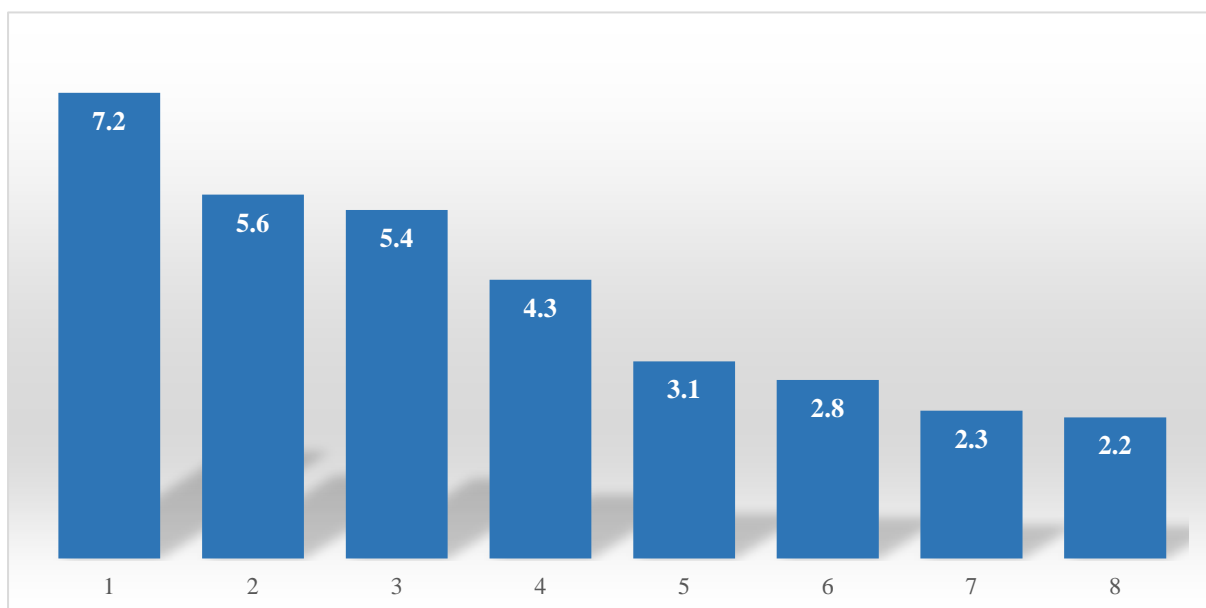


Рисунок 2. Физические качества, от которых зависит спортивный результат в военном пятиборье: 1-скоростно-силовая выносливость, 2-выносливость, 3-скоростно-силовые качества, 4-силовая выносливость, 5-скорость, 6-ловкость, 7-сила, 8-гибкость

Figure 2 Physical Qualities on Which Depend Sports Results in Military Pentathlon

Обычно в подготовительном периоде проводят 4 занятия ($4,26 \pm 1,53$) по военному пятиборью в неделю, в микроцикле соревновательного периода – тоже 4 занятия ($4,53 \pm 1,85$), в переходном периоде их количество

уменьшается до 3-х ($3,18 \pm 0,97$). Вариативность ответов респондентов очень большая – колеблется от 10 до 1 в подготовительном и соревновательном периоде и от 5 до 1 – в переходном. Отдельное вычисление результатов ответов тренеров со стажем более 10 лет ($n = 9$) также не позволило установить оптимального количества тренировок в неделю, поскольку их ответы практически не отличались от общественного мнения (по периодам подготовки: соответственно – $4,56 \pm 0,68$; $4,78 \pm 2,78$; $3,33 \pm 0,67$ занятий в неделю). Мода свидетельствует о наиболее часто использованной практике проведения 5 тренировок в неделю в подготовительном, 2 – в соревновательном и 3 – в переходном периоде макроцикла подготовки.

В разных ВВУЗ существует разный опыт объединения в одном тренировочном занятии нескольких видов многоборья: об этом свидетельствует большой разброс средних значений в количестве дисциплин военного пятиборья в одном занятии (колеблется от 1 до 5). В подготовительном и соревновательном периоде тренеры обычно объединяют в одно занятие по три дисциплины ($2,59 \pm 0,82$ дисциплины – в подготовительном, $2,79 \pm 0,94$ дисциплин – в соревновательном периоде). Результаты ответов тренеров со стажем более 10 лет ($n = 9$) подтверждают рациональность объединения в одном тренировочном занятии 3-х дисциплин.

Чаще всего в одном тренировочном занятии сочетают полосу препятствий и метания (19,5%). Другие сочетания дисциплин военного пятиборья в одном тренировочном занятии встречаются существенно реже. Так, стрельбу с метанием, стрельбу с метанием и плаванием, метания с кроссом, стрельбу и кросс в одной тренировке сочетают лишь в десятой части (12,5-10,9%) случаев.

Анализ количества времени, которое отводят тренера на отдельные дисциплины военного пятиборья (табл.1) свидетельствует о неравномерном распределении по видам многоборья. Также незначительные различия наблюдали в распределении времени на отдельные дисциплины военного пятиборья в зависимости от периода подготовки. Так, очевидно, что независимо от периода подготовки больше всего времени тренеры отводят на кроссовую подготовку. Меньше времени тренеры уделяют метаниям и стрельбе. Однако несогласованность ответов тренеров ($W = 0,21$, $W = 0,08$ и $W = 0,23$ на трех этапах подготовки, соответственно) свидетельствует о том, что устоявшегося варианта не существует.

Таблица 1. Количество времени (%), отводимое на отдельные дисциплины военного пятиборья в разные периоды тренировочного процесса

Table 1 The Amount of Time (%) Allotted to Individual Disciplines of Military Pentathlon in Different Periods of the Training Process

Дисциплины военного пятиборья	В подготовительном периоде	В соревновательном периоде	В переходном периоде
кросс	27,37±9,72	22,37±9,09	28,55±10,75
полоса препятствий	21,71±7,55	23,82±7,82	19,87±9,42
плавание	19,21±6,64	18,42±6,19	20,66±8,12
метания	16,05±5,75	17,89±7,04	15,39±7,38
стрельба	15,39±5,43	17,50±6,46	15,53±7,59

Подтверждает полученные результаты по количеству времени, отводимому на отдельные дисциплины военного пятиборья и количество времени, которое тренеры отводят отдельным дисциплинам военного пятиборья. Количество времени, которое тренеры отводят на развитие отдельных физических качеств также несущественно изменяется в зависимости от периода подготовки. Анализ ответов тренеров показал, что развитие выносливости ($18,85 \pm 7,27\%$, $16,32 \pm 7,04\%$, $19,47 \pm 10,98\%$), а также скоростно-силовой выносливости ($15,66 \pm 6,30\%$, $18,82 \pm 6,43\%$, $15,00 \pm 5,50\%$) проводят наиболее основательно на всех этапах подготовки военных пятиборцев. Несколько меньше времени (табл. 2), но также примерно одинаково на всех этапах подготовки, отводят на развитие скоростно-силовых качеств ($14,74 \pm 6,06\%$, $16,58 \pm 5,51\%$, $14,61 \pm 5,43\%$). Согласованность ответов – слабая ($W = 0,35$, $W = 0,38$ и $W = 0,06$ на трех этапах подготовки, соответственно), что свидетельствует о существенных различиях в методике тренировки.

Количество времени, которое тренера отводят на силовую выносливость пятиборцев практически не меняется на разных этапах подготовки (и составляет в среднем 12%). В соревновательном периоде несколько уменьшается количество времени на развитие скорости и силы, а в переходном – понижаются объемы ловкости. Процент времени, отводимого на занятиях на развитие гибкости, не меняется и остается самым низким относительно остальных физических качеств (8%). Ответ на этот вопрос согласовывается с ответами тренеров о значимости физических качеств для спортивного результата в военном пятиборье (см. рис.2).

Таблица 2. Количество времени (%), отводимое на развитие физических качеств в разные периоды тренировочного процесса

Table 2 The Amount of Time (%) Allotted for the Development of Physical Qualities in Different Periods of the Training Process

Физические качества	в подготовительном периоде	в соревновательном периоде	в переходном периоде
выносливость	18,85±7,27	16,32±7,04	19,47±10,98
скоростно-силовая выносливость	15,66±6,30	18,82±6,43	15,00±5,50
скоростно-силовые качества	14,74±6,06	16,58±5,51	14,61±5,43
силовая выносливость	12,76±4,96	13,29±5,41	11,97±4,94
скорость	10,13±4,51	9,08±4,11	10,26±4,28
сила	10,92±5,83	7,76±4,40	10,66±4,89
ловкость	10,00±3,97	10,13±5,44	9,74±3,96
гибкость	6,97±2,70	8,03±4,52	8,29±4,48

Выводы и обсуждение

Conclusions

The opinions of the coaches on the key issues of building the training process differ significantly, which means that there is no single training methodology for military pentathletes in the universities of Ukraine. Research on the establishment of a scientifically grounded ratio of training volumes of military pentathletes is urgent.

Реформирование ВСУ выдвигает все новые требования к будущему офицеру: наряду с теоретическими знаниями он должен обладать практическими умениями и навыками, иметь отличную физическую подготовленность и высокую степень развития общих и специальных двигательных навыков. Несмотря на существенное увеличение количества курсантов в ВВУЗ в связи с русско-украинским военным конфликтом на востоке Украины, уровень подготовленности выпускников пока еще отстает от постоянно растущих требований военной практики. Опыт боевой подготовки и результаты научных исследований (Gusak, 2012; Rolyuk, 2016; Andres, 2006) свидетельствуют о том, что наиболее эффективным средством решения задач специальной физической подготовки военнослужащих есть применение физических упражнений и видов спорта, наиболее приближенных по своей структуре движений и характеру физических нагрузок к военно-профессиональной деятельности военнослужащих. Разработка специальных, научно обоснованных средств и методов

физической подготовки по военному пятиборью будет способствовать не только достижению максимально высоких спортивных результатов среди военнослужащих-спортсменов на мировой арене, но и повышению боеспособности военнослужащих соответствии со специфическими требованиями их военно-профессиональной деятельности (Romanchuk, 2012). Актуальность проблемы обусловлена недостаточным использованием потенциала средств и методов военного пятиборья для повышения физической подготовленности курсантов с одной стороны и отсутствием современных научно обоснованных методических рекомендаций по вопросам организации, проведения учебно-тренировочного процесса военных пятиборцев в условиях ВВУЗ с другой.

Полученные нами результаты позволяют сделать выводы о том, что в Украине не существует единой методики тренировок военных пятиборцев. Одной из причин такого положения вещей служит то, что военное пятиборье является новым видом спорта для наших ВСУ (Yuryev, 2020). Оно отличается от «традиционных» военных видов многоборий не только содержанием, но и техникой выполнения соревновательных упражнений, входящих в него.

Анализ результатов анкетирования показал, что в ключевых вопросах построения тренировочного макроцикла и отбора нагрузок мнения тренеров существенно различаются, согласованность ответов – слабая ($W = 0,06-0,44$). В подборе нагрузок в течение макроцикла занятий военных пятиборцев ВВУЗ не просматривается периодизации ни касательно развития физических качеств, ни касательно отдельных дисциплин военного пятиборья. Отсутствие четкой периодизации в тренировочном процессе может объясняться спецификой построения спортивной подготовки сборных команд в высших учебных заведениях военного направления – необходимость несения службы – дежурства, караулы, учения на полигоне и т.п). Но важно не отвергать, а адаптировать наработанные специалистами по теории спортивной подготовки (Platonov, 2015), в многоборьях (Polishchuk, 1988) и в частности в военных многоборьях (Andres, 2006; Mihajlov, 2007) к особенностям условий обучения и тренировок в ВВУЗ. Поэтому одной из актуальных проблем является научное обоснование структуры и содержания учебно-тренировочного процесса военных пятиборцев, в условиях ВВУЗа. Еще одной из причин нехватки выразительной периодизации в тренировке военных пятиборцев может быть отсутствие твердых знаний у тренеров сборных команд о принципах и закономерностях формирования спортивной формы. Поэтому важна качественная подготовка начальников физической подготовки в ВВУЗ, постоянное обучение и совершенствование навыков в течение всей жизни.

Вероятно, стоит пересмотреть существующее, распространенное среди тренеров мнение об объемах средств отводимых на развитие отдельных физических качеств и дисциплин военного пятиборья. (Кстати это был единственный вопрос – от уровня развития которых физических качеств зависит спортивный результат в военном пятиборье, – в ответах на который тренеры проявили среднюю согласованность ответов – $W = 0,51$). Поскольку большинство (4/5) спортивных дисциплин военного пятиборья является сложнокоординационными видами, считаем, что развитию ловкости надо придавать большего значения для успешных выступлений на соревнованиях спортсменов по военному пятиборью. Для выяснения научно обоснованного соотношения часов на совершенствование в различных видах пятиборья, а также и на развитие различных физических качеств, следует провести соответствующие научные исследования.

Summary

Despite the significant increase in the number of cadets in military universities in connection with the Russian-Ukrainian military conflict in eastern Ukraine, the level of training of graduates still lags behind the ever-growing demands of military practice. The most effective means of solving the problems of special physical training of servicemen is the use of physical exercises and sports. The urgency of the problem is due to insufficient use of the potential of means and methods of military pentathlon to improve the physical fitness of cadets on the one hand and the lack of modern scientifically sound guidelines on the organization, training process of military pentathletes in military universities on the other.

The results obtained by us allow us to conclude that in Ukraine there is no single method of training military pentathletes.

One of the reasons for this situation is that military pentathlon is a new sport for our Ukrainian military (Yuryev, 2020). It differs from "traditional" military types of all-around not only in content, but also in the technique of performing the competitive exercises included in it.

The analysis of the survey results showed that in the key issues of building a training macrocycle and the selection of loads, the opinions of coaches differ significantly, the consistency of the answers is weak ($W = 0.06-0.44$). In the selection of loads during the macrocycle of military pentathlon in military universities there is no periodization either in terms of the development of physical qualities or in terms of individual disciplines of military pentathlon. One of the urgent problems is the scientific substantiation of the structure and content of the training process of military pentathletes in the conditions of the university.

Another reason for the lack of expressive periodization in the training of military pentathletes may be the lack of solid knowledge of national team coaches about the principles and patterns of formation of sports uniforms. Therefore, it is important to provide quality training to the heads of physical training in military universities, continuous training and improvement of skills throughout life.

Probably, it is worth reconsidering the existing opinion, widespread among coaches, about the amount of funds allocated for the development of certain physical qualities and disciplines of military pentathlon. (This was the only question - on the level of development of

which physical qualities depends the sports result in military pentathlon – in the answers to which the coaches showed an average consistency of answers – $W = 0.51$). To determine the scientifically sound ratio of hours for improvement in various types of pentathlon, as well as for the development of various physical qualities, appropriate research should be conducted.

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ФОРМИРОВАНИЕ НАУЧНО- ИССЛЕДОВАТЕЛЬСКИХ КОМПЕТЕНТНОСТЕЙ СТУДЕНТОВ-ЮРИСТОВ

Formation of Scientific Research Competencies of Law Students

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Abstract. *The practical activity of a lawyer involves a comprehensive analysis of various legal situations, the search for optimal ways to resolve them, the use of analogies, generalization, development and substantiation of new legal positions (including based on doctrinal sources), that is, it contains elements of the researcher's work. With this in mind, one of the important components in teaching legal students is the formation of their research competencies. The purpose of this study is to prepare proposals for improving approaches to the formation of scientific research competencies of students of legal specialties. During the research, formal legal, sociological and other methods of scientific knowledge were used. As a result of the study, proposals were substantiated for the formation of scientific research competencies of law students, based on the logic of scientific research in the field of law. These proposals imply consistent training of law students to work with facts of reality, scientific facts, scientific problems and scientific hypotheses, using appropriate methods of scientific knowledge.*

Keywords: *scientific research competencies, students of legal specialties, methods of scientific knowledge.*

Введение

Introduction

Среди многих компетентностей, необходимых студентам юридических специальностей для последующей успешной профессиональной деятельности, важное место принадлежит знаниям, умениям и навыкам по

самостоятельному проведению правовых исследований с использованием различных методов научного познания. Это обусловлено тем, что практическая деятельность юриста предполагает всесторонний анализ тех или иных правовых ситуаций, поиск оптимальных путей их разрешения, применение аналогий, обобщение, разработку и обоснование новых правовых позиций (в том числе с опорой на доктринальные источники), то есть содержит элементы работы исследователя. В ряде случаев выпускники юридических вузов (специальностей) приступают к подготовке диссертаций на соискание научной степени в области права, для чего также необходимо предварительно овладеть базовыми научно-исследовательскими компетентностями.

Формирование научно-исследовательских компетентностей студентов-юристов обеспечивается, в частности, в процессе подготовки ими курсовых (бакалаврских) и магистерских работ. При этом очень часто студенты-юристы сталкиваются с определенными трудностями, обусловленными отсутствием навыков организации и проведения самостоятельной поисковой работы в сфере права, и не имеют достаточной подготовки по применению методов научного исследования, понимают их в узком смысле – как способ толкования правовых норм.

С учетом этого, одной из основных задач преподавателей юридических вузов (факультетов) является качественное формирование таких компетентностей у студентов-юристов, а также постоянное улучшение собственных профессиональных навыков в этой сфере.

Изложенное выше свидетельствует об актуальности темы этой статьи.

Целью данной статьи является подготовка предложений по совершенствованию подходов к формированию научно-исследовательских компетентностей студентов юридических специальностей.

Данная статья базируется на анализе и обобщении опыта руководства подготовкой студенческих научных работ в Донецком национальном университете имени Василя Стуса, Донецком юридическом институте Министерства внутренних дел Украины, а также результатах опроса студентов Донецкого юридического института Министерства внутренних дел Украины.

Теоретические основы исследования *Theoretical Substantiation of the Problem*

Отдельные вопросы, связанные с формированием научно-исследовательских компетентностей студентов-юристов, ранее рассматривались в публикациях научно-педагогических работников и иных представителей юридического научного сообщества. В частности, в учебном пособии

украинских авторов Т.С. Киваловой, Т.Р. Короткого, Н.А. Полевого изложены рекомендации по подготовке квалификационных работ студентов юридических специальностей, в том числе относительно поиска и обработки нормативно-правовых актов и научной литературы по юриспруденции (Kivalova, Korotky'j, & Pol'ovy'j, 2011). Рассматривая формирование исследовательской компетенции как цель подготовки будущих юристов, П.Н. Пономарчук изложил свое видение понятия «исследовательская компетенция» и предложил совокупность его компонентов (Ponomarchuk, 2011). Ряд предложений относительно развития научно-исследовательских компетентностей студентов юридических специальностей изложены в статьях Н.И. Минкиной (Minkina, 2015), О.А. Егоровой, Е.Н. Зинченко (Egorova & Zinchenko, 2018), Г.А. Казарцевой (Kazarceva, 2018).

Вместе с тем указанная тематика не утрачивает своей актуальности и требует дополнительной разработки, с учетом того, что в современных условиях неограниченного доступа к результатам других исследователей предлагаемые и существующие общие подходы к формированию научно-исследовательских компетентностей студентов-юристов только отчасти обеспечивают приобретение студентами навыков самостоятельного научного поиска, а значит нуждаются в постоянном совершенствовании.

Методы исследования *Methods of the Research*

При проведении исследования использовались теоретические и эмпирические методы познания действительности. В частности, формально-юридический метод применен при анализе действующего законодательства, устанавливающего требования к компетентностям выпускников юридических специальностей. Методы анализа и синтеза, индукции, обобщения использованы для подготовки предложений по совершенствованию подходов к формированию научно-исследовательских компетентностей студентов-юристов. Социологический метод использован при обработке анкет студентов специальности «Право». Метод наблюдения применен при обобщении результатов практической апробации предложений, изложенных в данной статье.

Эмпирическую базу составили результаты опроса студентов Донецкого юридического института МВД Украины относительно целесообразности применения предложенного в данной статье подхода к проведению студентами научных исследований, а также о степени его влияния на формирование научно-исследовательских компетентностей студентов-юристов.

Результаты исследования ***Results of the Research***

Необходимость формирования у студентов-юристов основных научно-исследовательских компетентностей признается как в профессиональном юридическом сообществе, так и на государственном уровне. В Украине это нашло отражение в стандартах высшего образования по специальности 081 «Право» отрасли знаний 08 «Право» для первого (бакалаврского) и второго (магистерского) уровней высшего образования, которые утверждены приказами Министерства образования и науки Украины. В частности, согласно стандарту, выпускник-бакалавр специальности «Право» должен иметь способность к абстрактному мышлению, анализу и синтезу, анализировать правовые проблемы, формировать и обосновывать правовые позиции, демонстрировать исследовательские навыки (составлять и согласовывать план собственного исследования, самостоятельно собирать материалы по определенным источникам, и др.) (Standart vyshhoyi osvity Ukrayiny: pershyj (bakalavrs'kyj) riven' vyshhoyi osvity, haluz' znan' 08 «Pravo», special'nist' 081 «Pravo»).

К выпускникам-магистрам предъявляются более высокие требования, в том числе предусмотрена возможность соискания степени магистра по образовательно-научной программе. Выполнение такой программы предполагает приобретение способностей: применять современные методологии научно-правовых исследований и специальные методы исследований в определенных отраслях юридической науки; анализировать и интерпретировать результаты научных исследований, учитывая использование междисциплинарных и сравнительно-правовых подходов; использовать научные теории и концепции, а также приобретенные практические знания при проведении научных исследований; принимать продуктивное участие в научном сотрудничестве как на национальном, так и международном уровнях (Standart vyshhoyi osvity Ukrayiny: druhyi (mahisterskyi) riven' vyshhoyi osvity, haluz' znan' 08 «Pravo», special'nist' 081 «Pravo»).

Для формирования перечисленных научно-исследовательских компетентностей учреждения высшего образования, которые осуществляют подготовку студентов-юристов в Украине, включают в образовательные программы отдельные учебные дисциплины, специально направленные на приобретение студентами знаний, умений и навыков по проведению научных исследований. К примеру, в Донецком юридическом институте МВД Украины одним из обязательных компонентов образовательно-профессиональной программы «Право» является учебная дисциплина «Основы научных исследований». Преподавание студентам-юристам иных

учебных дисциплин также охватывает отдельные элементы, направленные на закрепление и развитие научно-исследовательских компетентностей.

Вместе с тем основным средством формирования научно-исследовательских компетентностей студентов-юристов является подготовка ими тезисов докладов, курсовых и магистерских работ, то есть письменных работ по заданной теме, в которых излагается ход и результаты самостоятельного исследования определенного круга правовых вопросов. Требования к содержанию таких работ дифференцируются в зависимости от года обучения студента и получаемого им уровня образования (бакалаврский либо магистерский). При этом в указанных работах в той или иной степени должны присутствовать элементы самостоятельного научного исследования, и подготовка таких работ должна базироваться на применении общих и специальных методов научного познания.

Приобретение студентами необходимых научно-исследовательских компетентностей в ходе подготовки курсовых (магистерских) работ в значительной мере зависит от методики руководства такой подготовкой, которое возлагается на преподавателей вузов. При этом в рамках такого руководства наряду с выполнением стандартных функций (предоставление рекомендаций по составлению плана работы, подбор перечня источников, проверка текста и указание допущенных недостатков) преподавателю важно изначально акцентировать внимание студента на особенностях, свойственных исследованиям юридической направленности.

Об одной из таких особенностей достаточно подробно говорится в работе М.И. Клеандрова «Кандидатская диссертация юриста: выбор и разработка темы». В частности, при проведении исследования выбранной темы юристу необходимо найти и тщательно проанализировать: 1) нормативно-правовые акты, регулирующие общественные отношения, охватываемые объектом исследования; 2) материалы соответствующей правоприменительной и иной практики; 3) научные источники по исследуемой теме (Kleandrov, 2007).

В развитие данного тезиса следует отметить, что при выборе любой темы исследования только глубокий анализ трех указанных элементов позволит студенту дать оценку состояния правового регулирования в исследуемой сфере и выявить проблемные аспекты (недостатки законодательства, несовершенство правоприменительной практики, недостаточная разработка тех или иных вопросов в юридической науке). На основе этого у автора курсовой (магистерской) работы появляется возможность сделать постановку соответствующих научных либо научно-практических проблем, сформулировать и обосновать собственные выводы и предложения относительно их решения.

Для формирования у студентов-юристов компетентностей относительно корректной постановки указанных проблем и поиска путей их оптимального решения преподавателю целесообразно сориентировать студентов на то, что одним из первоочередных шагов в правовом исследовании является сбор как можно более полных сведений о фактах действительности, имеющих отношение к исследуемой тематике. Фактами действительности следует считать события, явления, которые происходили или происходят на самом деле, различные стороны, свойства, отношения изучаемых объектов (Kuznesov, 2006). При этом особенностью этого этапа в правовых исследованиях являются как характер таких фактов, так и источники их получения, поэтому рекомендуется проводить обзор судебной практики, отчетов о деятельности различных органов государственной власти и местного самоуправления, материалов профессиональной периодической печати и т.п. Такими фактами могут быть и тексты нормативно-правовых актов при исследовании правовой основы конкретных отношений.

В процессе накопления информации о фактах действительности студенту-юристу важно сосредоточить внимание на тех из них, которые имеют правовое значение и объективность которых не вызывает сомнения, что должно подтверждаться ссылками на соответствующие источники информации. Для этого этапа такому студенту необходимо овладеть использованием метода наблюдения. Далее целесообразно мысленно сгруппировать факты действительности на позитивные и негативные, с учетом того, что отправной точкой для постановки научной либо научно-практической проблемы является выявление именно негативных фактов, то есть реальных событий и явлений, которые заслуживают отрицательной оценки, не соответствуют законным интересам отдельных лиц либо интересам общества в целом. Кроме того, необходимо выяснить, имеют ли выявленные негативные факты системный характер, присутствует ли тенденция к повторению подобных фактов в будущем, поскольку выявление единственного негативного случая, как правило, не является достаточным основанием для постановки проблемы в области права.

После выявления студентом-юристом негативных фактов действительности целесообразно рекомендовать ему подготовить обобщенное описание этих фактов с использованием соответствующей юридической научной терминологии, то есть представить накопленные сведения в виде изложения научных фактов, используя методы интерпретации, системный, анализа и синтеза, и другие. При этом ключевое значение на данном этапе имеет количество собранного материала и правильное его обобщение. К примеру, если студентом выявлены факты применения судами противоречивых правовых позиций при рассмотрении

аналогичных споров, в курсовой (магистерской) работе нецелесообразно давать описание каждого из многочисленных судебных решений. Вместо этого необходимо кратко изложить суть имеющихся в судебной практике различных подходов, оформив при этом ссылки на несколько судебных решений, иллюстрирующих применение таких подходов. Таким образом, у студента-юриста формируются навыки применения методов анализа и синтеза, индукции, мысленного восхождения от конкретного к абстрактному.

Для завершения правильной постановки проблемы студенту целесообразно применить закон причины и следствия, а именно рекомендуется принять во внимание, что выявленные им негативные факты правовой действительности являются следствием определенной причины либо совокупности причин. Выявление причины представляет собой достаточно сложный мыслительный процесс и, по сути, предопределяет дальнейший ход исследования темы. При этом важно понимание, что выявить и устранить причину наличия негативных фактов – это единственный наиболее конструктивный вариант пути к недопущению повторного возникновения какого-либо негативного явления в будущем. Для приобретения навыка постановки научной либо научно-практической проблемы студенту-юристу необходимо овладеть методами установления причинно-следственной связи (методы единственного сходства, единственного различия, сопутствующих изменений, остатков) и объединенным методом сходства и различия.

Следующим логическим шагом в проведении исследования должны стать разработка и обоснование студентом собственной гипотезы, т.е. выводов (предложений) относительно решения поставленной проблемы путем применения соответствующих правовых средств. Для этого он может использовать системный либо аналитический подход и соответствующие каждому из них методы научного познания. На этом этапе представляется правильным методологический подход, при котором студенту-юристу предлагается продумать возможные альтернативные варианты решения проблемы, оценив преимущества и недостатки каждого из них, на основе чего предложить наиболее оптимальный вариант, подкрепив его соответствующей аргументацией. Обязательным условием завершения этого процесса будет соблюдение студентом закона достаточного основания, согласно которому всякая правильная мысль должна быть доказана. Этот закон указывает на необходимость соблюдения исследователем четырех требований к аргументам: достоверность (доказанность), достаточность (вескость), доказанность независимо от тезиса доказываемого, наличие логической связи между аргументами и доказываемым тезисом.

Сформулированные таким образом выводы и предложения относительно каждого задания, поставленного в работе, будут являться результатами, полученными в ходе подготовки курсовой (магистерской) работы студента-юриста.

Для более четкого понимания логики процесса правового исследования в процессе подготовки курсовой (магистерской) работы можно предложить студенту-юристу представить информацию о проведенном исследовании путем заполнения таблицы по следующей форме (Табл. 1):

Таблица 1. Постановка научных (научно-практических) проблем и результаты исследования

Table 1 Statement of Scientific (Scientific and Practical) Problems and Research Results

№	Факт действительности (негативная практика)	Научный факт (научно-юридическое определение относительно такой практики)	Научная проблема (причина такого явления в области права)	Гипотеза (вариант устранения причины правовыми средствами)
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Работа с такими таблицами во время лекций и практических занятий по учебной дисциплине «Организация правовых исследований» проводилась со студентами-юристами по магистерской программе в период с 2010 года по 2020 год в Донецком национальном университете имени Василя Стуса и показала положительные результаты в овладении вышеуказанными компетентностями. Предложенный подход также начал применяться авторами данной статьи в процессе руководства подготовкой студенческих научных работ в Донецком юридическом институте МВД Украины.

На целесообразность применения предложенного подхода указывают, в частности, результаты опроса студентов Донецкого юридического института МВД Украины. В опросе приняли участие 104 человека: студенты 2-4 курсов, а также студенты-магистранты специальности «Право» дневной формы обучения. Опрос включал вопросы о целесообразности применения предложенного подхода (алгоритма) при проведении студентами научных исследований по правовой тематике, а также о степени его влияния на формирование научно-исследовательских компетентностей будущих юристов-практиков (Рис. 1).

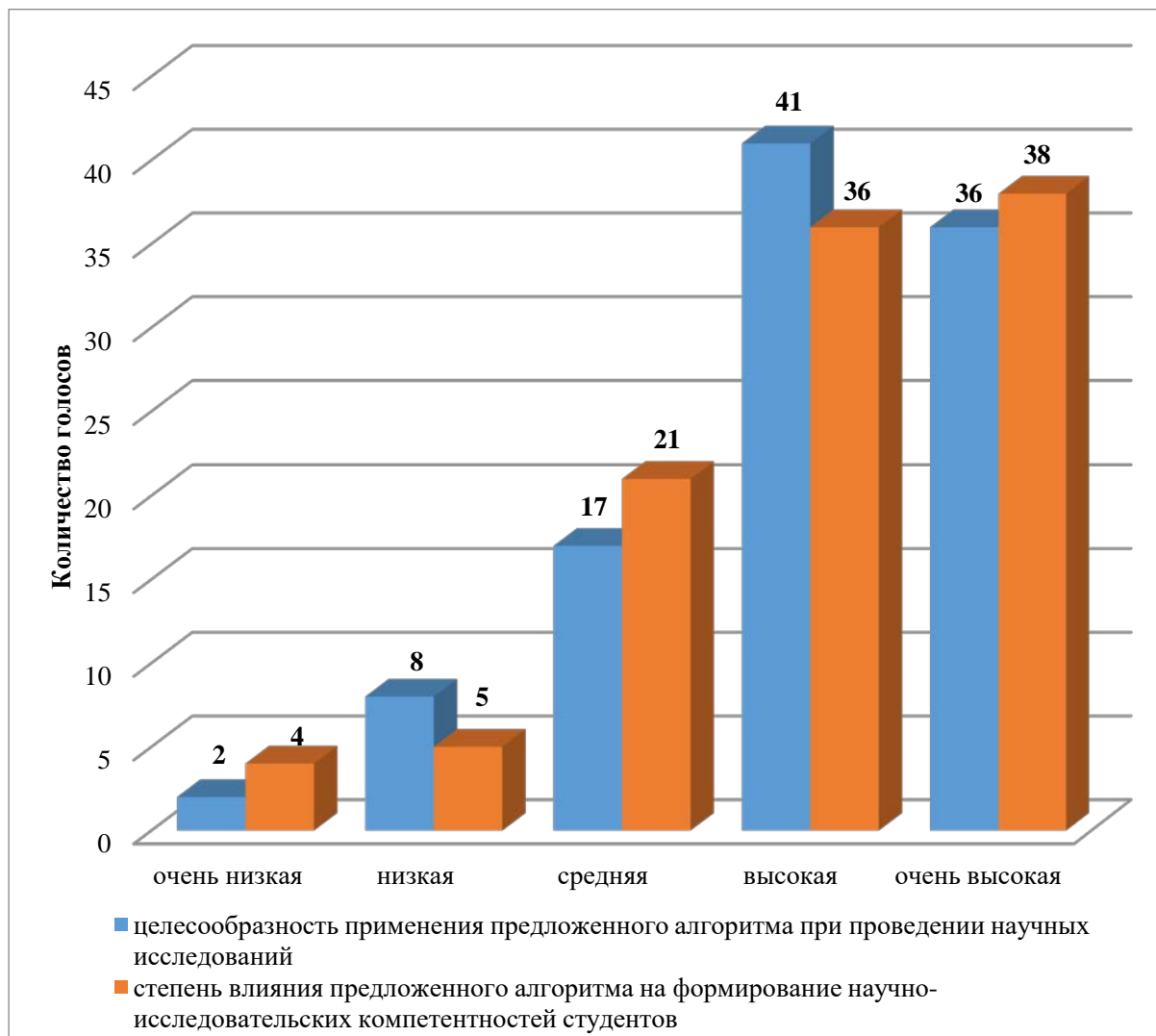


Рисунок 1. Результаты опроса студентов Донецкого юридического института МВД Украины об эффективности предложенного алгоритма проведения научных исследований

Figure 1 The results of a Survey of Students of the Donetsk Law Institute of the Ministry of Internal Affairs of Ukraine on the Effectiveness of the Proposed Algorithm for Conducting Scientific Research

Таким образом, применение предложенного подхода способствует формированию у студентов ряда важных умений и навыков, овладение которыми является необходимым условием успешной юридической практики независимо от сферы ее осуществления. В частности, студенты приобретают способность давать юридическую оценку разнообразным явлениям реальной действительности, выявлять причинно-следственные связи между многочисленными юридическими фактами, искать и применять наиболее рациональные способы решения проблемных правовых ситуаций, выдвигать и обосновывать собственную правовую позицию

относительно тех или иных вопросов. Кроме того, в процессе подготовки курсовой (магистерской) работы студенты укрепляют навыки связной профессиональной письменной речи, что также является необходимым каждому практикующему юристу.

Поскольку приобретение указанных научно-исследовательских компетентностей требует значительных усилий и является незаменимым для будущей профессиональной деятельности студентов-юристов, обучение таким компетентностям целесообразно включать в образовательную программу подготовки, начиная со второго курса. Это могут быть как отдельные учебные дисциплины («Основы научных исследований», «Организация правовых исследований»), так и обязательные задания по нескольким юридическим дисциплинам.

Выводы и предложения *Conclusions and Suggestions*

Проведенное исследование позволило подготовить выводы по совершенствованию подходов к формированию научно-исследовательских компетентностей студентов юридических специальностей, исходя из логики проведения научного исследования в сфере права. А именно, предложена следующая последовательность действий студента-юриста при проведении собственного научного исследования: 1) сбор информации о фактах действительности, имеющих отношение к исследуемой тематике; 2) обобщенное описание выявленных негативных фактов действительности с использованием соответствующей юридической научной терминологии, то есть представление накопленных сведений в виде изложения научных фактов; 3) поиск и описание причин указанных негативных явлений в области права (постановка научной проблемы); 4) обоснование собственных предложений относительно устранения этих причин с использованием правовых средств.

Такой алгоритм отражает особенности формирования научно-исследовательских компетентностей именно у студентов юридических специальностей с учетом объекта и предмета исследования, характерных для юридической науки. Относительно каждого из указанных этапов предложены конкретные шаги, которые должен пройти студент-юрист, и методы, которые он при этом может использовать с учетом темы своего исследования, эмпирической и теоретической его базы. Результатом последовательного обучения студентов-юристов работе с фактами действительности, научными фактами, научными проблемами и научными гипотезами будет овладение ими соответствующими научно-исследовательскими компетентностями, необходимыми им как для

самостоятельной научной работы, так и для будущей профессиональной деятельности, характер которой связан со сбором, анализом и оценкой соответствующих фактов, имеющих юридическое значение.

Изложенный материал может составить основу построения алгоритма освоения студентами-юристами навыков проведения научного исследования как при изучении учебной дисциплины «Основы научных исследований», так и при проведении самостоятельной научной работы во время обучения либо за его пределами. а для преподавателей – алгоритма обучения студентов-юристов самостоятельной работе с законодательством, практикой его применения, научными источниками.

Summary

The practical activity of a lawyer involves a comprehensive analysis of various legal situations, the search for optimal ways to resolve them, the use of analogies, generalization, development and substantiation of new legal positions (including based on doctrinal sources), that is, it contains elements of the researcher's work. With this in mind, one of the important components in teaching legal students is the formation of their research competencies.

The purpose of this article is to prepare proposals for improving approaches to the formation of scientific research competencies of students of legal specialties.

The article determines that the main means of forming the research competencies of law students is their preparation of theses of reports, term papers and master's theses, that is, written works on a given topic, which outlines the course and results of independent research of a certain range of legal issues.

Recommendations for university teachers to guide the preparation of student research papers, taking into account the specifics of scientific research in the field of law, are presented. The presented recommendations assume consistent training of law students to work with facts of reality, scientific facts, scientific problems and scientific hypotheses, using appropriate methods of scientific knowledge.

The proposed approach has been tested in the process of managing the preparation of student scientific works, teaching academic disciplines at the Vasyl Stus Donetsk National University, as well as at the Donetsk Law Institute of the Ministry of Internal Affairs of Ukraine.

The prepared material can form the basis for constructing an algorithm for mastering the skills of conducting independent scientific research by law students, and for teachers - an algorithm for teaching law students to independently work with legislation, the practice of its application, and scientific sources.

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КУРС ГЕРМЕНЕВТИКИ ХУДОЖЕСТВЕННОГО ТЕКСТА В ПРОГРАММАХ ВЫСШЕГО ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ

A Course in Hermeneutics of Works of Art in Higher Professional Education Programs

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Abstract. *The article stems from the problem that has developed in modern higher education programmes such as Humanities, History of Art and Musicology. Learners of these programmes are required to digest an increasingly large amount of information. Yet, the abundance in information, which is not always comparable in quality, obstructs the development of students' analytical skills. It seems feasible to introduce an innovative course in Hermeneutics of Works of Art into the Humanities, History of Art and Musicology programmes, the course is based on a universal method of artwork analysis elaborated by one of the authors of the article. The article aims to outline the main principles of this course, which is meant to help learners to understand the formation of semantics in various forms of art and to identify the ways of emotional and intellectual impact of artworks. This objective can be achieved by drawing upon a limited number of artworks. The musicological method of analysis is taken as a basis since its technology has been elaborated most thoroughly. This method focuses on the analysis of the formal structure of the work because the form itself contains the most important information about the content. The article shows that the basic structures of European academic music, such as periods, two- and three-part forms, variations, and the sonata form, are universal and derive from the most ancient mythological prototypes. These structures can be easily found in all forms of art and have similar semantic connotations. The proposed method also includes the analysis of polyphony, motivational dramaturgy, and space-time relations in the text, as well as the psychoanalytic approach to content interpretation. The idea of the hermeneutic circle is used to harmonize a general analysis of an artwork and a detailed analysis of its separate elements. The approbation of the proposed study course has demonstrated good results in developing students' abilities to analyse a work of art.*

Keywords: *artwork analysis; artwork semantics; artwork structure; hermeneutic circle; interpretation; literature; music; painting.*

Введение *Introduction*

Современная ситуация, сложившаяся в сфере гуманитарного образования, вызывает множество споров и выражения неудовольствия как со стороны преподавательского состава, так и со стороны обучающихся студентов. Привычные, сложившиеся десятилетиями, методы преподавания перестают соответствовать условиям сегодняшнего дня: ускорению темпа жизни, информационному буму, всеобщей компьютеризации и т.д. Все эти факторы требуют пересмотра основ образования, создания новых образовательных парадигм. Много говорится, в частности, о том, что современный педагог должен не столько давать информацию (в широком понимании этого слова), сколько учить способам ее быстрого нахождения (Trajnev, V., Trajnev, I., 2008; Andreev, 2011). При этом возникает другая, более глобальная проблема. Современный молодой человек, с рождения погруженный в электронную информационную среду, как правило, справляется с задачей получения любых сведений и фактов гораздо лучше, чем мучительно осваивающий новые технологии профессор-книголюб. Только как будет работать с добытыми сведениями этот студент? Насколько он в состоянии освоить и переработать тот колоссальный объем информации, который находится в свободном доступе, причем поданный в очень разном качестве: от вполне серьезных научных исследований до обывательских «постов», охватывающих решительно все области гуманитарного (прежде всего) знания? «*Homo informaticus*» часто теряет способность оценивать качество материала, сравнивать, классифицировать, – иначе говоря, теряет свойства аналитического мышления. Поэтому представляется актуальной задачей разработка таких вузовских курсов, которые были бы направлены на выработку навыков интегративного подхода ко всему корпусу гуманитарного наследия, причем не за счет увеличения количества объектов изучения, а за счет выявления общих закономерностей строения, развития и способов воздействия культурных текстов, в частности, произведений разных видов искусства.

Эту задачу, в принципе, ставят перед собой такие «метанауки», как герменевтика, семиотика, культурология. Однако и данные предметы уже требуют серьезного пересмотра и обновления, так как за историю своего существования обросли гигантским количеством теоретических научных текстов, даже попытка изучения которых для современного студента представляет настолько сложную задачу, что истинная цель – понимание объекта исследования – оказывается практически недостижимой. Не случайно все эти предметы сконцентрированы в образовательных программах философских факультетов, а искусствоведы, филологи,

музыковеды если и знакомятся с ними, то опять-таки как с очередным звеном философско-теоретического дискурса, но не как с практическим руководством для изучения произведений искусства. В такой кризисной ситуации представляется актуальным разработать для программ искусствоведческого и гуманитарного направлений принципиально иной подход к предмету «Герменевтика», обозначив его более точно как «Герменевтика художественного текста», и рассмотреть это как попытку вернуться к изначальному смыслу ГЕРМЕНЕВТИКИ как ПОНИМАНИЯ (иначе говоря, не объяснять феномен понимания, а дать возможность понять конкретное произведение искусства).

Цель данной статьи – предложить для вузовских программ искусствоведческого и гуманитарного направлений инновационный учебный курс «Герменевтика художественного текста», основанный на разработанном Н. Брагиной междисциплинарном методе анализа, который позволяет на примере ограниченного набора произведений живописи, архитектуры, музыки, кино и театра показать студентам, как формируются смыслы в произведениях разных видов искусства, какими способами эмоционального и интеллектуального воздействия пользуются авторы, как, через проникновение в глубинные слои конкретного произведения, можно рассмотреть психологический портрет его создателя и встроить данное произведение в целостный корпус его творчества и в культурный контекст эпохи.

Основные принципы курса *Basic Principles of the Course*

Для успешного преподавания курса большое значение имеет выбор произведений для анализа. Он может быть произвольным и варьироваться в соответствии с предпочтениями преподавателя, ведущего предмет, но и, одновременно, он должен быть очень хорошо обоснованным. Следует обращаться к сочинениям, где максимально ярко проявляются те свойства, на которых в данный момент преподаватель акцентирует внимание, чтобы потом обучающийся мог видеть их в самых разных проявлениях и сочетаниях. Таким образом, курс становится по преимуществу практическим. В качестве теории преподаватель дает в основном только методику анализа, а практическое освоение этого инструментария способствует тому, что студент получает навык *видения* и понимания любого произведения искусства, чтобы в дальнейшей своей деятельности расширить круг объектов изучения, исходя из собственных вкусов и профессиональных задач.

Подход к выявлению и интерпретации смыслов, заложенных в произведении, предлагается начинать с предварительного анализа его структуры. Такой вид анализа особенно подробно разработан в музыковедении, так как музыкальное произведение (имеется в виду «чистая», непрограммная инструментальная музыка) не имеет явного сюжета, и его структура напрямую транслирует его содержание (Mann, 1993: 60). Но поскольку музыкальные формы (одночастная, двухчастная, трехчастная, вариации, сонатная форма, рондо и т.д.) ведут происхождение от синкретического искусства древности, а, в более широком смысле, восходят к изначальным мифологическим структурам, то представляется плодотворным экстраполировать музыковедческий метод анализа форм на более широкий спектр произведений искусства, то есть трактовать его как универсальный (Bragina, 2017).

Точное определение структуры произведения уже само по себе дает возможность осознания заложенных в нем глубинных смыслов. Этот смысл – часто интуитивно, неосознанно со стороны автора – отсылает к мифологическим прототипам, к базовым, архетипическим схемам, которые воплощаются в бесчисленное множество разнообразных сюжетов (Bragina, 2010).

Так, одночастная форма воплощает единство мира. В ней, как в ядре, заключено все его многообразие, но в состоянии покоя, в герметичной замкнутости. Одночастная форма – это икона (лик), музыкальный период, лирическое стихотворение без развитого сюжета. Не случайно в любом виде искусства одночастной форме (периоду) соответствует экспозиционный тип изложения: репрезентативность, интонационная выпуклость, тональная определенность. Но внутреннее мотивное строение одночастной формы может быть весьма сложным, так как это полиэлементное образование, имеющее колоссальный потенциал для дальнейшего развития.

Самый древний и наиболее универсальный способ развития – вариативность. Форма вариаций дает возможность рассмотрения основной мысли с разных сторон, постепенного ее развертывания, обыгрывания, любования ее оттенками. Этот способ тематического преобразования присущ всем культурам во все времена и проявляется во всех видах искусства: от реликтовых кумулятивных сказок до изысканных живописных полотен, на которых одно лицо, фигура, предмет изображаются в разных ракурсах, в разном освещении, демонстрируя разные оттенки мироощущения, не теряя внутренней целостности. Не случайно в музыке в форме вариаций как правило пишется вторая часть классического сонатно-симфонического цикла, содержание которой – «человек размышляющий» (Agranovskij, 1979), ведь вариации – буквальное воплощение процесса размышления. Из живописи здесь возможны примеры

картин С. Боттичелли («Весна»), В.Э. Борисова-Мусатова («Изумрудное ожерелье»), серии пейзажей К. Моне.

Двухчастные формы в своей основе демонстрируют дуальность мира, бинарные оппозиции. Интересно сравнить икону и ренессансный портрет. В первом случае, как было сказано, это воплощение единства вселенной до грехопадения, до разделения на «свое» и «чужое» пространство, на «я» и «не я». Во втором – человек находится в оппозиции к миру, и это насыщает произведение драматизмом и субъективной эмоциональностью. На портретах Возрождения человек царит, занимая передний план картины (здесь в качестве иллюстраций и материала для подробного анализа возможно использовать картины Леонардо да Винчи, Джорджоне, Рафаэля). Он гармоничен и прекрасен в своей уверенной, статичной позе. А на заднем плане открывается мир необъятный и таинственный, так как уходящие к горизонту дали почти неразличимы благодаря световой перспективе. Однако господство человека над миром еще не вызывает сомнения. Это ли не симультанное воплощение антропоцентрической философии Ренессанса? Но достаточно перейти к анализу портретов эпохи барокко (Рембрандт, Веласкес), и зритель погружается в иную философию, наблюдает другое видение мира. Человек предстает здесь с печатью глубоких внутренних переживаний и страдания, а мир – задний план картины – лишается предметности, утопает в темных зияющих провалах, порождающих чувство ужаса перед его непостижимостью. Примеры указанных форм в живописи даны в Рис. 1.



(Икона)



(Боттичелли)



(Рафаэль)



(Рембрандт)

Рисунок 1. Примеры одночастной, вариативной и двухчастной формы в живописи
Figure 1 Examples of One-part Form, Variations and Two-part Form in Painting
(Icon, Botticelli, Raphael, Rembrandt)

В музыке в двухчастной форме (медленно – быстро) пишутся арии в итальянских операх. Это дает возможность показать разные грани образа героя: его внутренний мир, обычно (в традициях жанра) исполненный

драматизма и трагических переживаний, – и внешнее проявление с преобладанием героизма, решительности, блеска. Удобными примерами для анализа могут быть многочисленные двухчастные арии из опер Дж. Верди.

Та же идея двоемирия породила в музыке не просто контрастно-составные двухчастные формы, но и «малые циклы»: прелюдия и fuga, токката и fuga и т.п. Здесь двухчастная форма максимально поляризуется, образуя две самостоятельные части. Это можно трактовать как воплощение воли - и порядка, стихийно-человеческого (проявленного в импровизационности и обилии спонтанных контрастов в первой части диптиха) – и божественного канона (построенной по незыблемым законам fugи). Убедительный пример – токката и fuga d-moll И.С. Баха, но возможно использовать и другие, менее популярные произведения – в зависимости от музыкальной подготовки конкретной аудитории.

Трехчастные формы, то есть формы, наделенные репризой, возвращающие в первоначальное состояние, – воплощают мечту человечества о возвращении к утраченной гармонии, об обретении целостности. Именно поэтому симметричная трехчастная форма – основа картин на религиозные сюжеты, фасадов храмовой архитектуры. Это образ Дома, в который нужно вернуться после долгого пути, охранительной устойчивости и обретенного равновесия.

Идея вечного возвращения основана на циклическом восприятии времени. Переживание циклического времени породило большое количество ритуалов во всех мировых культурах и закрепилось в сознании человечества как проявление игрового начала. Поэтому в музыке в трехчастной форме пишутся практически все танцы (поздний, окультуренный вариант древних обрядов). В литературе трехчастная форма с ярко выраженной репризой (возвращением начальной ситуации) чаще наблюдается в комедийных жанрах, также связанных с игрой, иронией, с несколько отстраненным авторским взглядом на описываемые события.

Но в разные культурные периоды и у разных авторов (прежде всего европейских) эмоциональная оценка такой зацикленности времени была неоднозначной. Она могла трактоваться не только как достижение желаемой гармонии и покоя, но и как образ дурной бесконечности, косности, отсутствия развития, в пределе – смерти («Пляски смерти»). Поэтому европейская культура с ее многовековым стремлением к прогрессу породила разновидность трехчастной формы, основанной на внутреннем конфликте и показе в динамике его развития и разрешения. В музыке такая форма имеет название сонатной (так как используется по большей части в первых частях сонатно-симфонических циклов), но корни ее – в риторике, на законах которой, в свою очередь, основана и театральная драматургия

(Mattheson, 1739). Динамическую трехчастную форму можно обнаружить в любом произведении искусства, идея которого – драма (буквально – «действие»), то есть в котором присутствует конфликт и его развитие. Совершенно естественно, что она присуща подавляющему большинству литературных текстов с динамичным сюжетом; но в живописи, как искусстве статическом, казалось бы, говорить о действенности можно только условно, метафорически. Однако это не совсем верно. Картина горизонтального формата, как правило, имеет некий сюжет, только показанный одномоментно. Ведь и произведения «временных» (опять-таки условно) искусств при анализе рассматриваются как зафиксированный (записанный буквами или нотами) текст, имеющий начало, развитие и конец. Более того: только уже записанный, то есть превращенный в картинку, текст поддается анализу. Соответственно, и через живописное полотно можно передать драматический сюжет, развивающийся во времени. Как правило, это сложно организованные композиции, часто с присутствием зеркальных отражений. Возникающий эффект двойничества (всегда вариативного, несколько измененного) дает возможность предположить некоторую временную дистанцию между объектом и его отражением. В таком случае весь остальной визуальный ряд, как правило, прописанный менее детально, включающий мотивные повторения, связи, меняющиеся ракурсы, – будет соответствовать фазе развития, соединяющей основной образ картины и его репризное повторение, что и можно считать эквивалентом динамической трехчастной формы и сонатности, как самого драматичного ее варианта.

Можно предложить для детального рассмотрения, например, картину Э. Мане «Бар в "Фоли-Бержер"» (Рис. 2), где отражение в зеркале не совпадает с реальным портретом главной героини, изображенной на переднем плане. Это наводит на мысль о временной дистанции между двумя моментами, зафиксированными на картине. Разница подчеркнута не только внешним изменением героини, но и ее новым психологическим состоянием, потухшим взглядом, равнодушной отстраненностью от окружающего мира (в то время как зеркало передает момент живого общения с находящимся напротив мужчиной). Это прочитывается как начало и окончание некой истории, а все пространство полотна, заполненное многочисленными, едва различимыми, фигурами, среди которых угадываются варианты портрета героя, отраженного в зеркале, (эквивалент развития мотивов в разработке), но исчезнувшего, превратившегося в воображаемый фантом «здесь и сейчас» (эквивалент динамизированной репризы), превращается в метафору человеческой жизни, наполненную хороводом людей и событий и приведшей к полному одиночеству и душевному опустошению главной героини.



Э. Мане. Бар в Фоли-Бержер (1882)

Рисунок 2. Пример динамической трехчастной формы в живописи
Figure 2 An Example of a Dynamic Three-part Form in Painting
(E. Manet. Bar at the Folies Bergeres)

Таким образом, анализ формы произведения представляется очень важным и первичным в методике целостного анализа, так как структура несет информацию о наиболее глубинных внутренних смыслах текста, часто даже не осознанных автором. Более того, можно утверждать, что не столько художник выбирает, в какой форме он будет писать произведение, сколько его индивидуальный замысел неизбежно выльется в адекватную его идее базовую форму с устойчивыми мифологемами.

От общей идеи следует перейти к дальнейшему анализу всех мотивов, знаков, символов, их сопряженности и взаимовлияния – с целью понимания смысла каждого отдельного момента произведения и полноценной реконструкции авторского замысла. Для этого предлагается выделить такие параметры художественного текста, как полифония, система лейтмотивов, мотивная драматургия, пространственно-временные отношения в тексте. Психоаналитический метод анализа, который также можно применять в герменевтике художественного текста, методы аллюзий и ассоциаций позволяют соотнести текст с личностью автора и, шире, рассмотреть его в культурном контексте эпохи.

Работа идет по принципу герменевтического круга, то есть детальный анализ элементов художественного текста сравнивается с первичной версией общей идеи, которая может быть скорректирована, если возникают противоречия с выявленными смыслами отдельных фрагментов. Этот процесс может повторяться неоднократно, вплоть до полного совпадения общего и частного, в соответствии с учением Ф. Шлейермахера: «...Как целое понимается из отдельного, но и отдельное может быть понято только из целого, имеет такую важность для данного искусства (искусства понимания – авторы) и столь неоспоримо, что уже первые же операции невозможно проделать без применения его, да и огромное число

герменевтических правил в большей или меньшей степени основываются на нем...» (Schleiermacher, 1987, 99).

Только полное совпадение общего и частного в выводах может считаться логически доказанным исходом анализа. Однако это не отменяет известной свободы интерпретации, возможности субъективного взгляда, обоснованного личным жизненным опытом интерпретатора, широтой его ассоциативного мышления и возможностью трактовки произведения с позиции сегодняшнего дня. Технология герменевтического круга предполагает эту гуманитарную свободу толкования. Как писал Г. Гадамер: «Неизбежное движение по кругу именно в том и состоит, что за попыткой прочесть и намерением понять нечто "вот тут написанное" "стоят" собственные наши глаза (и собственные наши мысли), коими мы это "вот" видим» (Gadamer, 1991, 19).

Заключение *Conclusion*

Предложенный практический курс герменевтики художественного текста имеет свои преимущества и может быть востребован в преподавании в высшей школе для широкого круга гуманитарных и искусствоведческих специальностей. Он не предполагает дополнительного изучения большого количества нового материала, напротив, в качестве объектов исследования можно использовать уже известные, даже хрестоматийные тексты, но предложенный подход дает возможность совершенно иного уровня их понимания. Методика герменевтического анализа переключает внимание обучающегося с поверхностного ознакомления с гигантским количеством чужих исследований на индивидуальное, бережное и творческое прочтение текста, постижение заложенных в нем глубинных смыслов, подтекстов, выстраивания аллюзий и параллелей, порой даже не задуманных автором, но доступных пониманию современного читателя, зрителя, слушателя. Такой подход возвращает утраченный навык «медленного чтения», направленного не на фиксацию поверхностного сюжета или получения сиюминутного удовольствия от соприкосновения с произведением искусства, а на глубинную рефлексию и стимулирование собственных творческих интенций.

Курс «Герменевтика художественного текста» был апробирован на практике в двух российских вузах: Московском институте современного искусства и Нижегородской государственной консерватории им. М.И. Глинки. Слушателями были аспиранты и ассистенты разных специальностей: искусствоведы, режиссеры, журналисты, актеры, музыковеды и музыканты-исполнители. Проведенные опросы показали, что

курс вызвал большой интерес у студентов. По их утверждениям, предложенный аналитический метод позволил им не только совершенно по-другому воспринять уже знакомые художественные тексты, но и сформировал навык особого подхода к изучению новых произведений искусства. Студенты выразили также уверенность в том, что этот навык будет иметь значение в их дальнейшей творческой деятельности, будь то преподавание, работа в театре, исполнительское искусство или научное поприще.

Summary

The proposed innovative course in Hermeneutics of Works of Art is based on a universal method of artwork analysis applicable in all forms of art, which was elaborated by N. Bragina. The course helps learners to understand the formation of semantics in various forms of art and to identify the ways of emotional and intellectual impact of artworks. It can be achieved by drawing upon a limited number of artworks; however, the choice of examples for analysis is of great importance.

The principles of the musicological analysis are used in the course. The article shows that the basic structures of European academic music, such as periods, two- and three-part forms, variations, and the sonata form, are universal and derive from the most ancient mythological prototypes. These structures can be easily found in all forms of art and have similar semantic connotations. The one-part form reflects the idea of the unity of the universe (icon, musical period, and small lyric poem are examples of the one-part form). The variations form draws attention to the internal diversity and gradual development of the main image or idea of the artwork. The two-part form expresses the duality of the world and exhibits binary oppositions. The three-part form (a form with reprise) embodies the idea of return; it is based on cyclical perception of time. The dynamic version of the three-part form displays the conflict between images or ideas, its development and resolution (in music, this form is called sonata form).

The proposed method also includes the analysis of polyphony, motivational dramaturgy, and space-time relations in the text, as well as the psychoanalytic approach to content interpretation. The idea of the hermeneutic circle is used to harmonize a general analysis of an artwork and a detailed analysis of its separate elements, for harmony and balance between the general and the particular would thereby prove the relevance of interpretation.

The approbation of the proposed study course has demonstrated good results in developing students' abilities to analyse a work of art.

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DARBA VIDĒ BALSTĪTAS STUDIJAS AUGSTĀKAJĀ PROFESIONĀLAJĀ IZGLĪTĪBĀ LATVIJĀ UN EIROPĀ: TEORĒTISKIE UN METODOLOĢISKIE ASPEKTI

Work-Based Studies in Higher Professional Education of Latvia and Europe: Theoretical and Methodological Aspects

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Abstract. *Work-based learning has been developing rapidly in Latvia for the last three years. Since 2017, the Employers' Confederation of Latvia has been implementing a project of the European Social Fund, which provides for a tripartite learning implementation agreement between the educational institution, the student, and the employer. The project targets vocational learners, but equivalent opportunities are also spoken of in higher vocational education. Such an approach would help the employer direct the future employees in the direction of acquiring the necessary knowledge and skills. The publication aims to give a short overview of the historical development of learning opportunities in the working environment in Latvia, the concepts used in research, as well as to look at the research methodology used in the studies of work-based environment in higher professional education in Latvia and Europe and the results of those studies. The first section of the article discusses historical problems of work-based learning, analyses the normative acts and relevant concepts to support further research. The second section analyses methodological approaches to the studies related to the organization of work-based learning. The results of this theoretical and methodological review will serve as a theoretical basis for empirical research related to the introduction of work-based studies in higher professional education in Latvia.*

Keywords: *work-based learning, work-based studies, working environment, higher professional education.*

Ievads *Introduction*

Darba vidē balstīta izglītības modeļa izmantošana augstākās profesionālās izglītības studiju procesā ir aktuāla augstākās izglītības problēma Latvijā un citur pasaulē un tās risināšanai nepieciešami zinātniskajā izpētē balstīti instrumenti.

Minētais modelis ir saistīts ar studējošo integrāciju darba vidē, nodrošinot topošā darbinieka un darba devēja savlaicīgu sadarbību un izvairoties no pārejas perioda starp studijām un tiešo darba pienākumu veikšanu, jo studējošais jau atrodas darba vidē studiju laikā. Šādā studiju modelī darba devējs pats var virzīt topošo darbinieku nepieciešamo zināšanu un prasmju apguves virzienā. Šobrīd Latvijā ir izveidojusies cieša sadarbība starp darba devēju, studentu un izglītības iestādi profesionālās vidējās izglītības kontekstā kā darba vidē balstītas mācības (Vjakse, 2020). Augstākajā profesionālajā izglītībā šāda sadarbība patreiz bieži tiek īstenota, izmantojot kvalifikāciju prakses (ESF projekts, 2016).

Profesionālās izglītības līmenī darba vidē balstītas mācības Latvijā ieviestas kopš 2015. gada (ESF projekts, 2016). Tikmēr augstākajā profesionālajā izglītībā ir sākusies darba vidē balstītu studiju ieviešana tādās jomās kā skolotāju (Izglītības un zinātnes ministrija, 2021) un medmāsu profesionālajā izglītībā (LR Valsts kontrole, 2019).

Aplūkojot Eiropā veiktus pētījumus (Attenborough, Abbot, Brook, & Knight, 2019; Moldovan, 2019 u.c.) par profesionālajā izglītībā ieviestu darba vidē balstītu studiju procesu, tā ietekmi uz darba spēka kvalifikāciju un darbinieka nonākšanu atbilstošā darba tirgū, redzams, ka šāda studiju forma veicina motivāciju apgūt attiecīgajai profesijai nepieciešamās prasmes un nodrošina darba devēju prasībām atbilstošu speciālistu nonākšanu darba tirgū.

Lai noskaidrotu ar pētījuma tēmu saistītos teorētiskos aspektus, kas sakņojas vēsturiskās liecības, normatīvo aktu regulējumā un šajā jomā dominējošos jēdzienos, kā arī identificētu darba vidē balstīta studiju procesa pētījumos izmantoto metodoloģiju un rezultātus, tika analizēti vēsturiskie literatūras avoti, Latvijas normatīvie akti un statistikas dati, kā arī aplūkoti pieejamie teorētiskie un empīriskie pētījumi Latvijā un Eiropā attiecīgajā jomā. Sākotnēji, balstoties uz atslēgvārdiem – *darba vidē balstītas studijas, darba vidē balstīta izglītība* un izmantojot starptautiskas datu bāzes (EBSCO, ScienceDirect), tika atrasti astoņi raksti. No šiem rakstiem savukārt tika atlasīti pieci pētījumi, kuru metodoloģiskās pieejas autoriem bija devušas iespēju empīriski pārbaudīt konkrētu darba vidē balstītu studiju procesa pieeju, instrumentu un elementu efektivitāti.

Tādējādi šī raksta mērķis ir sniegt īsu ieskatu darba vidē balstīta studiju procesa vēsturiskajā attīstībā, pētījumos izmantojamajos jēdzienos, kā arī aplūkot pētījumu metodoloģiju, kas izmantota augstākās profesionālās izglītības darba vidē balstītu studiju pētījumos Latvijā un Eiropā, un šo pētījumu rezultātus.

Darba vidē balstītas studijas: vēsture, normatīvie akti un jēdzieni *Studies in Work Environment: History, Normative Acts, and Concepts*

Lai rastu dziļāku un kontekstualizētu skatījumu uz pētāmo tēmu, šajā raksta daļā ir īsi aplūkota darba vidē balstītu mācību/studiju vēsturiskā attīstība, analizēti attiecīgie normatīvie akti un statistikas dati kā arī apskatīti ar dotā pētījuma jomu saistīti specifiski jēdzieni.

Jau kopš 20. gs. 20. gadiem darba vidē balstītas mācības Latvijā tiek uzskatītas par risinājumu kvalificēta darba spēka trūkuma problēmas novēršanai (Dindans, 1921). Laika gaitā darba vidē balstītas mācības tiek ieviestas un ar to palīdzību tiek īstenotas praktiskās apmācības profesiju kvalifikācijas iegūšanai (Arodbiedrību aktīva sanāksme, 1944). Profesionālā izglītība kā atsevišķa studiju forma Latvijā tiek realizēta kopš 20. gs. 50. gadiem, kad kvalificēta darba spēka trūkumu un absolventu nenonākšanu profesijai paredzētajā darba tirgū tolaik piedāvā risināt kā studijas darba vietā (Andrejsons, 1958). Šāda prakse tiek ieviesta 20 gadus vēlāk (Turkovskis, 1976). Profesionālās izglītības iestādes, tostarp augstākās profesionālās izglītības skolas, Latvijā ir pārmantotas no Padomju Savienības izglītības politikas, kad arodskolas bija cieši saistītas ar lieliem industriāliem uzņēmumiem dažādās tautsaimniecības nozarēs.

Profesionālās izglītības jēdziens Izglītības likumā Latvijā ir noteikts kopš 1991. gada, savukārt 1999. gadā stājās spēkā Likums par profesionālo izglītību (LR Saeima, 1999). Profesionālās izglītības likums, kas attiecas arī uz augstāko profesionālo izglītību, nosaka, ka profesionālās kvalifikācijas līmenis, ko students iegūst absolvējot šādu mācību iestādi, ir viņa teorētiskā un praktiskā sagatavotība, kas dod iespēju veikt noteiktas sarežģītības darba pienākumus. Likumā noteiktās profesionālās kompetences savukārt ir profesionālās darbības veikšanai nepieciešamo zināšanu, prasmju un atbildības kopums noteiktā darba situācijā. Šādas kompetences tiek apgūtas mācību prakses laikā, kur studiju praktiskās daļas apguve tiek īstenota izglītības iestādē vai ārpus tās. Tikmēr pats praktikants likumā ir definēts kā izglītojamais, kas saskaņā ar attiecīgās profesionālās izglītības programmas praktiskās daļas apguvi atrodas mācību praksē iestādē, pie komersanta vai biedrībā (LR Saeima, 1999).

1. līmeņa augstākās profesionālās izglītības īstenošana Latvijā notiek koledžās, bet universitātes piešķir bakalaura un maģistra grādu 2. līmeņa profesionālās augstākās izglītības ietvaros (Nacionālā enciklopēdija, 2021). 1. līmeņa profesionālās augstākās izglītības programmas īstenošana noris saskaņā ar Augstskolu likumu (LR Saeima, 1995) un Profesionālās izglītības likumu. Termins “darba vidē balstītas mācības” normatīvajos aktos atrodams tikai Profesionālās izglītības likumā, kurš nosaka, ka šāds mācību process var tikt īstenots kā atsevišķa profesionālās izglītības ieguves mācību forma (LR Saeima, 1999). Augstākajā profesionālajā izglītībā šāds modelis atsevišķi normatīvajos

aktos netiek minēts. Tomēr darba vidē balstīts studiju process gan vidējās, gan augstākās profesionālās izglītības ieguvei aizvien tiek papildināts ar normatīvo aktu regulējumiem. Par pamatojumu šādas mācību/studiju formas iekļaušanai visos profesionālās izglītības līmeņos, tostarp augstākajā profesionālajā izglītībā, minama Latvijas Ilgtspējīgas attīstības stratēģija līdz 2030.gadam, kas paredz izglītības kvalitātes uzlabošanu un pieejamību, uzsverot, ka nepieciešams pilnveidot atbalsta pasākumus, kas sniegtu darba devējiem motivāciju ieguldīt kvalificēta darba spēka resursu attīstībā (Latvija 2030, 2010). Arī Latvijas Republikas Ekonomikas ministrijas ziņojumā par valsts sektora izstrādāto atbalsta programmu, lai atvieglotu nosacījumu piemērošanu augsti kvalificētu specialistu piesaistei, secināts, ka augsti kvalificētu speciālistu trūkums, kas šobrīd vērojams īpaši apstrādes rūpniecības un IKT nozarēs, ierobežo Latvijas ekonomikas izaugsmi, uzņēmumu produktivitātes pieaugumu un investīciju piesaisti, un līdz ar to arī labi apmaksātu darba vietu veidošanos (Ekonomikas ministrija, 2018).

Lai atspoguļotu statistikas datus, kas akcentē tēmas aktualitāti, vispirms aplūkosim Latvijas Darba devēju konfederācijas (LDDK) sadarbībā ar Lietuvas, Beļģijas, Somijas un Igaunijas partneriem īstenoto pētījumu projektu “Mācekļības attīstība: prakšu vadītāju apmācība un mācekļības veicināšana”. Tā ietvaros 30 dažādu nozaru (būvniecība, kokrūpniecība, pārtikas rūpniecība, metālapstrāde un mašīnbūve, IKT u.c.) uzņēmumos tika noskaidrots, ka 77% uzņēmumu īsteno savu darbinieku apmācību darba vietā, jo “darbaspēks ir pieejams, bet grūti atrast kvalificētu darbaspēku” (ESF projekts, 2016). Pēc pētījuma datiem secināms, ka 237 profesijās Latvijā šobrīd novērojams būtisks darba spēka trūkums. Arī Latvijas Lauksaimniecības universitātes ilglaicīga socioloģiskā pētījuma “Par darbaspēka pieprasījuma tendencēm līdz 2030.gadam dažādās tautsaimniecības nozarēs” rezultāti rāda, ka speciālistu trūkums prognozēts tieši inženierzinātnēs, ražošanā un būvniecībā, dabaszinātnēs, matemātikā un IT, kā arī veselības aprūpes un sociālās labklājības jomā (Latvijas Lauksaimniecības universitāte, 2019). 2018. gada nogalē veiktais LDDK pētījums par profesionālās izglītības iestāžu audzēkņu dalību darba vidē balstītās mācībās un mācību prakses uzņēmumos rāda, ka vairāk nekā 45% darba devēju vēlas iesaistīties šādu mācību organizēšanā, lai sagatavotu uzņēmumam kvalificētus darbiniekus (ESF projekts, 2020).

Raksta ierobežotā apjoma dēļ minēsim tikai dažus specifiskus jēdzienus, kas saistās ar tēmas teorētisko un empīrisko izpēti. Kā centrālos jēdzienus vispirms var izdalīt darba vidē balstītas mācības un darba vidē balstītu studiju procesu. Darba vidē balstītas mācības kā oficiāls jēdziens 2015.gadā ieviests profesionālās vidējās izglītības līmenī. Par piemēru šāda mācību modeļa izveidei tika ņemts augstskolu izglītības modelis, kur praktisko iemaņu iegūšanai atvēlētas studiju prakses (Cedefop, 2015). Mērķis darba vidē balstītu studiju īstenošanai arī augstākajā profesionālajā izglītībā ir līdzīgs – pēc iespējas augstāk kvalificētu

darbinieku nonākšana darba tirgū. Tā ir elastīga studiju forma, kas tiek realizēta gan augstskolā, gan uzņēmumā un balstās uz trim pamatnostādņēm:

- mācības darbam, kur students apgūst profesijai nepieciešamās zināšanas, prasmes un kompetences;
- mācības darba vidē, kur students profesijai nepieciešamās zināšanas prasmes un kompetences attīsta jau strādājot konkrētā amatā;
- mācības caur darbu, jeb ar darba palīdzību, kur students profesijai nepieciešamās zināšanas, prasmes un kompetences apgūst risinot konkrētas problēmas darba vidē un augstskolā (Katane, Katans, & Īriste, 2016).

Darba vidē balstītas studijas tiek organizētas duālajā studiju vidē, kas ietver gan augstskolas akadēmisko vidi, gan profesionālās darbības vidi uzņēmumā. Eiropas izglītības telpā jēdziens “profesionālās izglītības duālā sistēma” paredz domāšanas un rīcības maiņu profesionālajā izglītībā (Katane et al., 2016).

Vēl viens ar tēmu saistīts jēdziens “zināšanu līdzdale” piedāvāts A. Jēkabsones promocijas darbā inženierzinātnes jomā par ilgtspējīgas sadarbības veicināšanu starp pieaugušo izglītības iestādēm un uzņēmumiem. Darbā tiek secināts, ka potenciālajiem darba devējiem vai prakšu vadītājiem darba procesā ir jāsniedz savas praktiskās zināšanas studentam. Tādējādi izglītības sistēmā tiktu nodrošināts zināšanu līdzdales process, kurā students kā praktikants nonāk darba vidē un gūst zināšanas no prakses vadītāja vai potenciālā darba devēja, veicot konkrētā amata pienākumus. Šādā sadarbībā starp prakses devēju, studentu un mācību iestādi nepārtraukti nepieciešams motivēt visas iesaistītās puses, lai šis process būtu pietiekami intensīvs (Jēkabsons, 2016). Praktisko iemaņu apguve var tikt uzskatīta par evolucionāru procesu arī tajā ziņā, ka tā paredz nepārtrauktu profesionālo prasmju pilnveidi. Ne vienmēr tas garantēs ekonomisko izaugsmi un dos gaidīto rezultātu, taču kopumā tas varētu veicināt izglītota personāla nonākšanu darba tirgū (Šmite, 2004).

Ņemot vērā tēmas dinamisko attīstību pētniecībā un praksē, jānorāda, ka minētie jēdzieni noteikti nav vienīgie un tuvākajos gados var prognozēt jaunu tēmai raksturīgu jēdzienu ienākšanu zinātniskajā literatūrā.

Šī raksta otrajā daļā tiks analizētas darba vidē balstītu studiju pētījumos Latvijā un Eiropā izmantotās metodoloģiskās pieejas augstākajā profesionālajā izglītībā un šo pētījumu rezultāti.

Ieskats darba vidē balstītu studiju pētījumu metodoloģijā ***Research Methodology for Inquiry on Work-based Studies***

Tēmas zinātniskās izpētes nepieciešamību pamato ne vien raksta pirmajā daļā minētie tēmas praktiskās aktualitātes aspekti un teorētiskās iestrādes, bet arī

fakts, ka gan Latvijā, gan Eiropā zinātniskie pētījumi izglītības zinātnes jomā par doto tēmu tieši augstākās izglītības kontekstā ir rodami pavisam nelielā skaitā. Latvijā dotā tēma teorētiskajā aspektā ir dziļi analizēta jau minētajā Katanes, Katana and Īristes (2016) zinātniskajā rakstā, bet empīrisko pētījuma ir izdevies atrast vienīgi Sitikova, Anohinas-Naumecas un Petrovičas (2013) rakstā, kur autori izmanto internetaptaujas un dziļās intervijas, lai iegūtu pārsvarā kvalitatīvus datus un noskaidrotu darba devēju un studentu viedokļus par darba vidē balstītām studijām, universitātes kultūru, juridiskām un akadēmiskām problēmām saistībā ar šāda veida studijām. Vairāki citi datu bāzēs atrodami Buliginas un kolēģu (Buligina & Sloka, 2017, 2020; Buligina, Putans, & Sloka, 2014) kā arī Golcas un Rajevskas (2017) pētījumi bija saistīti ar profesionālo vidējo izglītību, izmantoja ekonomikas zinātnes perspektīvu un pamatā balstījās uz kvantitatīvām aptaujām.

Lai rastu ieskatu jaunākajos empīriskajos pētījumos par darba vidē balstītām studijām augstākajā profesionālajā izglītībā Eiropā, tika izmantotas Vācijas (2 publikācijas), Nīderlandes, Spānijas un Rumānijas pētnieku zinātniskās publikācijas (Esteban & Arahal, 2015; Guo, Saab, Post, & Admiraal, 2020; Longmuß & Benjamin, 2017; Müller, Reise, Duc, & Seliger, 2016; Neacsu, 2015) par šo tēmu, kas pēdējo piecu gadu laikā publicētas inženierzinātņu un veselības aprūpes jomā.

Rakstu tematika pamatā aptver studentu pieredzes un studiju motivācijas izpēti darba vidē balstītu studiju laikā. Pētījumi saistās ar jaunu modeļu ieviešanas stratēģijām praktisko iemaņu apguvei, kā arī dažādu metožu izmantošanu, lai veicinātu studentu mācīšanās efektivitāti (Guo et al., 2020; Müller et al., 2016; Neacsu, 2015). Ieviešot darba vidē balstītu jaunizstrādātu studiju modeli, tiek veikta studiju procesa novērošana, lai noteiktu problēmu risināšanas un kolektīvās mācīšanās efektivitāti (Neacsu, 2015). Savukārt montāžas spēļu sistēmas ieviešana ļauj noteikt iespējamus risinājumus mācīšanās izaugsmes nodrošināšanai (Müller et al., 2016). Pētījums, kura pamatā ir produkta ražošanas process studiju laikā, ļauj noskaidrot izmaiņas darba procesa izpratnē (Guo et al., 2020). Divos pētījumos skatīts arī studentus reālajā darba tirgū iesaistījušo darba devēju viedoklis par darba spēka kvalitāti un efektivitāti, ja praktisko iemaņu apguve studiju laikā notiek uzņēmumā jeb potenciālajā studenta darba vietā (Esteban & Arahal, 2015; Longmuß & Benjamin, 2017). Pētījums, kas vērsts uz lidmašīnu projektēšanu studiju laikā, sniedz ieskatu efektīvās praktisko studiju metodēs lielām studentu grupām (Esteban & Arahal, 2015). Savukārt pētījums, kura pamatā ir konkrētas problēmas risinājuma īstenošana, piedāvā jauna modeļa izveidi un ieviešanu uzņēmuma darbībā, kas paredzēta tieši potenciālajiem darbiniekiem (Longmuß & Benjamin, 2017). Visus pētījumus vienojošais elements ir uz gala produktu vai pakalpojumu virzīts studiju process.

Runājot par izmantotajiem dizainiem, pētījumos par praktiska profesionālo apmācību modeļa ieviešanu darba vietā (Neacsu, 2015) un simulācijas spēlēm darba prasmju apgūšanai (Müller et al., 2016) izmantots kvalitatīvais darbības pētījuma dizains. Savukārt pētījumā par mācību modeļa ieviešanu profesionāli apmācītiem ekspertiem darba vietā balstītās mācībās (Longmuß & Benjamin, 2017) izmantots kvantitatīvais eksperimentālā pētījuma dizains. Lai noskaidrotu studentu viedokli par mācīšanos, izmantojot reālās darba vietas pieredzi, tiek izmantots jauktā pētījuma paralēlās triangulācijas dizains, kura ietvaros tiek gan ieviests jauns studiju modelis, gan realizētas studentu, docētāju un darba devēju aptaujas, lai noteiktu sasniegto rezultātu efektivitāti (Guo et al., 2020). Identisks dizains izmantots arī pētījumā “Lielām studentu grupām piemērotas uz projektiem balstītas mācību metodes”, kur noskaidrots darba devēju un docētāju viedoklis par studentu mācību rezultātu paaugstināšanas iespējām (Esteban & Arahal, 2015).

Tādējādi, divos no pieciem gadījumiem pētnieki izmantojuši kvalitatīvos darbības pētījuma dizainus (Neacsu, 2015; Müller et al., 2016). Lai noskaidrotu darba devēju, studentu vai docētāju viedokli, tiek izmantoti arī jauktā pētījuma dizaini (Guo et al., 2020; Esteban & Arahal, 2015). Vienā pētījumā izmantots eksperimentālais kvantitatīvā pētījuma dizains (Longmuß & Benjamin, 2017). Pat šāda neliela pētījumu skaita analīze liecina par daudzveidīgu komplicētu dizainu izmantošanu un vairāku datu vākšanas metožu kombinēšanu dažādu pētījuma mērķu sasniegšanai, kas ir zināmā mērā skaidrojams arī ar pētāmās parādības komplicēto raksturu.

Minēto pētījumu rezultāti sniedz vērtīgu informāciju par ārzemju izglītībā piedāvātajiem ar zinātniskiem pierādījumiem pamatotiem darba vidē balstītas studiju vides risinājumiem. Tā Vācijā veiktos pētījumos secināts, ka šādos mācību modeļos izmantojamas uz problēmu risināšanu balstītas mācīšanās stratēģijas. Pētījumā par studentu iesaisti uzņēmuma darbībā noteikta projekta izstrādei pētnieki aplūko projektu kā problēmu un tā realizāciju kā problēmas risinājumu (Longmuß & Benjamin, 2017). Tikmēr pētījumā par simulācijas spēļu izmantošanu profesionālo iemaņu apgūšanai (Müller et al., 2016) tiek analizēta darba vidē balstīta studiju procesa attīstība, lai veicinātu studiju produktivitāti augstākās profesionālās izglītības studentiem.

Līdzīgi kā Vācijā veiktos pētījumos arī Nīderlandes pētnieki (Guo et al., 2020) piedāvā organizēt uz projektu izstrādes bāzes balstītu studiju procesu, iesaistot studentus autentisku projektu un produktu izstrādē. Arī šī pētījuma ietvaros tiek runāts par projektu kā problēmu, bet tā ieviešanu un izstrādi – kā risinājumu, kura nepieciešamība ir būtisks un izšķirošs darba vides elements. Studentu autonomijas paplašināšana mācību uzdevumu laikā par 20% ir palielinājusi studentu mācīšanās un motivācijas efektivitāti (Guo et al., 2020).

Uz projektiem balstītu studiju piekritēji ir arī Spānijas pētnieki (Esteban & Arahal, 2015), kas iesaistījuši studentus lidmašīnas projektēšanā, lai noskaidrotu

vai šāda pieeja iespējama lielās studentu grupās. Pētījuma ietvaros izveidotās studentu darba grupas strādāja ar reāliem lidmašīnu pasūtītājiem, projektējot lidmašīnas pēc inženieru specifikācijām, piedāvājot savus gala produktus. Pētījuma rezultāti 140 studentu izlasē rāda, ka uz projektu balstīta studiju vide ir efektīva studiju forma, kas orientēta uz reālo darba vidi. Docētājs šāda mācību modeļa ietvaros pilda skolotāja, darba devēja un konsultanta lomu. Tāpēc vienam no šāda izglītības projekta mērķiem vajadzētu būt nepārtrauktai jaunu rīku iekļaušanai zināšanu nodošanas uzlabošanai (Esteban & Arahaj, 2015).

Arī Rumānijā veiktais pētījums (Neacsu, 2015) par mācīšanos darba vietā papildina minētās atziņas par to, ka darba vidē balstītas studijas balstās uz teorētisko zināšanu izmantošanu sarežģītās darba situācijās, demonstrējot indivīda pielāgošanos konkrētajai situācijai. Kvalitatīvā pētījuma ietvaros pētnieki piedāvā pavisam jauna studiju modeļa ieviešanu praksē un tā darbības novērošanu. Arī šī pētījuma ietvaros uzsvars tiek likts uz problēmu risinājumu un studentu autonomijas paplašināšanu risinājuma ieviešanai, atklājot arī problēmu – docētāju un praktiķu pārmērīgu vēlmī iesaistīties problēmas risinājumā, izmantojot personīgās darba pieredzes zināšanas, tādējādi nepieļaujot studentu iespēju mācīties no kļūdām (Neacsu, 2015).

Pētījumos, kas vērsti uz problēmu risināšanu balstītas studiju stratēģijas ieviešanu, izmantoti dažādi instrumenti – simulācijas spēles, autentisku projektu un produktu izstrāde, studentu darbs pie jaunu rīku izstrādāšanas. Šāda studiju pieeja veicina iesaistīto personu pielāgošanos konkrētajai situācijai, taču vienlaicīgi atklāj arī potenciālās problēmas, kuras var izsaukt docētāju un praktiķu kompetences trūkums šādu studiju organizēšanā.

Secinājumi **Conclusions**

Ielūkojoties darba vidē balstīta studiju procesa vēsturiskajā attīstībā, pētījumos izmantojamajos jēdzienos, kā arī aplūkojot pētījumu metodoloģiju, kas izmantota augstākās profesionālās izglītības darba vidē balstītu studiju pētījumos Latvijā un Eiropā, un šo pētījumu rezultātus, var izdarīt šādus secinājumus:

- 1) Vēsturiski attīstījušās, nepārtraukti risinātas un joprojām aktuālās problēmas – kvalificēta darba spēka trūkuma, risinājums Latvijā tiek ieviests, izmantojot darba vidē balstītu izglītības formu, kuras īstenošana izglītības sistēmā tiek piedāvāta pamatizglītības, profesionālās vidējās izglītības un profesionālās augstākās izglītības līmeņos.
- 2) Lielākā daļa uzņēmumu īsteno savu darbinieku apmācību darba vietā, jo “darbaspēks ir pieejams, bet grūti atrast kvalificētu darbaspēku”.

- 3) Normatīvā līmenī profesionālā augstākā izglītība Latvijā tiek definēta Profesionālās izglītības likumā un Augstskolu likumā. Termins “darba vidē balstītas mācības” atrodams tikai Profesionālās izglītības likumā, kurš nosaka, ka šāds mācību process var tikt īstenots kā atsevišķa profesionālās izglītības ieguves mācību forma.
- 4) Jēdziens “darba vidē balstīts studiju process” augstākajā profesionālajā izglītībā patreiz nozīmē darbam nepieciešamo prasmju apguvi studiju prakšu laikā, ar šo jomu saistīti arī tādi jēdzieni kā “darba vidē balstītas mācības”, “duālā studiju vide”, “zināšanu līdzdale” u.c.
- 5) Dažādās Eiropas valstīs veiktu darba vidē balstītu studiju pētījumu tēmas ļauj noskaidrot šāda studiju modeļa efektivitāti un iesaistīto pušu viedokli par motivāciju apgūt praktiskās iemaņas reālajā darba vidē.
- 6) Darba vidē balstīta studiju procesa pētīšanai izmanto daudzveidīgus komplicētus pētījumu dizainus, kas aptver kvalitatīvas un kvantitatīvas pētījumu metodes, un vairāku datu vākšanas metožu specifiskas kombinācijas dažādu pētījuma mērķu sasniegšanai.
- 7) Tieši studentu autonomija un iesaiste reālajā darba procesā prasmju apgūšanas laikā tiek uzskatīti par efektīvākajiem līdzekļiem, lai apgūtu profesijai nepieciešamās prasmes un iemaņas.

Būtu jānorāda, ka nākotnē jēdzienu “darba vidē balstīts studiju process” var izmantot, runājot par augstākās profesionālās izglītības praktisko iemaņu apguves laiku jeb studiju prakses nodrošināšanu, ja tā tiek īstenota reālajā darba vidē, proti, izglītības iestādei sadarbojoties ar nozares uzņēmumiem, vai, ja izglītības iestāde ir izveidojusi savu mācību centru, kas ir maksimāli pietuvināts reālajai darba videi, pieaicinot pasniedzējus – nozares speciālistus. Attiecībā uz turpmākiem empīriskiem pētījumiem, var secināt, ka studiju procesa darba vidē augstākās profesionālās izglītības kontekstā izpētei ir iespējams izmantot aktīvo iekļaujošo pētījumu (angl. *engaged research*), kura ietvaros varētu īstenot darbības pētījuma dizainu, kombinējot kvalitatīvās un kvantitatīvās pētījuma metodes (Cunliffe & Scaratti. 2017). Dotajā rakstā izvirzītie secinājumi veidos pamatu tālākajam pētījumam par darba vidē balstīta studiju procesa modeli pirmā līmeņa augstākajā profesionālā izglītībā veselības aprūpes nozarē.

Summary

Over the past three years, work-based studies have been developing rapidly in the Latvian education system. European Social Fund project provides for a tripartite learning implementation agreement between the educational institution, student, and employer that has been implemented at the secondary vocational education level. In higher professional education, the introduction of work-based studies already has been initiated in some areas. The publication aims to give a short overview of the historical development of learning opportunities in the working environment in Latvia, the concepts used in research, as well as to

look at the research methodology used in the studies of the work-based environment in higher professional education in Latvia and Europe and the results of those studies. The first section of the article discusses historical problems of work-based learning, analyses the normative acts and relevant concepts to support further research. The second section analyses methodological approaches to the studies related to the organization of work-based learning. The performed analysis allows us to conclude that the studied topic is highly relevant to improve the economical situation in the country and it asks for further empirical research to provide research-based evidence on the best solutions for the organization of work-based studies in higher education institutions. Currently, the researchers, from several European countries explore the work-based studies using various complex research designs, containing qualitative and quantitative research methods as well as specific combinations of several data collection methods to reach various aims of their studies. The results of this theoretical and methodological review will serve as a theoretical basis for empirical research related to the introduction of work-based studies in higher professional education in Latvia.

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ТЕКСТОВЫЙ VS. СХЕМАТИЧНЫЙ УЧЕБНЫЙ МАТЕРИАЛ НА УРОКЕ РУССКОГО КАК ИНОСТРАННОГО В КИТАЙСКОЙ АУДИТОРИИ

Textual vs. Schematic Teaching Material in a Lesson of Russian as a Foreign Language in a Chinese Audience

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Abstract. The Russian language continues to maintain a leading position as a foreign language in China. Every day students have to work with much information in Russian. According to the confirmed data, the Chinese are representatives of cultures of the right-brain type of thinking. Today some works touch on the psychological and pedagogical aspects and linguo-methodological foundations of teaching Chinese students. The researchers believe it is possible to classify Chinese students as individuals with a significant dominance of the brain's right hemisphere. This is related to the specificity of the cognitive style of their educational activity, which manifests itself in the following features: in an inductive, concrete-nonlinear type of thinking, which allows one to perceive information holistically, at one time, in establishing connections not from word to word, but from image to word, with an important role of a visual image. Leading methodologists and psycholinguists recommend considering the dominance of the right hemisphere to increase the effectiveness and efficiency of teaching Russian as a foreign language to Chinese. Nevertheless, the design of the educational material of the lesson is still formalized in a traditional, textual form. The article aims to experimentally answer the question: in what form, textual or schematic, Chinese students perceive and remember information better. The authors used an experimental method, which consisted in studying the development of educational material depending on the form of presentation: text or schematic. As a result of the experiment, it was revealed that Chinese students make much fewer mistakes when studying the material in a schematic form.

Keywords: cognitive linguistics, Chinese students, traditional methods of teaching, diagnostic experiment, Russian as a foreign language.

Введение *Introduction*

Русский язык продолжает сохранять лидирующие позиции иностранного языка в Китае. Студентам каждый день приходится работать с большим количеством информации на русском языке. Согласно подтвержденным данным, китайцы – представители культур право-полушарного типа мышления. С этим связана специфика когнитивного стиля их учебной деятельности, проявляющаяся в следующих особенностях: в индуктивном, конкретно-нелинейном типе мышления, позволяющем воспринимать информацию целостно, одномоментно, в установлении связей не от слова к слову, а от образа к слову, при этом важную роль играет наглядное изображение. Ведущие методисты (Гальскова Н.Д., Азимов Э.Г., Щукин А.Н., Вагнер В.Н.) и психолингвисты (Выготский Л.С., Леонтьев А.Н.) рекомендуют для повышения эффективности и результативности обучения китайцев русскому языку как иностранному учитывать доминантность правого полушария. Тем не менее, оформление учебного материала урока по-прежнему оформляется в традиционном, текстовом, виде.

Статья ставит целью экспериментальным путём ответить на вопрос: в каком виде, текстовом или схематичном, китайские студенты лучше воспринимают и запоминают информацию. Для этого был проведён урок по русскому языку как иностранному в китайской аудитории в Нанькайском университете (Тяньцзинь, Китай). Учебный материал для эксперимента был представлен в двух формах: схематическом и текстовом. Студенты-китайцы для участия в образовательном эксперименте были поделены на две подгруппы; уровень владения русским языком В1. Студенты должны были просмотреть видео, выполнить задания по содержанию видео, потом устно пересказать. Более подробно эксперимент описан далее.

Методология *Methodology*

Авторы использовали экспериментальный метод, который заключался в изучении освоения учебного материала в зависимости от формы подачи: текстового или схематического.

Кроме того, ряд методов для уточнения результатов: потенциал сознательно-сопоставительного и сознательно-практического методов для разработки упражнений, приём анкетирования для проведения констатирующего эксперимента; обучающий эксперимент, с помощью

которого проводилась верификация разработанных упражнений, качественно-количественный анализ экспериментальных данных.

Обзор литературы *Literature Review*

В первую очередь при обучении русскому языку как иностранному необходимо учитывать особенности национального менталитета учащихся «Национальный характер является важнейшей и наиболее устойчивой частью психологического склада любого народа, его культурного архетипа» (Lo, 2006). М.Г. Иванова отмечает, что «русские и китайцы различаются по философско-религиозным основам мировоззрения» (Ivanova, 2020, 57). Из-за этого во время изучения русского языка китайскими студентами возникают методические сложности. Именно поэтому национально ориентированный подход (далее, НОП) в обучении языкам даёт лучшие результаты. НОП в методике преподавания подразумевает ориентацию на педагогические методы и средства, которые не будут «враждебны» обучающимся, учитывает национально-культурные и национально-психологические особенности и нормы учебного контингента – студентов.

С одной стороны, китайские студенты имеют склонность к заучиванию текстов большого объёма, потому что им с детства сильно развивают память. Многие методики рассчитаны на то, что студент учит материал и потом воспроизводит его. «Вообще, китайское образование часто обвиняют в нежелании развивать креативность: студент привык «зазубривать» готовые тексты, фразы, клише, мысли, а не конструировать их» (Antonova, 2016, 15). Эту особенность отмечают и сами китайцы. Ч. Гося отмечает, что в Китае «до сих пор действует «знаниевая» парадигма образования» (Gosya, 2018, 421), то есть получение готовой информации, заучивание её и повторения. В связи с этим для проведения урока-эксперимента одной группе студентов были предложены задания в традиционном формате. Под традиционным форматом мы подразумеваем печатный текст с типичными видами послетекстовых заданий.

С другой стороны, китайские студенты гораздо лучше усваивают информацию в схематичном виде.

Выдающийся лингвисты и специалисты по преподаванию русского языка как иностранного (РКИ) В.Г. Костомаров и О.Д. Митрофанова писали о важности визуального сопровождения аудиозаписи при обучении иностранных студентов аудированию. В качестве примера они приводили работу с диафильмом, после просмотра которого студентам предлагается выполнить задания, используя различные иллюстрации, рисунки. Это позволяет не только улучшить усвоение информации учащимися, но и

помочь им в развитии устной речи, потому что «с помощью средств наглядности мы снимаем дополнительную нагрузку на память учащихся» (Kostomarov & Mitrofanova, 1988, 78). Таким образом, для стимуляции устной речи можно использовать визуальное сопровождение, например, схемы, которые решено было представить китайским студентам для выполнения заданий и пересказа видео.

У носителей китайского языка доминирует правое полушарие мозга. В основе китайского языка лежит иероглифическая письменность, и только благодаря конкретному восприятию образов, человек может её усвоить. Китайские студенты по-иному воспринимают зрительные образы и отличаются хорошо развитой зрительной памятью. «Каждый иероглиф китайского языка – это обозначение смысла какого-либо перцептивного образа с помощью одной картинки» (Rubets, 2009, 115). Поэтому считается, что при обучении китайцев целесообразнее всего использовать информацию, которая представлена в виде схем, памяток, рисунков, так как наглядно представленная информация является наиболее доступной для их восприятия.

Профессор А.В. Павловская и кандидата политических наук Г. Ю. Канарша утверждают, что китайцы обладают хорошей зрительной памятью. В их языке большую роль играет иероглифическая письменность, которую легче всего усваивать через восприятие конкретных образов. «В этой связи при инструктаже китайца желательно использовать схемы, рисунки, планы» (онлайн-ресурс 8). Поэтому было решено представить китайским студентам информацию в виде схем для лучшего её усвоения.

Особенностью китайских студентов является быстрое формирование оперативной памяти. Это связано с доминированием правого полушария мозга, которое позволяют довольно быстро воспринимать новую информацию и закреплять её. Эта особенность играет важную роль при осуществлении такого вида речевой деятельности как аудирование. Однако для лучшего закрепления информации необходима работа долгосрочной памяти, с чем у китайских студентов могут возникать проблемы. «Для снятия этих трудностей могут быть использованы механизмы компенсации недостатков долговременной памяти: организация языкового и речевого материала в определенном временном порядке, позволяющая использовать отсроченное повторение, которое необходимо в этой аудитории, а также некоторые методические приемы, направленные на развитие долгосрочной памяти» (Shanturova, 2017, 28). Для этого перед тем, как пересказать видео, студентам предлагается информация в текстовом формате и в схематическом, а также послетекстовые задания, чтобы у учащихся была возможность лучше усвоить материал перед дальнейшим пересказом.

При определении ошибок в произношении китайских студентов была принята во внимание классификация, предложенная Ч. Чжао и И. М. Логиновой (Zhao & Loginova, 2016, 37). Мы уделили внимание ошибкам, характерным для северных диалектов китайского языка.

Ошибки студентов определялись по классификации для северных диалектов. Таким образом, были выделены следующие виды ошибок:

1. фонематические ошибки

- 1) неразличение и смешение русских согласных звуков по твердости – мягкости: р[Э]па – вместо репа;
- 2) неразличение и смешение русских согласных звуков по глухости – звонкости: [К]отовка – вместо [Г]отовка;
- 3) замена русских глухих звуков китайскими придыхательными, звонких – непридыхательными: го[t^h]овка - вместо го[т]овка

2. фонетические ошибки

- 1) реализация русских смычных [т'] и [д'] с помощью китайской аффрикаты [tɕ]: [tɕ]ем – вместо [т]ем;
- 2) реализация китайской апиальной придыхательной аффрикаты [ts^h] вместо русской переднеязычной аффрикаты [ц], употребление заднеязычного носового [ŋ] вместо русского [н] в закрытом слове, и особенно после гласного звука или перед заднеязычным согласным: [ts^h]елый – вместо [ц]елый;
- 3) произношение китайская ретрофлексная придыхательная аффриката [tʂ^h], либо придыхательная дорсальная аффриката [tɕ^h] вместо русской переднеязычной аффрикаты [ч]: [tʂ^h]асто – вместо [ч]асто;
- 4) реализация гласного звука [u] вместо губно-зубного звука [в]: [u]ерх – вместо [в']ерх.

Эксперимент *Experiment*

Для проведения урока-эксперимента были выбраны группы китайских студентов второго и третьего курсов Нанькайского университета, владеющих русским языком на уровне В1. Всего в эксперименте принял участие 21 студент. В группе А – 10 студентов, в группе Б – 11.

Студенты просмотрели видео продолжительностью 7 минут (фрагмент научно-популярной телепередачи «Галилео»). Затем группе А был предложен скрипт видео (пословная запись звучащей речи в видео), а группе Б – схемы, оформленные по этому ролику на интерактивной онлайн-платформе Miro (miro.com) и представленные на рисунках 1, 2 и 3.

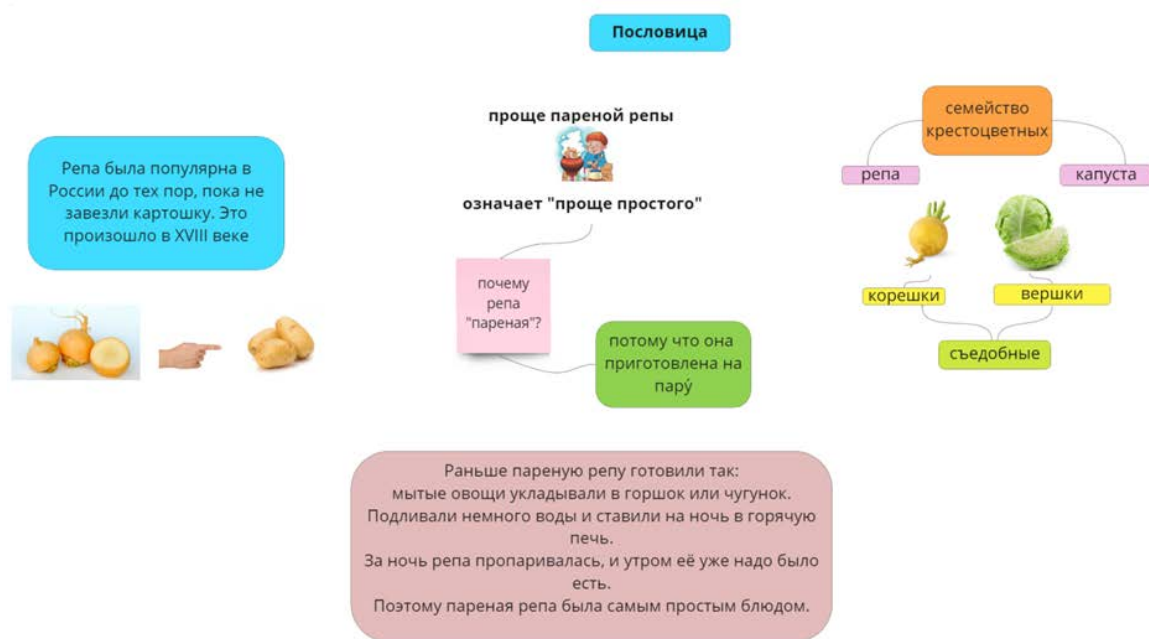


Рисунок 1 Общие факты о репе
Figure 1 General Facts about Turnip



Рисунок 2 Фрагмент объяснения русской идиомы «проще пареной репы»
Figure 2 A fragment of the Explanation of the Russian Idiom “easier than a steamed turnip”

Студенты выполнили по 8 заданий на понимание просмотренного видео, на закрепление новой лексики и повторение уже пройденных грамматических конструкций.

После этого каждый студент записал аудиосообщение пересказа видео и отправил авторам статьи. Студенты группы А в качестве опорного материала использовали ключевые слова, которые каждый студент выделял в своем скрипте, а студенты группы Б использовали готовые схемы на доске Miro, которые были подготовлены авторами статьи.



Рисунок 3 Способы приготовления репы
Figure 3 Cooking Methods of Turnip

Результаты исследования Research Results

Авторы статьи прослушали аудиозаписи ответов студентов и зафиксировали допускаемые ошибки. Виды ошибок и их количество представлены в таблицах ниже.

Таблица 1. Ошибки в письменных заданиях
Table 1 Mistakes in Written Answers

Вид ошибок	Традиционный вариант, количество ошибок	Вариант со схемами, количество ошибок
Неточное различение лексем	12	6
Неправильное образование простой формы прилагательных в превосходной степени	6	0
Затруднение в образовании простой формы прилагательных в превосходной степени	12	0
Неправильное написание окончаний прилагательных	6	0
Неверное использование падежной формы имени существительного	0	12
Неправильное написание наречия с частицей «не»	0	3
Итого	36	21

*Таблица 2 Ошибки в устных заданиях
Table 2 Mistakes in Oral exercise*

Вид ошибок	Традиционный вариант, количество ошибок	Вариант со схемами, количество ошибок
Фонетические ошибки	24	12
Орфоэпические ошибки	24	21
Фонематические ошибки	21	9
Грамматические ошибки	27	9
Итого	96	51

*Таблица 3 Ошибки при пересказе видео
Table 3 Mistakes When Retelling the Video*

Вид ошибок	Традиционный вариант, количество ошибок	Вариант со схемами, количество ошибок
Фонетические ошибки	27	0
Орфоэпические ошибки	27	25
Фонематические ошибки	51	21
Грамматические ошибки	33	36
Логические ошибки	3	0
Морфологические ошибки	0	3
Стилистические ошибки	0	3
Итого	141	88

Полученные результаты показали, что студенты, которые работали с текстом (скрипт + упражнения), допустили большее количество ошибок, чем студенты, работающие со схематичным представлением материала: письменные задания: 36 ошибок против 21; устные ответы: 96 против 51.

Что касается главной части эксперимента – пересказа видео, то ожидаемо, что студенты, работающие с текстовым материалом, испытывали больше трудностей. Они старались рассказать заученный текст, но при этом их речь не обладала чёткой структурой. Эти студенты пропускали важные фрагменты видео, нарушали порядок логических частей. Итого, 141 ошибка против 88.

Таким образом, учащиеся, которые работали со схемами, показали лучшие результаты. Они сделали на 42% меньше ошибок в письменных заданиях, на 47% меньше ошибок в устных ответах и на 38% меньше ошибок в пересказе видео, чем студенты, работающие с традиционным вариантом подачи информации. Их пересказ был более структурированным и подробным. Ответы на вопросы также показали, что китайские студенты не знают таких русских сказок как «Репка» и «Вершки и корешки». Целесообразно привлекать на уроки РКИ больше информации по лингвострановедению.

Выводы *Conclusions*

Проведя урок-эксперимент среди обучающихся 2-3 курсов Нанькайского университета, мы сравнили результаты восприятия одинаковой информации, представленной в двух разных формах. Одной группе студентов была представлена информация в виде текста, а другой группе в виде схем.

Результаты показали, что обе группы китайских студентов справились с заданиями и пересказом видео. Однако группа, работавшая со схематично представленной информацией, сделала на 24% меньше ошибок, чем группа, работавшая со схемами, дала более четкие и структурированные ответы на вопросы. Пересказ информации студентами этих групп также различался. Те обучающиеся, которые работали со схемами, представили более структурированный и подробный пересказ. В своих рассказах они выделяли различные подробности и детали. У тех студентов, которые работали с текстом, информация в пересказах представлена более обобщенно.

Таким образом, китайскоговорящим студентам легче воспринимать и усваивать информацию, представленную в схематичном виде, поэтому при обучении китайцев русскому языку рекомендуется в большем объеме использовать схемы, памятки и рисунки.

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TEACHERS' PROFESSIONAL SKILLS AS THE COMPONENT OF THE QUALITY OF HIGHER EDUCATION AND THE ELEMENT OF STUDENTS' MOTIVATION

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Abstract. *The problem of studying the significance of teachers' professional skills as the component of the quality of higher education and the element of students' motivation is being analyzed in the article. The purpose of the research is study and analyzes of students' attitude towards teachers' professional skills as the component of the quality of higher education. The research has been conducted with the help of theoretical and empirical methods. Connection between the quality of higher education and teachers' professional skills has been established with the help of dialectical method. The use of comparative method allowed us to implement the raking division of students' attitude towards teachers' professional skills. The empirical base of the research consists of the results of the survey of 175 students of Drohobych Ivan Franko State Pedagogical University. The following teachers' professional skills: the ability to arouse the interest for the subject; clarity, accessibility and comprehensibility of the information layout; the ability to create a teamwork, motivate to achieve goals have been granted the highest ranking according to students' attitude towards teachers' professional skills. Such skills as objectivity and transparency of evaluation; goodwill and tactfulness; creative approach to studying; subject competence; erudition and culture of speech are highly evaluated. The following qualities: the culture of a dress code; organizational culture; the ability to act accordingly with moral, ethical and legal standards; the ability to recognize, formulate and solve problems constitute the interim position of the general ranking. Content significance and accessibility of the information which is being taught; skills of informational technologies; the ability to choose forms and methods of teaching which comply with student-oriented approach have been positioned at the lowest point of the general ranking according to the survey.*

Keywords: *Ukraine; ranking; students; incentive; skills; higher education.*

Introduction

One of the main conditions of successful being of any modern country is good education. Education is the basis of intellectual, spiritual, physical and cultural development of any personality, his/her successful socialization, economic wellbeing, guaranty of development of society united by common values and culture and the country (Pro osvitu: Zakon Ukrainy, 2017). Modern education is characterized not only by the level of knowledge, skills and abilities but also by the quality of personal, worldview and civic development of future generation (Kharchenko, 2018).

The quality of education is the congruence of study results with the requirements established by the law, relevant educational standards and/or by the educational services agreement (Pro osvitu: Zakon Ukrainy, 2017). By quality of education, we mean the certain level of knowledge and abilities, mental, physical and moral development that was attained by the graduates of educational establishment according to the pre-arranged aims of studies and education.

Nowadays Ukraine undertakes firm steps towards the development of the system of providing of quality of education, including higher education. It allows build the trust of society to educational establishments, organs of education management and to guarantee the high level of quality of educational process. An institution, which is responsible for the observance of quality of higher education – National Agency of Higher Education Quality Guarantee (NAHEQG), has been created. The national agency, in accordance with Charter, annually prepares and publishes a report on quality of higher education in Ukraine. The reports are -sent to the Verkhovna Rada of Ukraine, the President of Ukraine, the Cabinet of Ministers of Ukraine and establishments of higher education for further discussion and proper actions (Postanova Kabinetu Ministriv Ukrainy «Pro utvorennia Natsionalnoho ahentstva iz zabezpechennia yakosti vyshchoi osvity», 2015).

The law of Ukraine "About higher education" closely correlates with the European standards and recommendations in relation to the internal and external assurances of quality of higher education. In accordance with the indicated law, higher educational establishments of Ukraine are obliged to have internal system of providing of quality of higher education and educational activity. The efficiency of this system must be estimated by National Agency of Higher Education Quality Guarantee (Sydorenko, 2016).

In Drohobych Ivan Franko State Pedagogical University the system of the internal guarantee of quality of education functions on the basis of «Statute about the system of the internal guarantee of quality of higher education in DSPU» (Polozhennia pro systemu vnutrishnoho zabezpechennia yakosti vyshchoi osvity u DDPU imeni Ivana Franka, 2015). It indicates the availability of multilevel

control including students' control. One of ways of realization of function of controlling quality of educational activity by students is their participation in realization of internal and external measures of controlling quality of educational activity and quality of higher education, including means of monitoring.

The aim of the research is study and analyzes of students' attitude towards teachers' professional skills as the component of the quality of higher education.

Theoretical Substantiation of the Problem

The problem of teachers' professional skills has been in focus of attention of domestic and foreign specialists for quite a long time. The Motivational-valued component of inclusive skill of future teachers is studied in work by Kucheruk (Kucheruk, 2012).

The problem of study of interconnection between teachers' professional skills and quality of education has already become a traditional subject for discussion on conferences in Latvia (Augskalne & Garjane, 2019; Bobkova, Melnychuk, Melnychuk, Melnychuk, & Pypiak, 2020). Existence of direct connection between the level of development of teachers' professional skills and their academic respectability has been depicted (Bobkova et al., 2020). It has been also stated that the inhibition of academic respectability by academic staff can be implemented by developing motivational-valued, cognitive-operational, reflective-evaluating components of teachers' professional skills.

Works, which expose the problem of forming of motivation of students' educational-cognitive activity deserve proper attention in the context of our research. The notion of motive is the complex phenomenon, which scientists describe to be too complicated to give the unambiguous definition. Il'in determines the motive as difficult psychological formation, that induces to the conscious actions and acts, and which is the basis for these actions as well (Il'in, 2000). In his opinion, the notion of motive often designate such psychological phenomena as intention, desire, aspiration, fear etc. These phenomena represent the presence of determination in the human psyche that induces the achievement of a certain goal.

Honcharenko defines the motive as the main incentive of actions, person's acts, which are aimed at meeting the needs, and as something, that calls to action (Honcharenko, 1997, 47).

The notion of «motivation» is also the complex phenomenon and much broader than the notion of «motive». Honcharenko understands motivation as the system of motives or stimuli, factors, that determine concrete activity, person's behavior (Honcharenko, 1997, 47).

Formation of motivation is possible only when a person succeeds in connecting the aim with personal values. The more the personal values are

connected with the result of future action, the more the inner motives nourish the energy of personal motivation. Motivation is the main driving force of any human activity and the professional one is not an exception. Motivation is one of the leading factors of successful study of a young person, which includes her/his professional growth. Development of positive educational motivation of students is one of the conditions of personal development and effective professional training (Bondar, 2017).

Description of motives of educational activity requires special attention as they influence the quality of professional training. Here are some of them: cognitive, professional, motives of creative achievement, broad social motives, motives of the personal prestige, motive of self-realization, financial motives.

Bondar states (Bondar, 2017, p. 13) that professional-cognitive need should be the leading need in educational activity of a student.

As well as any other type of motivation, educational motivation is determined by the series of specific for this activity factors: by the educational system, educational establishment of education, organization of educational-educator process, subject features of the one who studies and the one who teaches, by the characteristics of educational subjects (Pidhorodetska, 2007).

Thus, the motivational constituent of educational activity embraces cognitive necessities, motives and senses of studies. As Cherniak marks (Cherniak, 2013), students should feel the rising of a need in self-perfection, self-realization and self-expression during classes. Collaboration between a teacher and students as well as between students only plays a significant role in forming of this need. This collaboration is implemented by means of dialogue in an educational process.

The results of the theoretical study give us the right to claim that the question of students' attitude towards teachers' professional skills as the factor of motivation to educational activity has been left behind the attention of scientists.

Methods of the Research

The research has been conducted with the help of theoretical and empirical methods. Connection between the quality of higher education and teachers' professional skills has been established with the help of dialectical method. The use of comparative method allowed us to implement the raking division of students' attitude towards teachers' professional skills.

The empirical base of the research consists of the results of the survey of Drohobych Ivan Franko State Pedagogical University students. The survey has been conducted in February 2020 within the framework of internal control of the quality of educational process in the educational-scientific institute of physical culture and health of Drohobych Ivan Franko State Pedagogical University. The students of the 2nd-4th years of the first (bachelor) level of higher education

participated in a questionnaire. The questionnaire includes 175 students: 98 applicant of 014 «Secondary education (Physical culture)» specialty and 77 applicants of 227 «Physical therapy and ergotherapy» specialty. The aim of the survey consisted in the study of students' attitude to professional skills of teacher as component quality of higher education and factor of motivation to educational activity. The survey was conducted by writing anonymous questionnaire. The collected results were analyzed by means of methods of mathematical statistics.

Results of the Research

We have already studied values and motives of health of students' conservation activities (Hrybok, Chopyk, & Zakaliak, 2017). In this research it was important to create motivation to study of applicants of higher education in the university.

As Mykhailychenko & Polianska state, the research of the problem of motivation forming of educational-cognitive activity in the establishment of higher education gives an opportunity for many aspects of internal life of student to become the object of study: his/her interests, values and beliefs, motives of activity, talents, knowledge, abilities, and skills. These aspects will be the part of his/her professional orientation in the future.

As the results of the survey show (see Figure 1), majority of students have the proper motivation – to acquire professional knowledge and skills and to become a highly skilled specialist that is in accordance with a cognitive need. This kind of motivation prevails in 52% of respondents. However, the level of motivation of students – majoring in 227 «Physical therapy, ergotherapy» is higher, than among their colleagues – majoring in 014 «Secondary education (Physical culture)», and makes 60,6% versus 44,4% accordingly.

To find a good job in the future can be counted as another powerful motive of students to studying. It induces 36,2% of students to get higher education (39,4% of students with speciality 227 «Physical therapy, ergotherapy» and 33,3% of students – 014 «Secondary education (the Physical culture)»). It is important to notice that among the applicants of higher education there is certain amount of students, who do not have clear motivation, and study in the university only to get higher education. They consist 14,5% of students (2,3% of students with specialities 227 «Physical therapy, ergotherapy» and 19,4% with speciality 014 «Secondary education (Physical culture)» accordingly). Prestige of having higher education degree is the main motive for 7,2% of students (6,2% of students with speciality 227 «Physical therapy, ergotherapy» and 8,3% of students with speciality 014 «Secondary education (Physical culture)»).

Thus, the results of questionnaire indicate that the majority of students have the proper level of motivation for acquiring higher education in higher educational

establishment. However, there is small percent of students that study simply in order to have higher education. Obviously, that for the representatives of this category the absence of the proper motivation in studies can be pre-condition of their slow progress. It corresponds with the studies of Cherniak & Hylun. (Cherniak, 2013; Hylun, 2012).

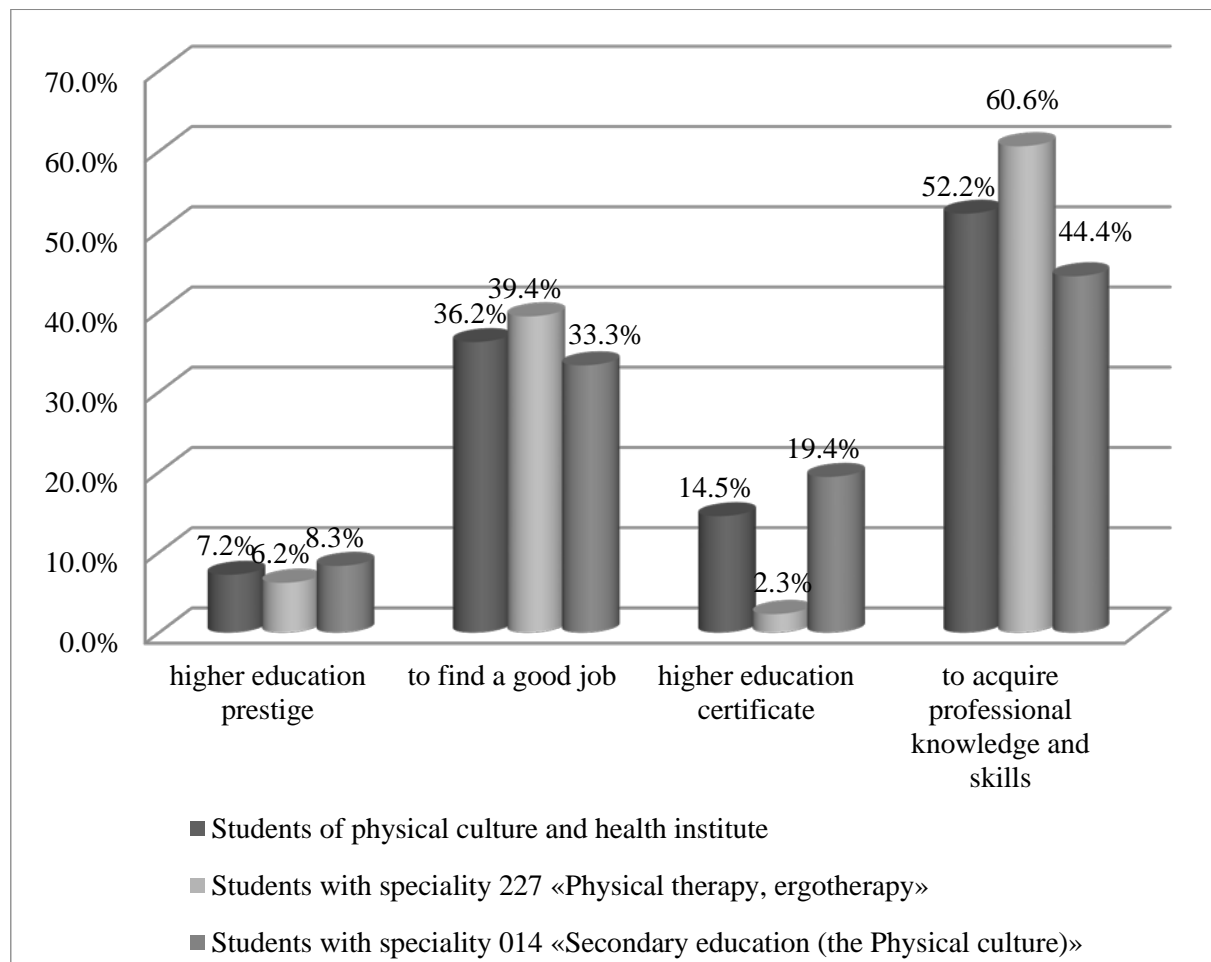


Figure 1 Motivation of Students of the Institute to Higher Education

The important constituent of effective educational process is a highly skilled teacher that has necessary skills. A professional competence of a teacher, especially pedagogical mastery, is the substantial factor of increase of motivation to studying and to interest in a profession. Therefore, we tried to figure out with the help of questioning, which qualities of teacher are valued most highly by a student nowadays. Such information is useful for administration of institute in making administrative and personnel decisions addressed to upgrade educational process.

The results of questioning of students showed that generally according to the level of significance for students the represented skills can be divided into several conditional groups. The following teacher's skills appeared to be the most significant for the students: ability to arouse interest to discipline; clearness, accessibility and intelligibility of material presentation; ability to create a team and motivate to achievement of aims. The indicated skills belong to one conditional group, as their distribution has a clear maximum and similar dynamics of decrease. The majority of the questioned students consider that these teacher's skills are determinative for providing the proper quality of educational process.

Obviously, in our opinion, the first place in the consolidated rating of teacher's skills occupied ability to arouse interest in discipline (see Figure 2). Teacher's ability to clearly and intelligibly present material is also highly valued by modern students and it occupies the second place in the consolidated student rating. Teacher's ability to create a team and to motivate to achieve aims concedes a bit prior to skills however these are also significant.

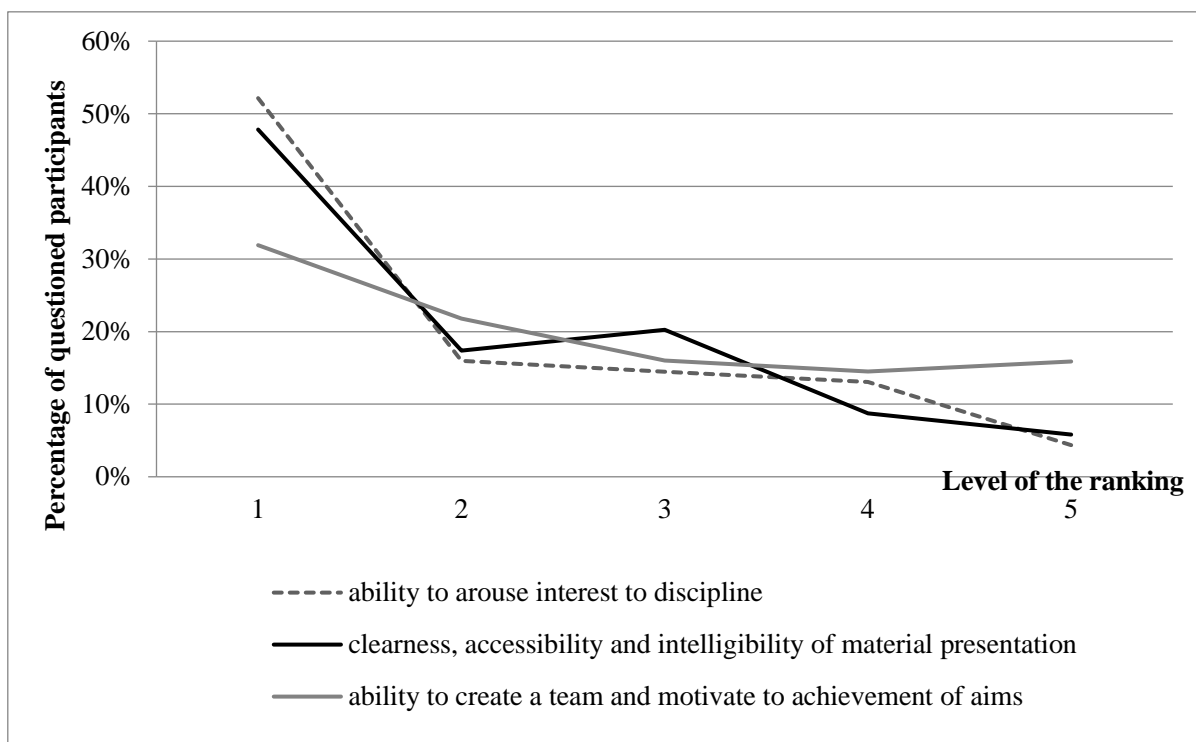


Figure 2 Division of Teacher's Skills with the Highest Ranking

The second conditional group of the student rating consists of the following teacher's skills: objectivity and evaluation transparency; goodwill and tactfulness; creative approach to teaching; subject competence; erudition and culture of speech. Indicated skills are attributed to the separate conditional group due to clearly expressed maximum and the similar dynamics of decrease (see Figure 3).

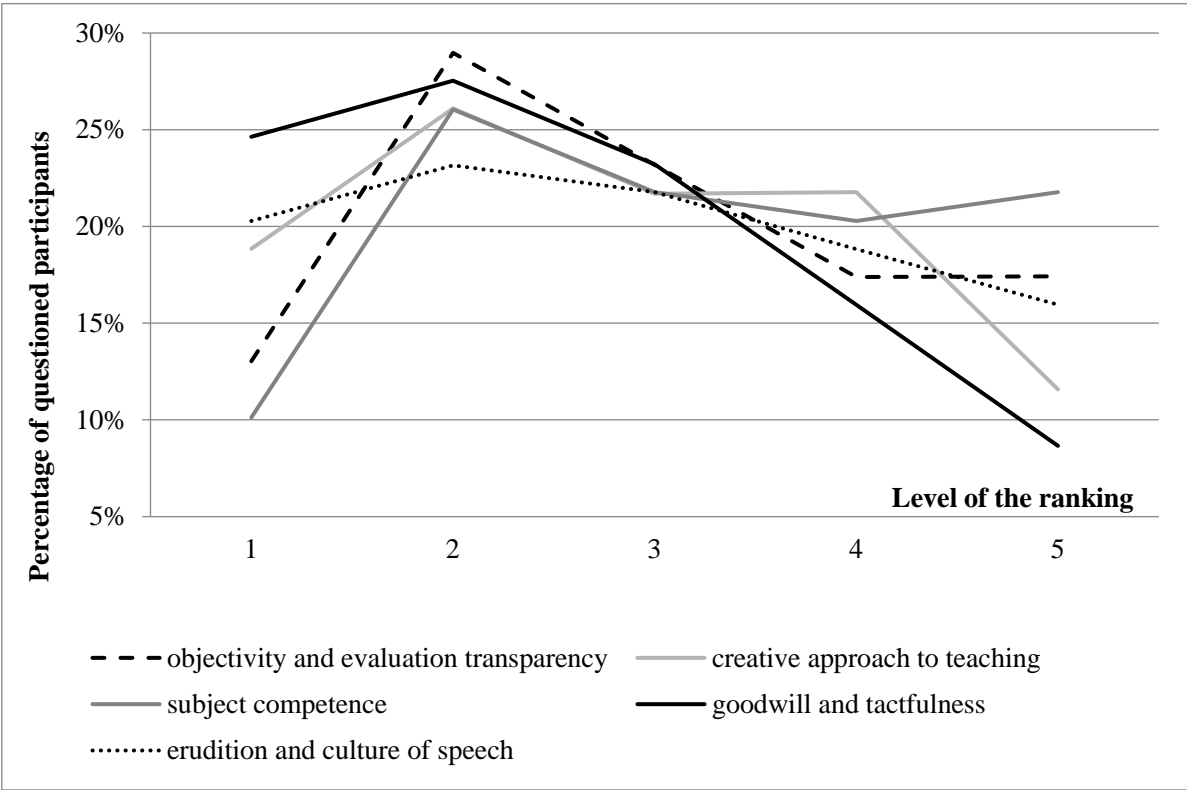


Figure 3 Ranking Division of Teacher's Skills of the Second Group

One of key skills, that constitute this group, are goodwill and tactfulness of teachers. The presence of such an approach fully meets principles of humanism and - puts emphasis on the importance of the construction of educational process, when a student is its subject. Students also give special value to objectivity and evaluation transparency that, in our opinion, have a key value for forming of academic respectability and quality of higher education in general. Without doubt, the knowledge of material as teacher's skill is essential for ensuring the quality of higher education. Such skills as creative approach to teaching, erudition and culture of speech are positioned a bit lower in the student's rating.

The third conditional group of the general rating consists of the qualities, which students consider not to be the last, but at the same time, they are far from being the first (see Figure 4). By the results of survey, the third group teacher's skills are the culture of appearance; organizational culture; ability to act accordingly with moral, ethical and legal standards; the ability to recognize, formulate and solve the problem.

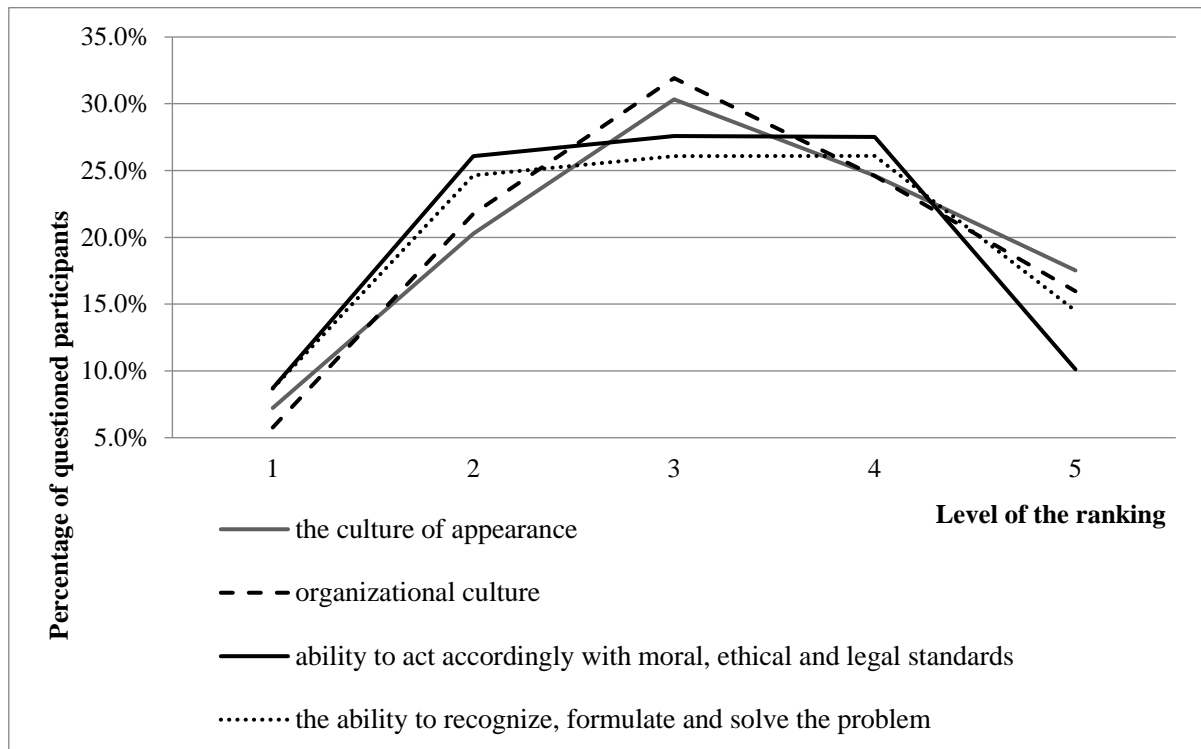


Figure 4 Ranking Division of Teacher's Skills of the Third Group

The qualities, that students evaluate the least, constitute the last groups of general rating (see Figure 5). The skill of «content significance and study material accessibility» can still be referred to the conditioned group with the priority №4. While two other – «skills of informational technologies» and «the ability to choose forms and methods of teaching, which comply with student-oriented approach» are firmly positioned at the lowest level of the ranking and can form the separate fifth group.

«The ability to choose forms and methods of teaching, which comply with student-oriented approach» received the poor evaluation of significance for students and the same position in ranking accordingly (see Figure 5). It's important to note that the students – majoring in 014 «Secondary education (Physical culture)» value this skill less than students - majoring in 227 «Physical therapy, ergotherapy». We believe that this depends on the fact that students majoring in 014 «Secondary education (Physical culture)» have more hardened temper as sportsmen.

As the results of the survey show, the teacher's skill of informational technologies was positioned at the lowest level of the students' ranking (see Figure 5). It might be due to the fact that at the moment the survey was conducted the use of informational technologies in the educational process, including the field of physical culture, had not been yet so important and spread so broadly.

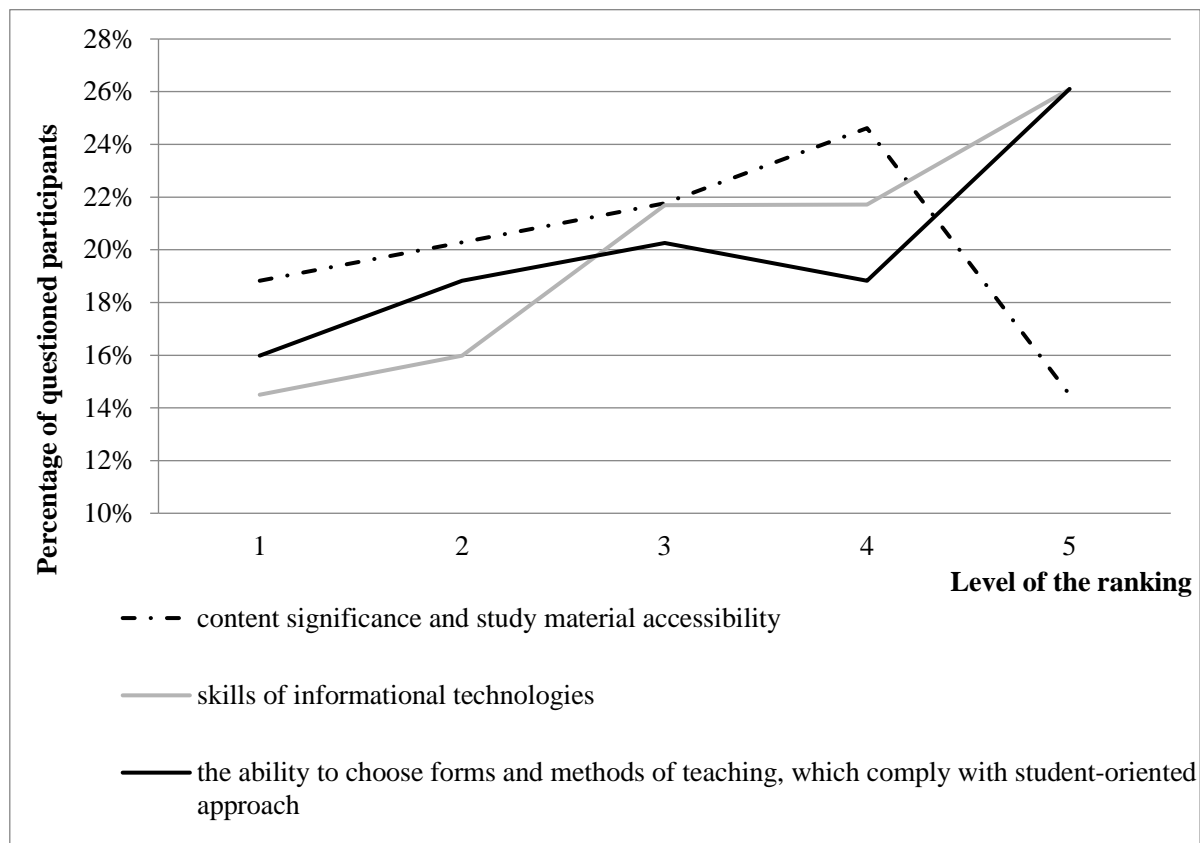


Figure 5 Division of Teacher's Skills with the Lowest Ranking

Conclusions

During the research, we analyzed the collected data about students' attitude towards teachers' professional skills as the component of the quality of higher education. We confirmed the correlation between motivation of applicants for higher education to studying and teacher's professional skills.

We conducted the ranking division of students' attitude towards teacher's professional skills. The common features of the dynamics of ranking division of teacher's skills had been displayed, that helped us to divide them into several conditioned groups according to the level of their significance to students. The following teachers' professional skills: the ability to arouse the interest for the subject; clarity, accessibility and comprehensibility of the information layout; the ability to create a team, motivate to achieve goals have been granted the highest ranking according to students' attitude towards teachers' professional skills. Such skills as objectivity and transparency of evaluation; goodwill and tactfulness; creative approach to teaching; subject competence; erudition and culture of speech are highly evaluated by students. The following qualities: the culture of appearance; organizational culture; the ability to act accordingly with moral,

ethical and legal standards; the ability to recognize, formulate and solve problems constitute the interim position of the general ranking. Content significance and accessibility of the information, which is being taught; skills of informational technologies; the ability to choose forms and methods of teaching, which comply with student-oriented approach, have been positioned at the lowest point of the general ranking according to the survey.

Thus, on the basis of conveyed analyzes we confirmed the importance of teacher's professional skills for ensuring the quality of higher education and for forming the students' motivation for studying.

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FORMATION OF ETHICAL CULTURE OF INTENDING EDUCATORS IN THE EDUCATIONAL PROCESS OF HIGHER EDUCATION INSTITUTION

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Abstract. *The study intends to expand a methodology of shaping intending educators' ethical culture. The examples of effective techniques that were used in a teacher-training process are provided. Some samples of authentic pedagogical cases created by teachers and students are presented. The main stages of work on the formulation of the "Teacher's Code of Ethics" are revealed. Such interaction methods as "Brain Storming", "Decision Tree" are given. Fragments of the lesson "Pedagogical techniques in the structure of pedagogical communication of a teacher" are described, where students analyze videos on pedagogical topics, identify phrases that violate the ethical norms of the teaching profession and choose alternatives.*

The excerpts from the works of intending educators, where students reflect on the teachers' functions and responsibilities, are analysed. A structured set of traditional (lectures, tutorials, laboratory classes) and innovative (brainstorming, role-playing, case studies, decision tree, pedagogical marathon, etc.) methods, which accelerate students' gradual progress to the highest creative level of ethic culture is presented. Such organization of the educational process reflects the developmental changes from intuitive actions in different situations on the basis of initial ethics knowledge to the willingness of intending educators to work independently, guided by high-minded principles and norms in professional situations.

Keywords: *educational process, ethical culture, intending educators, pedagogical case, pedagogical technique.*

Introduction

The key to the successful development of the state and overcoming the general crisis in society is the spiritual revival of the people. The future of the

nation depends on the content of values that are laid in the hearts of young people, and on the extent to which ethical culture will become the basis of their lives.

The Laws of Ukraine “On Higher Education”, “On Education”, State national program “Education” (“Ukraine – XXI century”), the Concept of national education, the National doctrine of education development in Ukraine in the Program “The Teacher” consider a teacher, whose training involves the formation of ethical culture, to be the main force of changes in the education system of Ukraine (Voloshyna, 2014, p. 68).

According to the programme “New Ukrainian School”, students’ character formation is organized due to the model of respect for human rights, democracy, and support of good ideas. The institutions create an atmosphere of trust, friendliness and goodwill, mutual assistance and support in case of difficulties in learning and everyday life. The key educational element is a teacher who is willing to encourage children and form their ethical culture.

The *purpose* of the study: is to examine the effectiveness of forming the ethical culture of intending educators in the educational process of a higher education institution. Under effectiveness the authors understand the beneficial influence of the suggested experimental training on students’ ethical culture, their character formation, and their adherence to the principles of careful choice of interaction with children in future. The *objectives* of the study are to substantiate theoretically and implement the method of forming the ethical grounds of behaviour in the prospective teachers’ training.

Theoretical Substantiation of the Problem

Today’s realities require re-evaluation, actualization, analysis, and comparison of a number of national and universal moral values which form ethical culture.

The problem of forming universal moral values of the personality is a key for all human sciences: Philosophy, History, Sociology, Law, Cultural Studies, Psychology, and Pedagogy. Researchers Bergem (1990), Bicheva and Varivoda (2016), Biesta (2006), Billings (1990), Galuziak and Kholkovska (2015), Gunzenhauser (2012), Haynes (1998), Joseph and Efron (1993), Nash (2002), Strike and Soltis (2004), Voloshyna (2014) note that universal moral values are the leading mechanism of influence on the personalities and their behaviour, indicate the ways to realize spiritual and moral potential and form ethical culture.

Teachers-practitioners Dmitrenko (2014), Fitzmaurice (2010), Voloshyna (2016) in their scientific works have proved that the moral and ethical norms, principles and rules mastered by the teacher act as a regulator of behaviour and attitude to themselves, students, and their professional activities.

The analysis of scientific literature confirms the need of finding practical ways to develop the ethical culture in the professional training of prospective teachers.

Methods of the Research

The experimental training through the method of forming the ethical culture of intending educators took place in Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University during 2019/2020. 120 intending educators (second year of study), majoring in Mathematics, Psychology, and the Ukrainian Language were involved in the research process. Each group consisted of 30 students, who were randomly assigned.

The participants of the experimental training were informed about the purpose and the structure of study and assured that their names would not be used in the study result reports. The following *theoretical and practical methods* were used: literature review, a questionnaire, experimental training, observation of students' ethical culture and behaviour, quantitative measurement of the experimental data.

To evaluate the initial stage of intending educators' ethical culture the survey "Level of Ethical Culture" was used. The authors asked the students to respond to the questionnaire which consisted of open questions. The same questions were asked after the experimental training to compare the students' answers and observe the changes in participants' ethical culture and the overall effectiveness of the method.

In the second part the method of forming the ethical culture of intending educators was applied in two experimental groups, whereas two control groups were taught with the same intake of concepts using the traditional forms and methods during lectures and seminars. Both traditional and interactive forms and methods of work were used in the classes of pedagogical disciplines (brainstorming "Teacher's Code of Ethics", case studies, decision tree, pedagogical marathon, etc.), which contributed to the formation of students' pedagogical position and formation of ethical culture. Their effectiveness was based on the data collected. Accordingly, the method of forming the ethical culture of intending educators in the educational process is considered as substantive and operational, which includes special selection of methods and forms of ethical culture.

Results and Discussion

The survey data pointed to the need for improvement of the level of ethical culture of intending educators. Here we present the questions of the survey "Level

of Ethical Culture” which were used to define the level of formation of ethical culture of intending educators and several students’ responses.

- 1) *“Is it possible to form ethical culture of intending educators?”* Respondents answered: *“Yes, through psychological and pedagogical influence on them”*; *“These are my personal values”*; *“Probably, because an intending educator must be ready to interact with other people”*; *“Yes, because they are capable of perception and introspection”*; *“Values must be formed in childhood, you just need to improve them”*; *“Yes, students have their moral values”*. Such students’ answers proved mostly an average levels of ethical culture formation.
- 2) *“Is it relevant today to form moral values of intending educators?”* Most students answered: *“Of course, because they will raise and teach the next generation of children”*, which is a sign of high level of formation. Some students gave the following answers: *“Yes, because the level of morality in our society is declining”*; *“If teachers do not have moral values, what will they teach children?”*; *“You need to develop moral values and to have experience in solving complex problems”*. These answers revealed an average level of formation of students’ knowledge of moral values.
- 3) *“Do you think students should study moral values of different nationalities?”* Students gave the following answers: *“Yes, it is necessary to treat with respect not only our native people, but also the peoples of other countries”*; *“The more knowledgeable a person is, the easier it is to find common ground with others”*; *“Yes, this is a new knowledge”*; *“Yes, it develops the image of the world and people of other countries”*; *“I don’t know, it’s everyone’s choice”*. Most respondents demonstrated an average level.
- 4) *“Do you find it mandatory to use knowledge of ethical culture in the teacher-training process?”* Students exhibited a high level of knowledge formation: *“It is necessary, students are prospective teachers who will pass this knowledge to the younger generation”*; *“Yes, because not all students and not always have fully formed moral values”*; *“Of course, yes, because we finally systematize knowledge about ethical culture here”*; *“Yes, because we form the complete knowledge about people at the university”*. Some students showed an average level of formation: *“It is necessary, because it allows solving complex problems”*.
- 5) *“Can you name the difficulties that may hinder the formation of moral values of intending educators?”* The answers were very varied. Among the difficulties, students mentioned such as: *“lack of understanding,”*

“bad habits, low level of moral education”; “situation in the country”; “inequality of study conditions, financial problems”; “too fast development of technology and communication, addiction of young people on gadgets”; “lack of morality, indifference to others.”

- 6) *“Do you aim to form moral values in your referent group?”* Students’ answers demonstrated a high or average level: *“Yes, because it is not interesting to communicate with fools”; “Yes, I want my colleagues to have such moral values”; “Yes, even though I communicate with people who have a high level of moral values”; “No, everyone decides for themselves what their moral values are”; “I consider it is necessary to talk about moral values”.*
- 7) *“Do you believe that you will make use of knowledge of moral values? Explain why.”* The explanations were the following: *“Yes, we need it to communicate with other people”; “Yes, it is useful in the process of children’s upbringing and in the future profession”; “Of course, first of all, because I am a future mother and must behave my children with the moral values”; “Yes, because I will be able to improve moral qualities of my future students and form a society with a higher level of ethical culture”.*

During the second stage of the study group discussions, project work, situation or case analysis were used. The most effective fragments of classes during the experimental training through the method of forming the ethical culture of intending educators are presented in this study.

For instance, during the group discussion, students independently prepared a report on the topic *“Teacher’s Code of Ethics”*. Group work (8-9 students) provided *brain storming* during discussion and after that each of the groups represented and “defended” their opinion within the stated theme. At the end of the presentation, students answered questions from “rivals” and the teacher. Students summed up and formed the general statements of the *“Teacher’s Code of Ethics”*. The main positions of the code are the following:

- the teacher’s work is grounded on love for children, humanism, and responsibility;
- the teacher’s activities should not cause moral or physical harm to the child;
- the main principle of the teacher’s behaviour: unconditional positive treatment of children;
- the teacher must be careful and cautious in choosing and applying of teaching methods, diagnostic and corrective means, their own recommendations for teaching children;

- the teacher must counteract any political, ideological, social, economic, religious and other influences that may lead to a violation of the rights of the child;
- the teacher must actively cooperate with psychologists, doctors, parents to save and develop the personality and mental, psychological and physical health of children.

While working on the “Teacher’s Code of Ethics”, one of the students group initiated the creation of the project “*Teacher’s Oath*”.

The *Case Method* contributed to the development of students’ skills of analysis and critical thinking, the ability to express students’ position and opinion, the formation of skills of alternative decisions or behaviour in unordinary pedagogical situations. In addition, intending educators developed communicative skills of expression, listening, argumentation, counter argumentation, and self-confidence that can help to solve the pedagogical problem professionally in practice. Students improved skills of self-assessment, reflection, self-correction of individual communication style as well.

With the active students’ participation, the case method was realized during the tutorials. For instance, video fragments of lessons were presented where various aspects of the participants’ behaviour were considered. Students discussed both positive and negative manifestations of the ethical culture of the teacher using actively pedagogical vocabulary in the analysis of the offered video fragments. They defined the principles of education, methods, techniques, forms of education, determined the individual style of the teacher and tried to substantiated reasons for the deviant behaviour of students.

During the teaching practice, the method “*Decision Tree*” was applied. Students were asked to choose the best way out of the certain pedagogical situation. Each stage of the decision had to be justified. Moreover, students identified the ethical principles which were used in the presented pedagogical situations. After that, during the reflection, intending educators expressed their opinions what a code of ethics should be for a modern teacher.

During the laboratory lesson on the topic “*Pedagogical techniques in the structure of teachers’ pedagogical communication*”, students had the opportunity to demonstrate their knowledge and communicative skills gained in classes during the course “Speech Culture”. The task was to watch the video “It’s so Similar to a Teacher”, which suggested phrases that violate the ethical norms of teacher’s profession and to choose alternative phrases, preserving the meaning of the statement (Table 1).

Table 1 Teacher's Anti-phrases and Alternatives

Anti-phrases	Correct Phrases
<i>Have you left your brains at home?</i>	<i>Please, be more attentive.</i>
<i>Go out and then come in normally!</i>	<i>Please, come in the class next time, following the rules of conduct.</i>
<i>Should I write your surname instead of you?</i>	<i>Be sure to sign your papers. Nameless works will not be checked! Carefully check again whether you have signed your paper.</i>
<i>Either you or I go out.</i>	<i>Please calm down! Otherwise, I will have to write down remarks in your diary.</i>
<i>Tell everyone the joke, let's laugh together.</i>	<i>Petrenko, that's enough to laugh and share jokes. There is a break for this. It is the lesson now, please behave yourself.</i>
<i>Who has two textbooks? Give them to these louts.</i>	<i>Who has two textbooks? Share with your classmates, please. Petrenko and Sidorenko, next time make sure that you have at least one textbook on your desk.</i>
<i>I think, you had enough time to learn it by heart.</i>	<i>Unfortunately, I can't help you now. However, after the lesson, I will answer all your questions.</i>
<i>Who is on duty? Wipe the board.</i>	<i>Who is on duty? Prepare the board, please. Next time, please, prepare the board beforehand.</i>
<i>It's not me who has to take exams!</i>	<i>Prepare carefully, because you need to take exams.</i>
<i>Do you speak in that way at home with your parents?</i>	<i>Please change your tone.</i>
<i>If you're so clever, take my place and teach your classmates.</i>	<i>Petrenko, calm down, you are hindering yourself and others.</i>
<i>You are the worst class for 10 years of my work.</i>	<i>I didn't expect it from you! You have always been a good class. What happened to you?</i>
<i>Sit down! The bell rings for a teacher.</i>	<i>Children, I apologize, I take 2 minutes of your break. Dears, please, 2 more minutes and I let you go out.</i>

In the educational process of forming the ethical culture of intending educators, the method “*Pedagogical Marathon*” was used which had five stages:

1. “*Pedagogical crossword*”, participants were asked to fill in a crossword based on the materials of the disciplines “*Pedagogy*”, “*Moral Culture*”, “*Methods of education*”, “*Culture Speech*”.
2. “*What do these names mean?*” – students determined the main achievements of the famous educators in the field of ethical culture.
3. “*Story with errors*”, participants analyzed the pedagogical text and tried to find mistakes.

4. “*Author!!!*” – students named the authors of famous books on Education and Ethical Culture.
5. “*Detective*”, participants matched the pedagogical phenomena with concepts, dates, and names.

After the experimental training through the method of forming the ethical culture of intending educators, the results changed. In the experimental groups, the level of forming ethical culture has significantly improved due to changes in the hierarchy of values of prospective teachers, who in the process of training were able to reveal previously hidden potential of the teaching profession and the organization of professional development.

The students’ results of the survey before and after experimental training through the method of forming the ethical culture of intending educators are presented in Table 2, 3.

Table 2 Formation Levels of Ethical Culture of Intending Educators (before the experimental training)

Levels of value orientation of intending educators	Evaluation Results, %	
	Experimental group	Control group
Low	23.3	21.1
Average	64.3	68.1
High	12.4	10.8

Table 3 Formation Levels of Ethical Culture of Intending Educators (after the experimental training)

Levels of value orientation of intending educators	Evaluation results, %	
	Experimental group	Control group
Low	1.6	19.4
Average	73.9	68.4
High	24.5	12.2

After the experimental training through the method of forming the ethical culture of intending educators, the results analysis confirmed that the students in the control group had a slight increase in the level of ethical culture, while the students in the experimental group had the significant changes towards increasing values and forming high creative level of ethical culture.

In the experimental groups, the number of students with a low level decreased from 23.3% to 1.6%, with an average level – increased from 64.3% to 73.9%, with a high level – almost doubled – from 12.4% to 24.5%.

After the experimental training through the method of forming the ethical culture of intending educators, it was also summarized the data, which showed a

significant difference between the preparation of students of the experimental and control groups for educational work. The results showed that only 69.8% of students in the control groups, while 96.8% students in the experimental groups said that they were ready for solving different pedagogical problems from the point of view of ethical culture and felt more confident of their moral values in the educational process.

Conclusions

The current study suggests that ethical culture of intending educators can be successfully changed if traditional methods of its formation are combined with creative and innovative ones. The research results may be interesting for those who are concerned with students' ethical culture, their interaction with children in future. Thus, it is grounded that the presented method of forming ethical culture of intending educators in the educational process of a higher educational institution is an orderly set of traditional (lectures, tutorials, laboratory classes) and innovative (brainstorming, case studies, decision tree, pedagogical marathon, etc.) forms and methods of work that ensure the gradual advancement of students to a high creative level of formation of ethical culture. The organization of the educational process through the method of forming the ethical culture of intending educators reflects the gradual transition from the ability to act intuitively in different situations based on initial ideas about ethical culture, to readiness of intending educators to carry out independent activity, guided by ethical principles and norms in a professional manner solving pedagogical problems.

The survey results were considered as diagnostic indicators in determining how the level of ethical culture of intending educators has been changed after the experimental training. Students' collective and individual experience obtained during the experimental training allowed achieving positive results in the process of formation of ethic culture.

Thus, the formation of ethical culture of intending educators is a positive motivational focus on mastering the pedagogical profession. The comparison of diagnostic results before and after the experimental training has led to the conclusion of the effectiveness of methods of forming ethical culture of intending educators in the educational process of a higher education institution.

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TEACHER EDUCATION STUDENTS' SELF-ASSESSMENT OF COMPETENCE FOR COOPERATION WITH PARENTS

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Abstract. *To be a teacher in the times of today is a great challenge. In order to respond to the needs of modern society, lifelong learning and mastery of numerous competences are expected of the teacher in various fields of work, wherein cooperation with parents is one of the extremely important areas. The goal of the research was to gain insight into self-assessment of competence of students at the Faculty of Teachers Education for future cooperation with parents. The research was implemented during October, 2020, on the sample of 416 students in their first, third and fifth year at the Faculty of Teacher Education of the University of Zagreb (Croatia). It is a futurological research for whose needs a questionnaire was designed with 26 manifest variables on an ordinal, five-degree Likert-type scale. From the manifest set of variables of competence for future cooperation with parents, three composite variables were formed: general cooperation competence, competence for cooperation directed to teaching efficacy, and competence for cooperation directed to communication with parents. The results show that the total student self-assessment of competences for future cooperation with parents is relatively positive, and the existence of statistically significant differences in all three composite variables. Faculties educating future teachers should introduce obligatory courses which would sensitise and capacitate them for future cooperation with parents.*

Keywords: *communication; competences; cooperation; parents; students; teaching efficacy.*

Introduction

Being a teacher is a great challenge today. In order to respond to the needs of contemporary society, lifelong learning and mastery of numerous competences in various fields of his/her work is expected of the teacher. One of the exceptionally important areas of teacher's work and profession is also cooperation with parents. Contemporary society we live in has imposed new goals and challenges in all areas of human activity (business, politics, economy), the field of education not being the exception. The teaching profession is becoming more

and more demanding and complex each day. The competence profile of the teacher has undergone a significant transformation. In order for the today's teacher to perform the work successfully, he/she needs numerous competences. Scientific and expert literature entails various explanations of the term competence. Cindrić, Miljković, and Strugar (2010, p. 216) define competence as a combination of knowledge, abilities and skills indispensable for a certain context. Competences are: knowledge and understanding (theoretical knowledge and the capacity for cognition and understanding); knowledge on how to act (practical application of knowledge in a certain context), and knowledge on how to be (values as an integral part of the ways of perceiving and living with others and oneself in the social context). Blažević (2016) warns that the use of a multidisciplinary approach (pedagogy, psychology, communicology, etc.) is essential in defining teaching competences which are encompassed by a wide scope, spanning from those very broad and general (fundamental) to the very specific and expert ones. Jurčić (2012) defines teacher's competence as an expertise based on knowledge, abilities and values. The mentioned author underscore that teaching competences need to be observed as interwoven in the fundamental areas of teacher's work:

- the methodology for designing the teaching curricula;
- organising and guiding the education process;
- forming classroom climate;
- determining the student's achievement;
- cooperation with parents.

Significant number of researchers remarks the teacher's ability to maintain and sustain quality relationships with parents as one of the basic characteristics a competent teacher (Rečić, 2006; Kostović-Vranješ & Ljubetić, 2008; Ljubetić & Zadro, 2009; Zrilić & Marin, 2019). The concept of teacher-parent cooperation entails the process of mutual briefing, agreement, counselling and joint learning, with the goal of sharing mutual responsibility for the child's development in the family and school (Maleš, 1996). Epstein (2001) states six types of parental involvement in school:

- parenting – it concerns stimulating the family environment as one of the prerequisites for the child's success in school;
- communication – it entails efficient school-family and family-school communication;
- volunteering – parents' inclusion in various school activities;
- learning at home – capacitating parents for helping children in doing homework;
- making decisions – motivating parents to cooperate in making school decisions by means of their representatives;
- cooperation with the community – cooperation between the local community and school in the best interest of children.

LaRocque, Kleiman and Darling state similar types (2011):

- volunteering at school;
- helping children with their homework;
- attending school functions;
- visiting the child's classroom;
- sharing expertise or experience with the class through guest speaking;
- taking on leadership roles in the school and participating in the decision-making process.

It is expected of the school to develop cooperative relationships with the family; its responsibility ensues from the fact that cooperation begins in school spaces and from the expectations of the teacher as a professional to know how to motivate parents for cooperation (Maleš, 2015).

The question arises as to why it is important to realise quality cooperation with parents. Numerous researches name various benefits for the welfare of children/students: parental involvement in school and school activities is positively correlated with students' academic achievement (Epstein, 1994; Hill & Taylor, 2004; Burcu & Sungur, 2009; Jeynes, 2012), with students' attendance and participation in classes (Fan & Williams, 2010; Avvisati, Gurgand, Guyon, & Maurin, 2014), with appropriate (good) behaviour (Domina, 2005; Sheridan et al., 2017), and better relationships with other students in class (Garbacz, Zerr, Dishion, Seeley, & Stormshak, 2018). Furthermore, when parents are actively engaged in school, children are more satisfied with it (Hiatt-Michael, 2001), which positively affects their mental health (Wang & Sheikh-Khalil, 2014). Shu (2019) stresses that the communication between school and parents is the key to realising mutual quality relationships. Besides being beneficial for students, parents' inclusion in school brings gain to the parents as well as teachers. The inclusion of parents in school facilitates teaching and empowers teachers to meet the students' needs more easily. Considering the fact that quality cooperation between parents and teachers and active parental participation in the school's functioning has numerous benefits, it is important to design ways and capacitate future teachers for increasing parents' involvement in school and the realisation of quality communication. Although the importance of preparing future teachers for cooperation with parents has been recognised long ago, students, future teachers, express their worries about the possibilities of realising positive and pleasant relationships between teachers and parents (Baum & McMurray-Schwarz, 2004).

Methodology

The goal of the research was to gain insight into the self-assessment of competence for future cooperation with parents of students at the Faculty of Teacher Education.

It is a futurological research whose design utilised the quantitative approach. The research was implemented in October 2020, on a sample of 416 students of the first (n=132), third (n=151) and fifth (n=133) year of the Faculty of Teacher Education of the University of Zagreb (Croatia). Since only few students were males, gender was not considered. The participants were informed on their right to withdraw from the research at any given time, and that the gathered data are anonymous, confidential, and intended exclusively for the needs of the research.

The questionnaire was designed on the basis of the studied literature and research dealing with similar issues (Alaçam, & Olgan, 2017; Cheung & Kam, 2019; Shu, 2019). A questionnaire was designed for the needs of the research with 26 manifest variables on an ordinal five-degree Likert scale, wherein the quantifiers are: 1 – it is not at all true for me; 2 – it is somewhat not true for me; 3 – it is neither true nor false for me; 4 - it is true for me in greater measure; 5 – it is completely true for me. To check the intelligibility and suitability of the questionnaire, the instrument had been field tested in a pilot research implemented with 20 students who were not involved in the main research. The questionnaire was altered in accordance with the recommendations, and the main research utilised the revised version. It took 15 minutes to fill in the questionnaire with the paper-pencil method.

The following hypotheses were set:

H 1 – there is a statistically significant difference in the students' self-assessment of competence for future cooperation with parents: general cooperation competence, competence for cooperation directed to teaching efficacy, and competence for cooperation directed to communication with parents.

H 2 – there is a statistically significant difference in all three composite variables in the student self-assessment of competences for future cooperation with parents regarding the year of study.

Results and Biscussion

The obtained data were processed with the use of SPSS 26.0 statistical package (Statistical Package for the Social Sciences).

For the needs of this work, from the manifest set of variables of competences for future cooperation with parents, three composite variables were formed: general cooperation competence, competence for cooperation directed to teaching

efficacy, and competence for cooperation directed to communication with parents (Table 1).

Table 1 Examples of the Manifest Variables Included in the Composite Variables

COMPOSITE VARIABLES	EXAMPLES OF THE MANIFEST VARIABLES
general cooperation competence	<i>My relationship with parents will improve if I cooperate with them intensively. I don't fear cooperation with parents.</i>
competence for cooperation directed to teaching efficacy	<i>Students will have better achievements if I cooperate with parents. I feel I will be able to motivate parents to participate in class as guest-speakers.</i>
competence for cooperation directed to communication with parents	<i>Holding a parent-teacher meeting will not be a problem for me. I feel I will be able to successfully communicate with parents in the virtual environment.</i>

Descriptive values of the composite variables are presented in Table 2.

Table 2 Descriptive Statistics for the Composite Variables

	N	Min	Max	Mean	Std. Dev.	Skewness		Kurtosis	
						Stat.	Std. Error	Stat.	Std. Error
general cooperation competence (E 1)	416	2,17	5,00	3,6034	,48753	,006	,120	-,222	,239
competence for cooperation directed to teaching efficacy (E 2)	415	2,50	5,00	4,1364	,49157	-,481	,120	-,170	,239
competence for cooperation directed to communication with parents (E 3)	416	1,50	5,00	3,8277	,56014	-,422	,120	,749	,239
valid N (list wise)	415								

As visible from Table 2, E1 and E2 have asymmetrical sampling distributions according to the scale's direction, i.e. higher mean values. Composite variables E1 and E2 are mildly platycurtic, while E3 is mildly leptocurtic. Variability coefficient is < 35%, which indicates homogenous characteristics.

H 1 – there is a statistically significant difference in the students' self-assessment of competence for future cooperation with parents: general cooperation competence, competence for cooperation directed to teaching efficacy, and competence for cooperation directed to communication with parents.

H1 hypothesis is tested in the general linear model. The results of multivariate tests (within subject design estimation) are shown in Table 3.

Table 3 Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
ESTIMATION	Pillai's Trace	,559	262,185 ^b	2,000	413,000	,000
	Wilks' Lambda	,441	262,185 ^b	2,000	413,000	,000
	Hotelling's Trace	1,270	262,185 ^b	2,000	413,000	,000
	Roy's Largest Root	1,270	262,185 ^b	2,000	413,000	,000

Maulchy's W test of sphericity is statistically significant ($W=0,908$; $df=2$; Chi square/approx= 39.847 ; $p=0,000$). Thus, Greenhouse-Geisser ($df=1,832$; $F=200.297$; $p=0,000$) and Huynh-Feldt ($df=1,839$; $F=200,927$; $p=0,000$) are used as tests of within-subject effects. Hence, the difference between assessment of values of the cooperation with parents competence is obtained. For better understanding the differences between the composite variables of cooperation competence, the pairwise comparison on the estimated marginal means was done (Table 4).

Table 4 Pairwise Comparisons

(I)	(J)	Mean	Std.		95% Confidence Interval for Difference ^b	
ESTIMATION	ESTIMATION	Difference (I-J)	Error	Sig. ^b	Lower Bound	Upper Bound
1	2	-,532 [*]	,023	,000	-,578	-,486
	3	-,224 [*]	,026	,000	-,275	-,174
2	1	,532 [*]	,023	,000	,486	,578
	3	,308 [*]	,030	,000	,248	,367
3	1	,224 [*]	,026	,000	,174	,275
	2	-,308 [*]	,030	,000	-,367	-,248

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

As show in Table 4, statistically significant differences were determined between all pairs of composite variables of assessment of competence for future cooperation. Figure 1 presents new estimated marginal means of the composite variables.

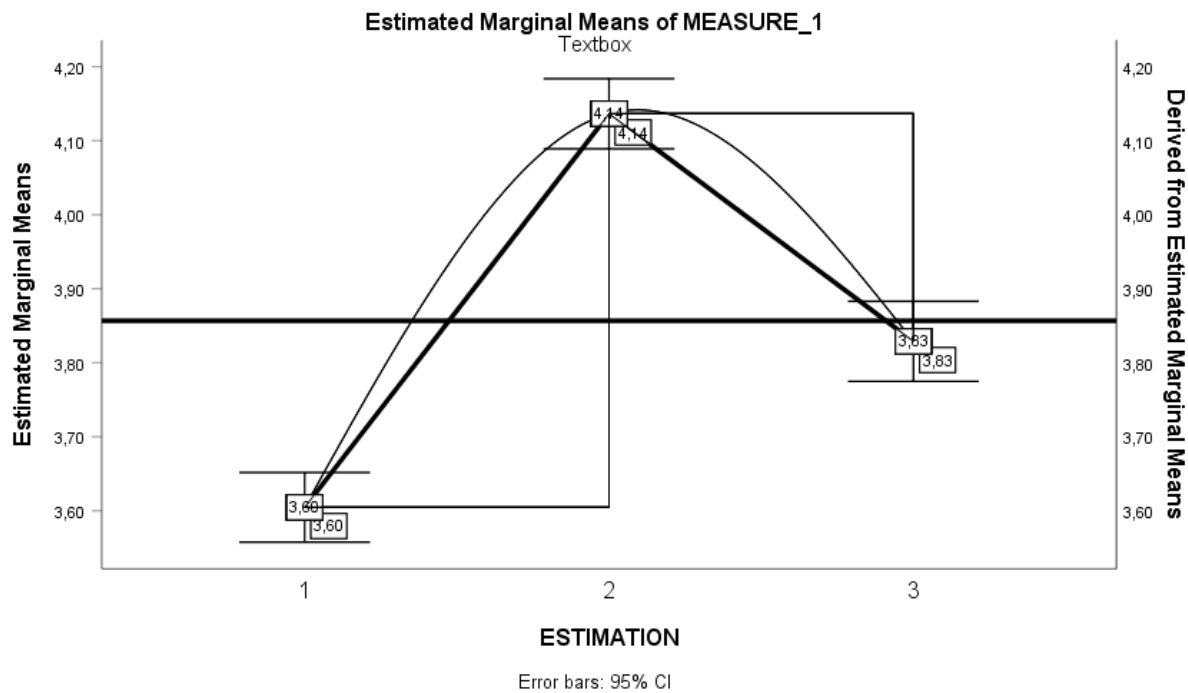


Figure 1 E 1 - General Cooperation Competence; E 2 - Competence for Cooperation Directed to Teaching efficacy; E 3 - Competence for Cooperation Directed to Communication with Parents

Therefore, overall assessment of competences for future cooperation with parents is relatively positive (grand estimated mean), and students from the sample attribute the highest assessment to competence directed to teaching efficacy. In accordance, hypothesis H1 is confirmed, i.e. there is a statistically significant difference in the students’ self-assessment of competences for future cooperation with parents: general cooperation competence, competence for cooperation directed to teaching efficacy, and competence for cooperation directed to communication with parents.

Tichenor (1998) came to similar results in examining students' standpoints in her research. The students evaluated general cooperation with parents as fairly positive.

In our research, the students, future teachers, assess themselves as most competent for realising cooperation directed to teaching efficacy. The reason for such finding could be large number of courses (pedagogical-psychological-didactical-methodical) with the learning outcomes directed precisely to teaching

future pupils. Unfortunately, no obligatory course for students of teacher education exists that would be directed exclusively to gaining the competence for cooperation with parents (but is realised within other courses or in the frame of elective courses).

Ljubetić and Zadro (2009) have done a research with the goal of determining the extent to which teachers find themselves competent for the work with parents. According to the obtained results, most teachers who participated in the research consider themselves inadequately competent in the area and have pointed out that a lot more attention needs to be directed to preparing students for the work with parents in the course of their studies (58% claims this to be completely true, while 42% claims it to be partially true).

H 2 - there is a statistically significant difference in all three composite variables in the student self-assessment of competences for future cooperation with parents regarding the year of study.

The distribution of independent variable study year is as follows: 132 first-year students (31,7%), 151 third-year students (36,3%), and 133 fifth-year students (32%).

ANOVA one-way variance analysis was used for testing the H2, and the results are presented in Table 5.

Table 5 ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
general cooperation competence (E 1)	Between groups	2,057	2	1,029	4,400	,013
	Within Groups	96,310	412	,234		
	Total	98,368	414			
competence for cooperation directed to teaching efficacy (E 2)	Between Groups	,693	2	,346	1,436	,239
	Within Groups	99,347	412	,241		
	Total	100,039	414			
competence for cooperation directed to communication with parents (E 3)	Between Groups	9,908	2	4,954	17,001	,000
	Within Groups	120,056	412	,291		
	Total	129,964	414			

p>0,05

The results of the Levene test indicate the homogenous variances of dependent variables across the compared subsamples ($p > 0,05$). In accordance with the results of the ANOVA, a statistically significant difference was confirmed between students at different study years (first, third and fifth) in their self-assessment of competences for the future cooperation on two composite variables: general cooperation competence and competence for cooperation directed to communication with parents.

Post hoc analysis, i.e. Gabriel test of multiple comparison, was implemented additionally (Table 6).

Table 6 Gabriel Test of Multiple Comparisons

Dependent Variable	(I) year of study	(J) year of study	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
general cooperation competence	First year	Third year	,15031*	,05761	,028	,0123	,2883
		Fifth year	,15215*	,05951	,032	,0095	,2948
	Third year	First year	-,15031*	,05761	,028	-,2883	-,0123
		Fifth year	,00184	,05761	1,000	-,1362	,1399
	Fifth year	First year	-,15215*	,05951	,032	-,2948	-,0095
		Third year	-,00184	,05761	1,000	-,1399	,1362
competence for cooperation directed to communication with parents	First year	Third year	,30469*	,06432	,000	,1506	,4588
		Fifth year	,35606*	,06645	,000	,1968	,5153
	Third year	First year	-,30469*	,06432	,000	-,4588	-,1506
		Fifth year	,05137	,06432	,809	-,1027	,2055
	Fifth year	First year	-,35606*	,06645	,000	-,5153	-,1968
		Third year	-,05137	,06432	,809	-,2055	,1027

*. The mean difference is significant at the 0.05 level.

In line with the results of the Gabriel test, differences on both composite variables are confirmed, wherein the first-year students have statistically significant, higher assessment of competence for cooperation with parents than the third- and fifth-year students (additionally, Figure 2).

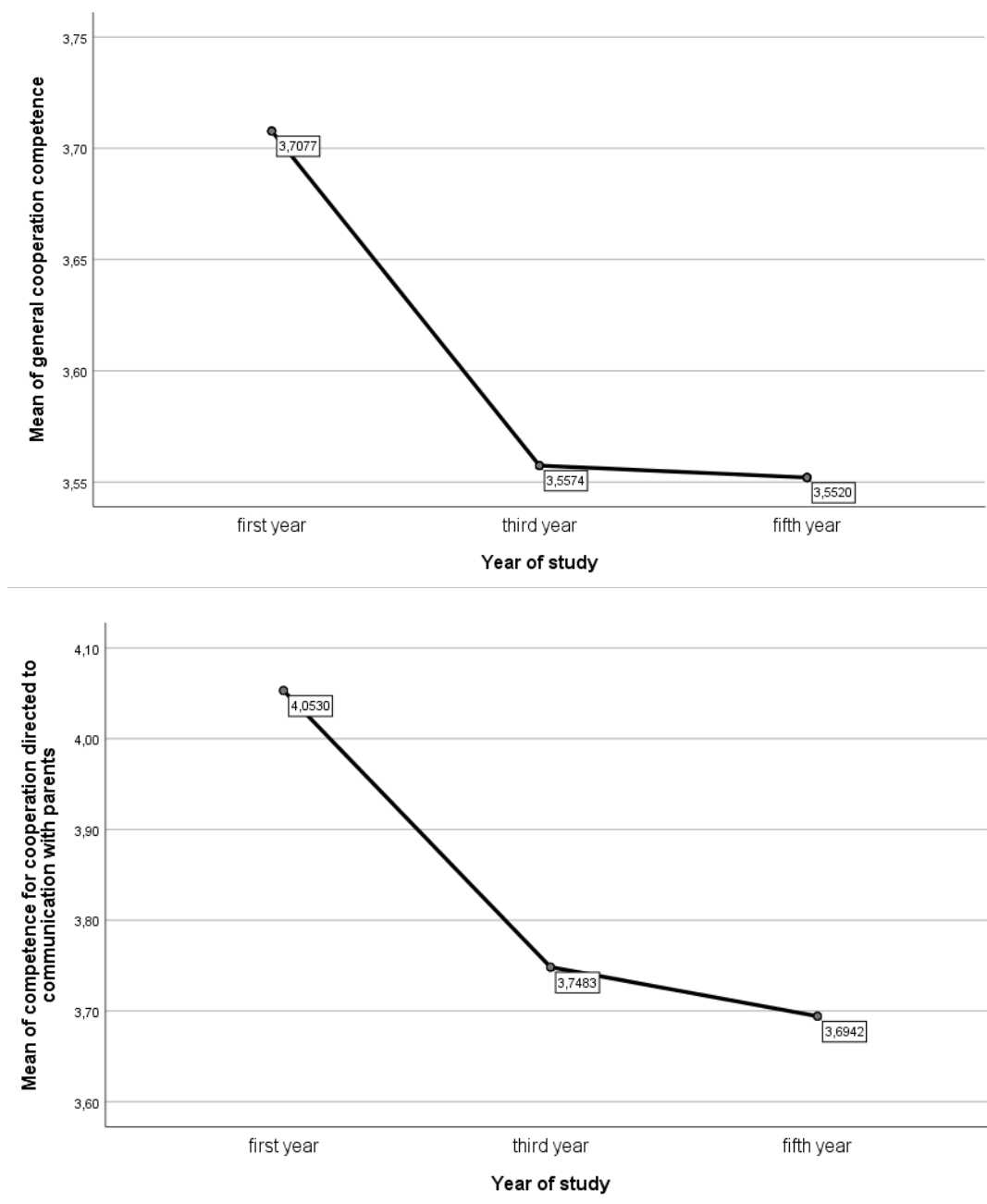


Figure 2 Mean Values between the Subsamples on the Composite Variables

Additionally, Bayesian estimates of coefficients for the composite variables confirmed the difference in the subsamples (Tables 7a and 7b).

Table 7a Bayesian Estimates of Coefficients^{a,b,c}

Parameter	Mode	Posterior		95% Credible Interval	
		Mean	Variance	Lower Bound	Upper Bound
Year of study= first year	3,708	3,708	,002	3,625	3,790
Year of study = third year	3,557	3,557	,002	3,480	3,635
Year of study = fifth year	3,552	3,552	,002	3,470	3,634

a. Dependent variable: about cooperation in general

b. Model: year of study

c. Assume standard reference priors.

Table 7b Bayesian Estimates of Coefficients^{a,b,c}

Parameter	Mode	Posterior		95% Credible Interval	
		Mean	Variance	Lower Bound	Upper Bound
Year of study= first year	4,053	4,053	,002	3,961	4,145
Year of study = third year	3,748	3,748	,002	3,662	3,835
Year of study = fifth year	3,694	3,694	,002	3,602	3,786

a. Dependent variable: communication with parents

b. Model: year of study

c. Assume standard reference priors.

In accordance with the results, H2 hypothesis is partially confirmed.

A possible explanation of such finding could be that the first-year students assess their general cooperation competence and the competence for cooperation directed to communication with parents as higher because at the onset of their studies they are not fully acquainted with the complexity of the teaching profession. Pendergast, Garvis and Keogh (2011) have done a longitudinal research on the Australian students', future teachers', standpoints about what being a teacher entails. It appears that the students had overestimated their level of teacher self-efficacy at the beginning of their study, before acquiring practical experience, more than they have during the final semester of their teacher education programs. Alaçam and Olgan (2017) emphasize that preservice teachers are unaware of the problems concerning parent involvement in education.

Conclusions

Educating and raising children is neither simple nor easy. This demanding task is shared between parents and teachers with the same goal, namely their quality mutual relations and cooperation for the purpose of children's/students' welfare. A life role for parents is a professional one for teachers. Defining roles

and setting clear goals are prerequisites for quality cooperation filled with mutual understanding, respect and appreciation (Ljubetić & Zadro, 2009).

Realising positive cooperation and healthy communication between teachers and parents already at the start of education greatly contributes to future life success of students.

In order to realise a firm bond between family and school, it is important for the teachers to have a positive attitude, show initiative and readiness for building cooperative relationships (Shu, 2019). The onset of quality cooperation must be formed as early as at faculties, during studying. Precisely for this reason it was challenging for us to examine the way students, future teachers, assess their competences for cooperation with parents of their future students. The research results point to high self-assessment of the students, but also indicate there is room for possible improvements. In the results of her research, Zygmunt-Fillwalk (2006) pointed out the importance of implementing appropriate education of future teachers who, after a 16-weeks course, have significantly positively changed their perception of the importance, feasibility and level of preparation regarding family involvement strategies. Thus, it is necessary for faculties educating future teachers to introduce obligatory courses which would sensitise and capacitate them for more efficient cooperation with parents.

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ПРАКТИЧЕСКАЯ РЕАЛИЗАЦИЯ МОДЕЛИ ФОРМИРОВАНИЯ ГОТОВНОСТИ КУРСАНТОВ К ОБЕСПЕЧЕНИЮ ИНФОРМАЦИОННОЙ БЕЗОПАСНОСТИ В ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ

Practical Implementation of the Model of Formation of Cadets' Readiness to Ensure Information Security in Professional Activities

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Abstract. *The mass introduction of information technologies in the activities of state structures has made it possible to transfer the efficiency of their functioning to a qualitatively new level. Unfortunately, as a means of action, they have characteristic vulnerabilities and can be used not only for good, but also for harm. For the state, as a guarantor of the stability of a civilized society, the issue of ensuring the security of information processing is particularly important. Despite the automation of many information processes, the most vulnerable link in the work of information systems remains a person. A person acts as an operator of information systems and a consumer of information. The entire service process depends on the competence of the operator and the quality of his perception. There are areas of government activity where the cost of error is particularly high. These include ensuring the life and health of citizens, protecting public order and the state system, and ensuring territorial integrity. The specifics of the spheres must be taken into account when ensuring the security of information. This study concerns official activities that are provided by paramilitary groups. Currently, there is a discrepancy in the level of competence of new personnel in the first months of service. The author traces the shortcomings of general and special professional qualities in the field of information security. The purpose of the study is*

to substantiate certain pedagogical means of forming cadets ' readiness to ensure information security. As forms of theoretical knowledge, we will use the traditional hypothesis and model, as well as functionally distinguishable judgments – problem, assumption, idea and principle. Empirical forms of knowledge will be observation (experimental method) and fixation of facts. To evaluate the effectiveness of the developed pedagogical tools, we use statistical methods: observation (documented and interrogated) and calculation of generalizing indicators. To formulate conclusions, we will use logical methods: building conclusions and argumentation. The approbation of certain pedagogical tools described in this article showed a significant positive trend in terms of competence in information security issues.

Keywords: *components of readiness, ensuring information security, formation of readiness, organizational and pedagogical conditions, professional competence, professional readiness, professionally important qualities.*

Введение **Introduction**

Массовое внедрение информационных технологий в деятельность государственных структур позволило перевести эффективность их функционирования на качественно новый уровень. К сожалению, в роли средств деятельности они имеют характерные уязвимости, а также могут использоваться не только во благо, но и во вред. Для государства, как гаранта стабильности цивилизованного общества, вопрос обеспечения безопасности обработки информации особенно важен. Несмотря на автоматизацию многих информационных процессов, наиболее уязвимым звеном в работе информационных систем остается человек. Человек выступает в роли оператора информационных систем и потребителем информации. От компетентности оператора в первом случае и качества восприятия им сведений во втором зависит весь процесс обслуживания. Существуют сферы деятельности государства, где цена ошибки особенно велика. К ним относится обеспечение жизни и здоровья граждан, охрана общественного порядка и государственного строя, обеспечение территориальной целостности. Особенности сфер необходимо учитывать при обеспечении безопасности информации. Данное исследование касается служебной деятельности, которая обеспечивается военизированными формированиями. В настоящее время наблюдается несоответствие уровня компетентности новых кадров в первые месяцы службы. Прослеживаются недостатки общих и специальных профессиональных качеств в вопросах обеспечения информационной безопасности. Это затягивает интеграцию работника в полноценную служебную деятельность и подрывает общий уровень обеспечения безопасности информации в подразделении.

Цель исследования – обоснование отдельных педагогических средств формирования готовности курсантов к обеспечению информационной

безопасности. Объект исследования – формирование готовности курсантов ведомственных образовательных организаций к обеспечению информационной безопасности в профессиональной деятельности. Предмет исследования – практическая реализация ранее разработанной педагогической модели формирования готовности курсантов к обеспечению информационной безопасности. Гипотеза исследования данной статьи заключается в том, что если создать ряд педагогических средств, компенсирующих основные недостатки реализации образовательной программы по профилю информационной безопасности, то формирование готовности к ее обеспечению будет иметь более высокую степень эффективности. Для проверки предположения решим задачи: – представления теоретических оснований для разработки педагогических средств; – описания педагогических средств как практической реализации, теоретически обоснованных подходов к решению проблемы; – представление первичных результатов эмпирических исследований по внедрению педагогических средств.

В качестве форм теоретического познания будем использовать традиционные гипотеза и модель, а так же функционально различаемые суждения – проблема, предположение, идея и принцип. Эмпирическими формами познания послужат наблюдение (экспериментальный способ) и фиксация фактов. Чтобы оценить эффективность разработанных педагогических средств используем методы статистики: наблюдение (документированным и опросным способом) и расчет обобщающих показателей. Для формулирования выводов воспользуемся логическими методами: построения умозаключений и аргументации.

Теоретическая основа темы *The Theoretical Background*

Проведенные ранее авторские исследования (Kirillova & Dvoreckij, 2018) показали, что готовность к обеспечению информационной безопасности в профессиональной деятельности (составляющая профессиональной компетентности) является интегративным образованием в структуре личности. Компонентами такой готовности курсантов представляются: теоретический, практический, теоретико-практический, воспитательный. Компоненты готовности вначале рассматривались через общую структуру деятельности (целеполагание, планирование, активность, анализ), затем через анализ противоречий формирования готовности при освоении образовательной программы в условиях ведомственной организации (проблемы планирования и реализации программы, персональные трудности обучаемых). Общий

показатель готовности складывается из оценок полноты формирования компонентов по параметрам. Для ранжирования параметров изучалась востребованность профессионально-важных качеств среди специалистов по информационным технологиям и безопасности. Значимость параметров компонент готовности в порядке убывания выглядит следующим образом: 1) знания и самоконтроль; 2) умения и установки; 3) навыки и оценки, 4) привычки; 5) знания способа деятельности; 6) отношения; 7) уровень развития. В итоге были выявлены направления, последовательность, и ожидаемые результаты педагогического воздействия для формирования готовности по всем составляющим.

Сообразно области научных интересов авторов изыскания были ограничены организационно-педагогическими условиями формирования готовности в образовательном процессе ведомственной организации (Dvoreckij, 2017). Для уточнения их состава был исследован сам процесс, система, в которой он протекает и среда. Структура процесса дала возможность выявить внешние (актуальное состояние обеспечения информационной безопасности в ведомстве, потребности общества в эффективности функционирования ведомства и возможностей для его обеспечения) и внутренние (качество управления образовательным процессом в ведомственной организации) факторы создания организационно-педагогических условий. Структура образовательной системы ведомственной организации позволила выявить системные связи организационно-педагогических условий с другими компонентами, а характер внешних связей дал возможность уточнить их актуальный состав и оценить возможности их улучшения. Было определено, что организационно-педагогические условия – это совокупность актуально доступных информационных, учебно-методических, кадровых, материально-технических ресурсов, системы документирования управления реализацией образовательной программы, методик контроля и оптимизации освоения образовательной программы, регламентирующая содержание, обеспечивающая функционирование и развитие педагогической системы для достижения компетентности курсантов. Те условия, что будут удовлетворять критериям необходимости и достаточности станут причинами целесообразной активности педагогов и обучаемых для формирования требуемой готовности (см. рис. 1).

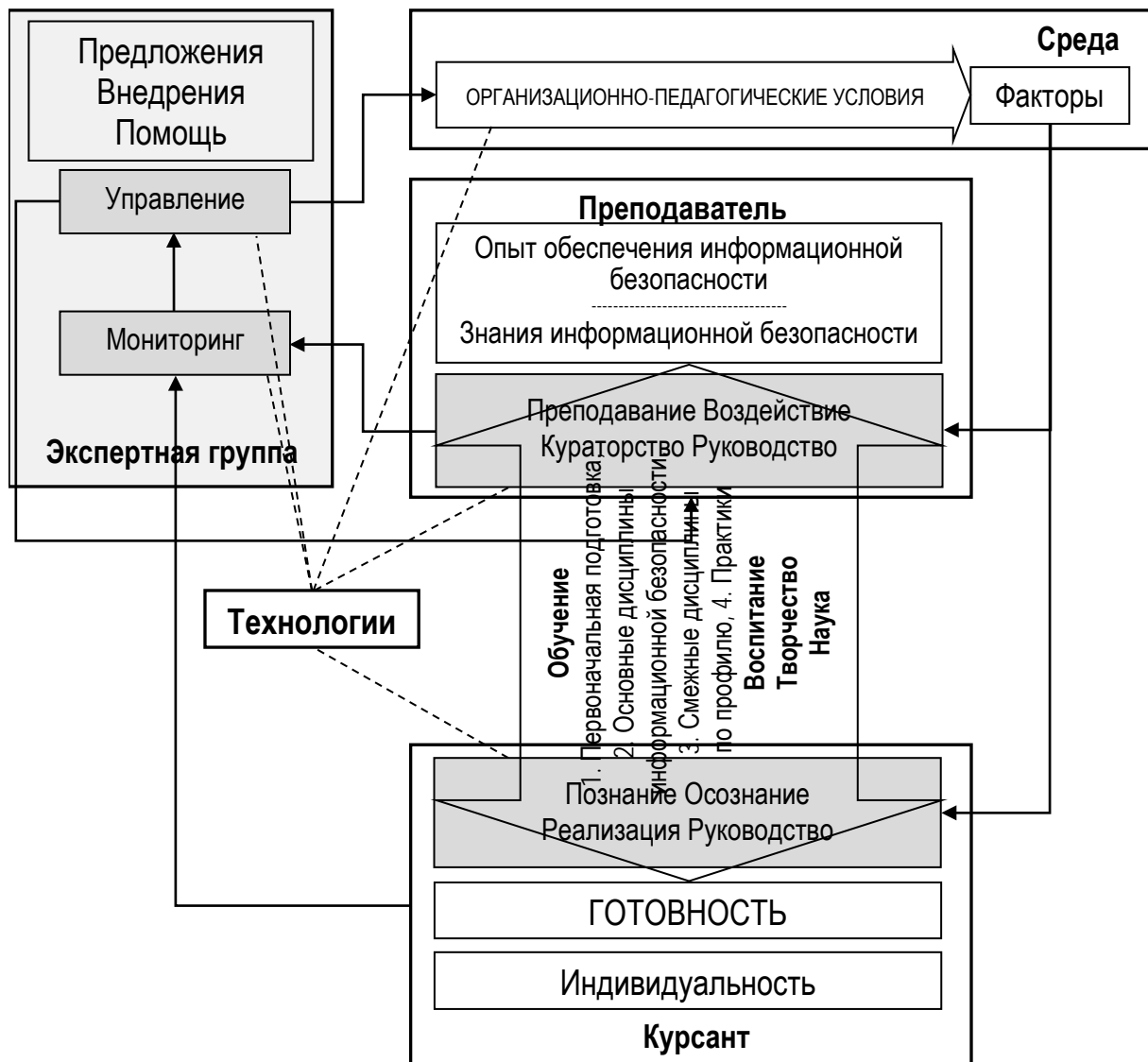


Рисунок 1. Модель формирования готовности курсантов к обеспечению информационной безопасности в профессиональной деятельности
Figure 1 Model of Formation of Cadets' Readiness to Ensure Information Security in Their Professional Activities

Главные авторские идеи повышения результативности формирования готовности курсантов к обеспечению информационной безопасности в профессиональной деятельности: поэтапное формирование готовности на стадиях, отчетливо различаемые при осуществлении образовательной программы в ведомственных образовательных организациях (первоначальная подготовка, основные дисциплины информационной безопасности, смежные дисциплины по профилю, практики); осуществление качественного педагогического сопровождения (Solov'eva & Makarkina, 2015) по всем направлениям деятельности участников образовательного

процесса (учеба, воспитание, творчество, наука); создание экспертной группы по вопросам информационной безопасности (коллегиального органа) в составе управляющего органа. При этом комплекс педагогического воздействия ориентируется на актуально востребованные в профессиональной среде специалистов по информационной безопасности качества, а учебно-воспитательный процесс учитывает индивидуальные достижения курсантов. Это позволит поддерживать уровень готовности на приемлемом значении после достижения основных показателей в течение всего освоения образовательной программы. Образовательный процесс по профилю инфобезопасности с традиционно проработанным обучением предметно и акцентированно дополнится всеми видами педагогического взаимодействия. А именно, воспитательным воздействием со стороны преподавателя с ожидаемым осознанием у курсанта, отношениями куратора творческой реализации курсанта, взаимодействием научного руководителя по исследовательской работе курсанта. Казарменные условия проживания курсантов на территории ведомственного учреждения дадут реализовать практико-ориентированный подход в профессиональной подготовке (Kolesnikova & Ushkov, 2017), так как режим деятельности, объекты информатизации образовательной организации и практического учреждения схожи. Технологичность обязательно должна присутствовать в образовательной системе как гарант получения рационального уровня образования. Образовательным технологиям отводится роль средства разработки условий и формы их существования. Результаты изысканий и предложений были представлены в виде графической модели.

На рисунке можно наблюдать основные элементы, влияющие на формирование требуемой готовности курсанта. Видно, что индивидуальность курсанта является неотъемлемой частью его личности и образовательный процесс строится с учетом этого обстоятельства. Преподаватель находится с курсантом в педагогическом взаимодействии под влиянием среды, стимулируя возможности к самообразованию (Luzgin, 2017). Среда настраивается коллегиальными силами организаторов процесса на основе непрерывного наблюдения за результатами готовности курсанта сообразно частной образовательной цели. Усилия по направлениям педагогического взаимодействия также подвергаются корректировке, однако это не должно усложнять процесс и оставаться в рамках используемых педагогических технологий. Разработанная модель обоснована, уточнена на основе авторских идей, и полученные знания обогащают теоретико-методологические представления об организационно-педагогических условиях формирования профессиональной готовности.

Результаты эмпирического исследования *The Results of Empirical Research*

Для практической реализации модели на текущем этапе были учтены лишь наиболее востребованные на практике профессионально-важные качества по обеспечению информационной безопасности и недостатки в профессиональной подготовке по профилю, исправление которых требует наименьшие затраты ресурсов. Осуществлены следующие мероприятия по разработке педагогических средств: переработана общепринятая структура (тематика) учебной дисциплины «Информационная безопасность» с пересмотром требований к результатам обучения, описаны критерии и показатели оценивания компетенций, внедрен соответствующий курс лекций; разработаны практические рекомендации по управлению информационными рисками для сотрудников, осуществляющих деятельность в условиях непосредственного контакта с потенциальным злоумышленником; подготовлены вспомогательные материалы для организации работы с курсантами ведомственных образовательных организаций по формированию готовности к обеспечению информационной безопасности в профессиональной деятельности учебного, воспитательного, творческого, научного характера.

Предварительные исследования показали, что учебная дисциплина «Информационная безопасность» стандартна для любого уровня профессионального образования и не учитывает профиль подготовки. Тематика дисциплины имеет явно выраженный технический уклон. Фактически представляет собой набор стандартов по безопасности без всякой систематизации. Очевидно, что это следствие относительно новой отрасли знаний. То есть изначально отсутствует универсальная часть знаний. Вводная тема должна содержать подробнейшее рассмотрение всех базовых понятий дисциплины во взаимосвязи между собой и с более общими понятиями. В новой области знаний не допускается простое изложение терминов перечнем. А уже из отношений понятий можно выделить специфические термины. Такой подход поднимает познавательную мотивацию. Должна присутствовать тема обеспечения информационной безопасности. С дидактической точки зрения правильно изучить общую схему процесса, чтобы представлять последовательность операций, возможные способы взаимодействия со специалистами по безопасности и другими организациями. И объективно необходима тема, ориентированная на профиль образования, образовательный и профессиональный стандарт. В этом разделе необходимо уточнить общие сведения применительно к специфике предстоящей практической деятельности, рассмотреть вопросы прикладного характера. Например, для технического профиля подойдет

изложение специальных стандартов безопасности и защиты информации, гуманитарного – рассмотрение информационных противоречий, юридического – анализ правонарушений в информационной сфере. Проработка структуры учебного курса позволяет более отчетливо отслеживать междисциплинарные связи. Таким образом, для служебной деятельности военизированных подразделений тематика учебной дисциплины и разработанный курс лекций содержат разделы: «Введение в теорию информационной безопасности», «Система управления информационной безопасностью», «Конфликты и правонарушения в информационной сфере». В первой теме представлены теоретические основы информационной безопасности, раскрыты правовые источники, сущность и содержание деятельности по обеспечению информационной безопасности. Во второй теме представлены сведения о порядке разработки единой политики информационной безопасности, организации управления информационными рисками, проектировании системы управления информационной безопасностью, построении системы защиты информации, аттестации объектов информатизации по требованиям безопасности информации, эксплуатации объектов информатизации с использованием системы защиты информации, управлении инцидентами нарушения информационной безопасности. В третьей теме представлены сведения о понятии, структуре конфликта в информационной сфере, особенностях информационного противоборства и профилактике данных явлений. Так же рассматриваются правонарушения в информационной сфере как не уголовного, так и преступного характера. Характеризуется киберпространство с точки зрения безопасности. Даются рекомендации по профилактике информационных правонарушений. Отдельный вопрос посвящен информационным конфликтам, противоборству в экстремальной среде и информационным правонарушениям в учреждениях, где обращение информации строго регламентировано. Разработанные документы (паспорта компетенций, рабочие программы, оценочные средства) содержат требования к результатам обучения по компонентам и этапам, начиная с первоначальной подготовки и заканчивая практикой.

Практические рекомендации по управлению информационными рисками для сотрудников отражают один из подходов к обеспечению информационной безопасности. Данный подход наиболее соответствует практической деятельности, напрямую не имеющей отношение к обслуживанию вычислительной и коммуникационной техники. Акцент для служебной деятельности, связанной с использованием оружия и специальных средств, сделан на условия антагонистического характера. Рекомендуются методики оценки информационных рисков, типовые приемы и средства защиты информации, особенности безопасного

обращения с распространёнными информационными технологиями. Особое внимание уделяется безопасному поведению и общению с целью недопущения раскрытия конфиденциальной информации. Приводятся примеры стандартных угроз, типовых информационных атак и провокационных действий. Предлагаются предпочтительные варианты выхода из опасной ситуации.

Для организации работы по всем направлениям педагогического взаимодействия с курсантами в целях формирования требуемой готовности подготавливается самый разнообразный материал. Решаемые задачи: активизация познавательной активности обучаемых; поэтапное формирование компетентности с последующим поддержанием ее на требуем уровне; документальное обеспечение образовательного процесса; использование условий проживания курсантов как практического полигона. Учебное пособие дополняет курс лекций и другое учебно-методическое обеспечение по профильным и смежным дисциплинам, учитывая предыдущий уровень образования. Дополнительные материалы по объему соответствуют трудоемкости затрагиваемых дисциплин, запланированных в рабочем учебном плане, и их содержанию. Пособие согласовывается с типовыми ежегодными планами воспитательных, научных, творческих, спортивных, культурно-досуговых мероприятий, графиком служебной подготовки. Наименование разделов: «Общие положения по обеспечению образовательного процесса»; «Учебные материалы и самостоятельная работа»; «Материалы для воспитательной работы»; «Исследовательские и творческие задания»; «Материалы для занятий по служебной подготовке».

В рамках этой статьи подготовлены наиболее существенные результаты мероприятий по практической реализации модели, описанной в разделе о теоретических исследованиях. С целью проверки эффективности разработанной модели процесса формирования готовности курсантов к обеспечению информационной безопасности в профессиональной деятельности были проведена опытная проверка с контрольной и экспериментальной группой методами математической статистики для обнаружения отличий до и после внедрения педагогических средств. Контрольная и экспериментальная группы в количестве по 24 курсанта из числа обучаемых Псковского филиала Академии ФСИН России. Такое разбиение удалось достичь за счет того, что занятия проводятся изначально в подгруппах. Объем выборки дает достаточно объективный результат в виду высокой степени однородности исследуемых единиц (обучаемых). Такое допущение оправдывается реализацией обучения по типовой программе. Первое измерение уровня компетентности контрольной и экспериментальной групп по вопросам информационной

безопасности состоялось на первоначальной подготовке в августе 2019 года. Второе измерение – после окончания второго семестра обучения (завершение курса основных дисциплин по информационной безопасности). Измерения уровня компетентности осуществлялось путем комплексной экспертной оценки каждого курсанта путем опросов, собеседований, тестирований на знания, проверки умений, навыков, изучения опыта, исследований воспитательного компонента (тесты на склонность к риску, на внимание, мотивацию). Оценка складывалась по методике, разработанной авторами эталонной компетентностной модели достаточного специалиста по вопросам информационной безопасности среди сотрудников. Ситуационный сдвиг у контрольной группы без экспериментального воздействия и у экспериментальной группы со специально созданными экспериментальными условиями по осредненному показателю готовности составил +13%.

Практическая значимость полученных результатов исследования выражается в возможности использования образовательными организациями военизированных формирований методики создания организационно-педагогических условий при проектировании ресурсов, подготовке системы документации, оптимизации средств контроля образовательного процесса для повышения эффективности формирования общекультурных компетенций информационного профиля и профессиональной компетентности в вопросах обеспечения информационной безопасности. Практические органы могут использовать методические и практические рекомендации для проведения занятий по служебной подготовке, инструктажей, организации информирования об инцидентах информационной безопасности и актуальных угрозах личному составу и безопасности службы со стороны киберпреступности.

Выводы *Conclusions*

Противоречие между желаемым качеством подготовки курсантов к обеспечению информационной безопасности в профессиональной деятельности и действительным подтверждается экспертными оценками, а также результатами текущей успеваемости. Одним из путей разрешения противоречия является переработка имеющихся и создание вспомогательных педагогических средств организации образовательного процесса с целью устранения объективных недостатков в нем. Педагогические средства создадут условия для повышения эффективности взаимодействия участников процесса и самостоятельной деятельности. Реализация замысла не требует привлечения значительных дополнительных ресурсов и

решается силами образовательной организации. Апробация отдельных педагогических средств, описанных в данной статье, показала значительную положительную динамику по показателю компетентности в вопросах информационной безопасности.

Summary

The article is devoted to the substantiation of certain pedagogical means of forming the readiness of cadets of educational departmental organizations to ensure information security in their professional activities. To study the process of readiness formation, a model of it was constructed and studied. The research conducted earlier by the team of authors showed that the readiness to ensure information security in professional activities (professional competence) is an integrative education in the structure of the individual. A system of professionally important qualities of an information security specialist was developed. The organizational and pedagogical conditions in the educational process of a departmental organization were chosen as the direction of research to improve the effectiveness of the formation of readiness components. The elimination of the objective shortcomings of this process and the use of all available areas of pedagogical interaction does not overload it, but only optimizes it. The practical implementation of the model of the process flow focused on the conditions took place in the development, implementation and evaluation of the effectiveness of the pedagogical tools presented in the article.

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FACTORS OF ATTRACTIVENESS OF EDUCATION IN THE FIELD OF FINE AND DECORATIVE ARTS

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Abstract. *The article dwells upon the problem of revealing ways to increase the attractiveness of education in the field of fine and decorative arts for today's youth. The specificity of "introducing" contemporary youth into the world of fine arts is studied, starting from the early stages (pre-school education) up to professional training. The factors affecting the decision of a person to choose a specialty in the field of art or education (artistic pedagogy) and the acquisition of corresponding professional qualifications are distinguished as follows: personal factor (abilities and talents of the individual), prestige as a motivational factor as well as information and organizational factors. The methodology of the study envisaged: systemic approach – in order to cover the problem consistently, systematically and holistically; an interdisciplinary approach to consider factors from the standpoint of pedagogy, psychology and sociology; historical approach – to estimate the state of formation of the system for future professional artist's training as well as fine arts teacher's training and decorative art tutor preparation. The scientific relevance of the research is the specification of the factors of attractiveness in terms of the choice of artistic or artistic-pedagogical specialty in the modern educational space. Generalization of the possibilities of vocational guidance of the educational system of teaching fine arts in its retrospective view (from the period of 1950-1991 to the beginning of the XXI century) is carried out. On the basis of the principal classification of the factors of choosing a profession and diagnosis results (questionnaires), certain recommendations are given in order to increase the attractiveness of education in the field of fine and decorative arts for both domestic and foreign students wishing to study in Ukraine.*

Keywords: *attractiveness of education, arts and crafts, educational process, fine arts, professional training, students.*

Introduction

A great number of people feel a crave inside for this or that kind of activity in the field of art from time to time, while not all of them choose it as a calling in life and pursue their career in arts, in particular, fine or decorative-applied one, design, etc.

Ukraine has long been famous for representatives who revealed their talent in pictorial, decorative and applied art. Now, that our country has dropped its position in terms of competitiveness in professional training in a number of areas (medical, natural science, physical and mathematical education, etc.), training of national specialists in the field of art and art pedagogy meets the world and European standards, and in many ways – has been successfully integrated into the global educational processes.

The up-to-date development of art and art-pedagogical education, the progress of culture and education on the national scale are conditioned by the national programs of Ukraine. The state programme "Education (Osvita (Ukraina XXI stolittya), 1994) sets the artistic and aesthetic education as one of the main directions of youth education, which includes the development of abilities to multiply the cultural and artistic wealth of the nation. Along with the declaration of constitutional right of citizens for education in all its forms and at all its levels, the Law of Ukraine "On Education" (article 21, parts 1 and 2) stresses the creation of conditions for receiving the specialized education, in particular the artistic one (Pro osvitu, 2017). In February 2021, draft amendments to the Law of Ukraine "On Culture" (Pro kulturu, 2010), were adopted as the basis. Article 4, paragraph 1, of the draft law sets the development of art education as the state policy priority in the sphere of culture.

Right now, domestic scholars are pondering the questions related to increasing the attractiveness of arts education for both domestic and international students. So, in this article, we are also trying to comment on this issue.

Theoretical Substantiation of the Problem

Certain comparative aspects of professional education in the country and abroad are covered in the works of V. Hamanyuk (Hamanyuk, 2012), T. Koshmanova (Koshmanova, 2002), E. Lokshyna (Lokshyna, 2013) and others. The top enquiry into professional-pedagogical and art-comparative studies is caused by the traditional interest of the Ukrainian community in foreign achievements, approval in the minds of the general public of the national system of professional training development in unity and integration with the world's ongoing achievements.

In fact, art education components of Vocational Education are presented in the works of numerous Slavic scholars (Arapova, 2004; Otich, 2011; Orlov, 2003; Pichkur, 2000; Stukalova, 2011). These scholars have detailed the nature and content of the professional training of future specialists in the field of fine arts, and have made valuable recommendations on ways of mapping professional and future artists' skills.

The following artists-pedagogues (Nemensky, 1987; Rostovtsev, 1998; Shmagalo, 2005; Yusov, 2002) speak about their common features with art-pedagogical education through their critical understanding of the principles of specialists' training in the field of Arts (fine arts and decorative-applied). As practice shows, this relieves some of the strain in applicants' choice between the arts and education to obtain a basic specialty in the field of fine and decorative arts.

According to the basic classification of E. Klymov (Klymov, 2004), among the factors that determine the choice of profession are the following: a formed system of value representations of the individual, professional self-determination from the positions of parents, friends, teachers, age, gender and medical problems, socio-economic aspects, awareness of the profession value in society, the level of personal qualities and aspirations, prestige of the profession, interests, abilities of the personality, etc.

We can also claim the works of foreign researchers are of high interest for this and further research concerning: ways to invest key competences in learning at all stages of life (Rychen, 2003), social career context (Herr, 2008), choosing career guidance strategies for people of different cultures in the United States (Leung, 2008) and others.

At present, we have a gap between the theoretical developments that have been made in the process of improving the methodological, practical components of professional training of student youth in the arts, and the real conditions that would promote the national system of training professionals in the field of fine arts and decorative arts.

Therefore, the aim of our study is to present the changes in the educational system for training an artist, artist-educator (since the second half of the twentieth century) in comparison with the modern system of gradual training in the field of fine and decorative arts and on this basis, to highlight and analyse the factors that can decisively influence the attractiveness of such education and its popularisation. The question is debatable – which really makes this education attractive to today's youth.

Methods of the Research

According to the objectives of the research, the following methods were applied: general scientific methods - study and analysis of scientific literature on psychology and pedagogy, works of domestic and foreign authors in the field of art pedagogy; specifically scientific methods: structural and logical – in order to present a model of a multilevel system of art and art-pedagogical education from the period of 1950-1991 and up to the beginning of the XXI century; comparison and interpretation – to identify and analyse the factors that, in our opinion, shape

the popularity of education in the field of fine and decorative arts; prognostic – allows one to formulate recommendations aimed at increasing the level of attractiveness of education in the field of fine arts and decorative arts at the level of professional training in higher education institutions. The empirical method (questionnaire) was applied to study the rating of motives for students' professional choice of Art and Graphics department of the Art faculty in Kryvyi Rih State Pedagogical University when entering the specialty Fine Arts and Design. The training itself is viewed as a structure at which different levels of career guidance are exercised.

We are analysing this problem consistently by:

- a) comparing the vocational/professional guidance of the educational system in retrospect (1950-1991) with the modern system of gradual training of a specialist in fine, decorative art, design, teacher or head of the circle; carrying out analysis on the formation of attractiveness of art and art-pedagogical education at its educational levels;
- b) distinguishing the factors influencing the formation of motivation to choose a profession of artistic and artistic-pedagogical direction;
- c) on the basis of the conducted research, offering recommendations aimed at increasing the level of attractiveness of education in the field of fine and decorative arts.

Results of the Research

In our study, we focus on the average young man or woman, for whom, as a rule, acquaintance with the arts begins in the family circle and in the institutions they visited during the preschool and school stages of their life. Here is a note: in Ukraine there is a consistent system of human aesthetic development, the early fostering of the ability to perceive and understand works of art. Educational programs of state preschool educational institutions contain such important components as demonstration and description of reproductions of paintings by famous domestic and foreign artists. The technique of speech development of preschool-aged children by means of fine arts is developed, there are numerous researches and recommendations which include classical works and what sequence to choose to acquaint children with them (questions on the content of canvases, characters depicted, making up a common story, etc.), how to make a picture description.

Practically, domestic training of the future professional artist, teacher of fine arts, teacher of decorative art was shaped in the Soviet times, and was carried out in specialized art schools and studios, in circles of decorative and applied direction, forming a prolonged attractiveness of education in the field of fine arts.

For example, in the period of 1950-1991 as a complete system, it was a vertical structure with a career-oriented influence at different stages:

1. **General education institutions:** elementary level (Grades 1-3) – manual labor, artistic work, fine arts; secondary level (5-6th grades) – labor training, fine arts; high level (Grades 9-10) – industrial training, vocational training, artistic and service work; classes with advanced study of fine and folk art; electives, circles.
2. **Out-of-school educational establishments:** children's art schools; palaces and houses of pioneers; stations of young technicians.
3. **Specialized secondary schools:** vocational schools of artistic profile; art schools; pedagogical schools.
4. **Higher education institutions:** academies of arts; art institutes; pedagogical institutes (faculties of graphic arts, industrial-pedagogical faculties).
5. **Postgraduate education:** faculties of advanced training, courses; training institutes.
6. **Complexes and educational associations:** «schools – vocational schools – production»; «Pedagogical classes – pedagogical schools – pedagogical institutes – advanced training courses»; «Art schools – folk crafts – art institutes» (Eivas, 2017).

Having absorbed the best of the previous period, the model of modern Ukrainian education in the field of art and art pedagogy is subordinated to the ranking of the basic level training: elementary, primary, secondary and higher professional.

At the same time, new elements of the educational system are emerging from the period of Ukraine's independent statehood up to the beginning of the 21st century, which promote the choice of the artistic and artistic-pedagogical specialty, among the following:

1. **Comprehensive secondary educational institutions:** specialized secondary schools; private schools; lyceums, gymnasiums of aesthetic profile; colleges; children's aesthetics academies.
2. **Out-of-school educational institutions:** Minor Academy of Sciences; flexible system of formal and informal extracurricular education; museums, exhibitions, competitions; art projects.
3. **Specialized secondary educational establishments:** colleges of arts, vocational colleges, institutes of arts; teachers' training colleges; art institutes, colleges; colleges of arts, design and arts and crafts.
4. **Higher education institutions:** institutes of arts; academies and universities of national importance; exchange programs between domestic and foreign higher education institutions; grant programs.
5. **Postgraduate education:** internships, workshops; training programs.

- 6. Centres and educational associations:** «pedagogical class – pedagogical college – institution of higher pedagogical education; «Postgraduate Pedagogical Education Institution – Formal and Non-formal Teacher Education»; «Art schools and centres – art colleges – art-pedagogical and technological-pedagogical HEI»; «Postgraduate education institutions – formal and non-formal art education» (Eivas, 2017).

Under the influence of cultural, historical, scientific and technological progress and political changes in the formation of independent statehood, in present day Ukraine, there is a process of reviewing of folk arts and crafts role and place in general secondary education, the material and technical basis for such education is being increased, experience and teaching methods are being accumulated, introducing new techniques and technologies that are passed on to talented youth and orienting them to the choice of profession in artistic and artistic-pedagogical direction, which can be considered as one of the basic factors of art education attractiveness.

For example, let us provide an example of professional orientation and promotion of future education in the field of fine and decorative arts applied at the level of elementary stage of secondary school education. During the Drawing lessons, the basic varieties of Ukrainian traditional decorative and applied art are introduced. Drawing lessons for six- to seven-year-old students involve not only getting acquainted with Petrykivka, Opishniansky, Kosiv and other paintings (examining dishes, analysing the components of patterns, etc.), but also reproducing the elements of these paintings themselves. Under the guidance of the teacher, children paint paper templates or a raw form of wood or ceramics, have the opportunity to depict vegetable (flowers, petals, shoots), geometric traditional elements by the types of arts and crafts, to understand the practical expediency of such products, to gradually become aware of the unique national mentality and get their first reflections on their future profession.

The school period makes it possible to diversify the children's and adolescents' ideas about the varieties of fine and decorative arts, to immerse themselves gradually into the specifics of each of them.

In addition to the Art discipline at school, which is taught to high school students and aimed to enrich the younger adolescents' understanding of the main arts in historical and cognitive perspectives, the content of all disciplines of the humanitarian cycle (the Ukrainian language and literature, World literature, Ukrainian and World history, geography) is diverse with the information somehow related to the study of arts. It is worth noting, we do not find any similar integration, consistency, clarity and thoughtfulness of the educational information submission into the syllabus studied by students of the relevant age from the European Union countries. Numerous reproductions of famous masters' pictures

on textbook and manual pages, photographs and QR codes that open up video content enrich students' consciousness, interest and tune them into the excellence of fine art world. For example, a textbook in World literature for the tenth grade of general secondary education institutions (Kadobianskaya & Udovichenko, 2018) contains images of Rafael frescoes, reproductions of paintings by John William Waterhouse, Herbert-James Draper, Jan Jordan, Thomas Wilmer Dewing, Maurice Danny and other prominent artists. The works of the world recognized writers, prose plots and poetic works are illustrated through paintings and graphics. On the other hand, the textbooks and manuals in the Ukrainian language are mostly illustrated by the stylization of the Petrivka paintings. Apparently, such information serves as additional motivation, and partly a decisive impetus to test their skills in the artistic field.

The next step in exploring of attractiveness of education in the field of fine arts and crafts is the specification of the factors that influence today's youth to choose fine arts and crafts as their profession or vocation.

In order to find out the rating of the factors and to identify the main motivators of modern youth to enter the study in arts and pedagogical and artistic specialties, a pilot survey was conducted by means of a questionnaire. Hence, 25 first-year students majoring in Secondary Education (Fine Arts) and 30 students of the specialty Design were selected for the diagnostics. The students were asked to answer the question "What circumstances and to what extent influenced your choice of profession as a fine arts teacher / head of the decorative arts club / designer?" The questionnaire contained some judgments, the degree of agreement to which allowed us to determine the rating of factors influencing the choice of future profession. The respondents were asked to choose from three levels of assessment: "predominant", "average", "completely unaffected" and mark the corresponding grade level with a "+" sign in each answer line.

The survey consisted of the questions with one choice by the level of influence (one answer for each question): 1. *Family traditions*; 2. *Tips from friends and acquaintances*; 3. *Parents' recommendations*; 4. *Teachers' recommendations*; 5. *I want to do creative work*; 6. *I am good at drawing / decorative creativity / design*; 7. *Random choice of profession*; 8. *I want to manage children's creativity in the field of fine arts / decorative arts / design*; 9. *I want to do teaching*; 10. *The future of the profession gives prospects for career advancement*; 11. *I am well-informed by the mass media about the demand for this profession in the labor market*; 12. *I consider the profession prestigious*.

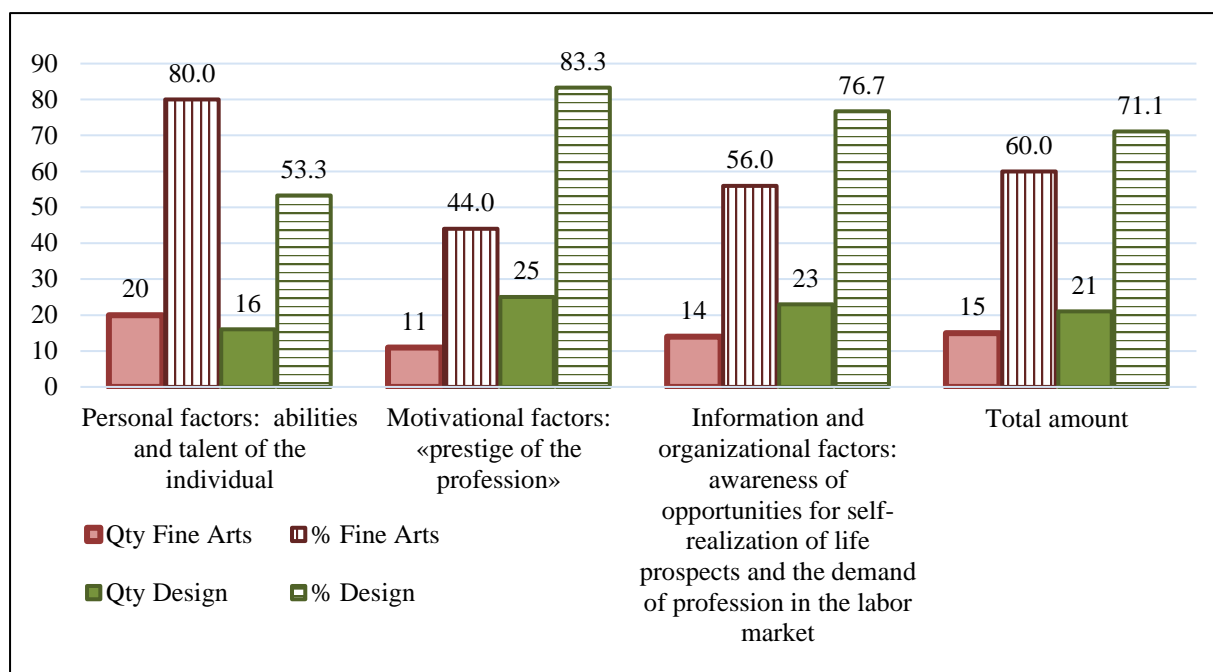


Figure 1 Rating of the Factors of Education Attractiveness in the Field of Art-pedagogical Training and Art Education

The qualitative analysis showed that in the ranking of factors of education attractiveness in the field of fine and decorative arts, the following factors are predominating: personal, motivational, informational and organizational. In general, 60% of students of arts and pedagogical specialty (Secondary education. Fine arts) and 71.1% of students of the educational branch of Arts (Design) made the choice in favour of these factors. We have conditionally distinguished the education attractiveness factors in the field of fine arts and arts in three groups (see Fig. 1).

Personal factors. This group of factors is related to the individual creative abilities of the personality, which is reinforced by the desire to express oneself in art, the desire for self-expression, following the traditions of art and at the same time, the search for one's self, artist's, artist-teacher's, demonstration of one's own identity. If a young person has the opportunity to observe the work of well-known masters of fine arts (excursions to artists' workshops, ethnographic museums, etc.), fascinated by the personal and professional traits of contemporary art, then the motivational positive background for choosing a future profession is due to be created quite quickly.

The key factor in fine arts teaching is the individual's ability and talent. There is no definite sensitive period for the development of fine arts. This period can be considered childhood, adolescence, youth; and the flourishing of fine arts talent can also fall into maturity or even old age. Raphael created his best paintings in

the period of nineteen to thirty years old; while the genius of I. Repin still did not fade after he turned 70 being quite elderly according to the general physiological estimation. In the world of contemporary art, we have examples where a person reveals his or her talent, whether in an old or elderly age. It is no coincidence that various educational services offered at home by foreign offices of formal and informal education provide educational services at the levels of pre-professional, vocational, higher, and postgraduate education. Numerous preparatory and preliminary programs, courses, training in boarding schools or specialized schools are also offered.

However, in our field of research, there are young people we are focused on, who are only choosing their professional careers. That is why the second group - motivational factors, is united and illustrated by the phrase "*prestige of the profession*". Considerations regarding the prestige of the future profession are brought to the foreground precisely at a young age. Being known and popular is a dominant incentive for a young person to choose an art profession. It is unlikely that older adolescents or young men have a clear idea of the difficulties that the daily, often routine, work of an artist involves. And it is the art faculties that are traditionally considered the most "diffuse" in terms of preserving the student contingent. It is quite natural that a young man tries to test himself in various fields.

For many people, the common pattern of choosing a profession right after schooling is definitely in the past. Today, studying and retraining, getting several professions is a common occurrence, and not only school graduates can be observed as fine arts students for which fine and decorative arts are the basis for further professional improvement in various related fields: design of clothes, industrial design, architecture and construction, etc.

Evidently, expectations for career growth is not the last factor in present-day understanding of the profession prestige (teaching in the field of art, management of art projects, art museums, exhibition halls, expert examination of works of art, obtaining honorary scientific and artistic titles, etc.), the opportunity to receive high financial support for creating art works, travel around the country and the world during plein air (artist-painter, graphic artist, artist of applied arts), or work online with Ukrainian and foreign customers (designer).

Becoming famous through the artist's elaborate manner of painting or graphics, mastering sophisticated traditional decorative art techniques, successful design activities, educating a student – a future artist who will continue his teacher's work in his paintings – are the motives for choosing it as their future profession. At the same time, the efforts of the artist, the painter to preserve and restore the monuments of art, to cherish the traditions of the national cultural heritage and to interpret them in contemporary art, also "work" for the prestige of the artist's profession. Therefore, striving to make your name known through your

chosen profession is an ambitious desire and a motivated choice that parents and teachers should support in every way, cultivating reasonable ambition, while encouraging young people to work hard, for cultural and professional growth.

Information and organizational factors. The ability to quickly and freely receive information related to the ways and methods of desirable training is a significant advantage in realizing your educational intentions in the age of mass communications and the Internet. In the nineteenth century, regardless of any social origin, there was one path for talented and gifted young men – in the field of the visual arts – the Academy of Arts, where the brilliant artists of the past were shaped and taught. In today's conditions, finding "your teacher", your manner, sticking to a known stream is a big problem, sometimes because of information overflow and a variety of ways. Therefore, "searching for yourself", a professional direction, own style in art – is responsible, and sometimes a long and painful process. In this sense, a systematic and accessible presentation of information useful to applicants and people interested in the visual arts is the primary task of educational institutions.

Moreover, the visualization of educational offers by means of infographics, image-oriented professional products, advertising of specialties along with the information about artists working within the walls of an educational institution, detailed information about the offered educational programs (their licensing and accreditation, content) are crucial elements; virtual museum of exhibitions (domestic and foreign), announcements and archives of cultural and artistic events; availability of budget places for students, tuition fees and options for simplification of payment in a convenient for students way (per semester or month, at the end of the academic year), guarantee of receiving a scholarship for academic progress in a proper amount, the possibility of receiving personal grants, – this is not a complete list of organizational measures to be taken in order to increase the attractiveness of gaining education in the field of fine arts and decorative-applied arts.

The possibility of self-realization of life prospects and the demand of the profession in the labour market is a significant factor that attracts applicants when entering a certain educational institution. Therefore, the specification of places of employment, career prospects, cooperation of the structure with various institutions, foundations, establishments, art associations that are in need of such specialists – such information is attractive, informative and organizationally grounded.

The aforementioned factors allow putting forward certain recommendations aimed at increasing the attractiveness of education in the field of fine arts and crafts at the level of professional training in higher education institutions:

a) clear organization of the educational process. Students from the first hours of attending higher education establishment should not be “lost” in the flow of

information and in the new activities they are mastering. Reviewing classrooms and workshops, learning the schedule and being able to properly understand the information it contains, providing information about the types of practices, materials and equipment you need to work – these and other activities should always be used in working with the freshmen. The precise and clear organization of the educational process stimulates the further desire to study, attend lectures and seminars both on the direct profile of training and those related to other cycles of study. The assessments of the institution's reputation, the relevance of the educational offerings to the educational reality, and the feedback on social networks about the benefits or disadvantages of education also affect the attractiveness or distrust to education.

b) Involvement of renowned artists, painters and promising young people in teaching in higher education institutions of artistic direction. Even though artistic genius is sometimes not combined with a teaching talent or pedagogical ability, we still have examples of a combination of both creative and teaching talents. For example, the well-known Ukrainian artist T. Yablonskaya has combined fruitful artistic work and teaching at Kyiv State Art Institute for more than a decade. A pedagogical talent was also characteristic to a Ukrainian painter I. Padalka, who worked at Kharkov Art and Industrial Institute and Kiev Art Institute. The combination of many years of successful experience of practical work in painting, graphics, arts and crafts, etc. and teaching skills in pedagogical activity - an inexhaustible source of attractiveness of art, motivation for future students to study it.

c) Diversification of education forms in art institutions. Lecture and seminar forms of education, which have been dominant for higher education institutions since the European Middle Ages and the emergence of the first European universities of the modern shape, should not be dogmatically reproduced in educational institutions of artistic direction. According to our observations, for students of the faculties of higher educational establishments of art education and faculties of arts in institutions of higher pedagogical education it is necessary to diversify the forms of educational work, using individual academic work in a more active way, performing copy tasks in museums, performing 3D-tasks in museums of virtual tours: The Apple Virtual Museum, Google Art Project, and later Google Arts & Culture, a digital project called Museum of the World, catalogues of digitized works of art by the Louvre Museum, Metropolitan, the Solomon Guggenheim museum complex in the Vatican). The control and monitoring over the level of knowledge mastering in certain disciplines, which are not directly related to the future art profession, can take place remotely. In most training disciplines, it is also advisable to allow an external form of summary reporting (obtaining credits in accordance with the individual training schedule at a convenient time for students).

d) Individual support for the student's learning process (especially foreign students): curatorial activity itself is an outdated form of interaction between the teachers and students. The tutoring system, distributed in the UK educational establishments, in which one teacher interacts with a subset of 7 to 8 students, is entirely and fully suited for art faculties. Thus, educational interaction of students with teachers who provide a certain master class, students' independent work, terms and forms of mastering non-core disciplines, features of dormitory accommodation, public aspects of students' life, etc. – all these issues are to be dealt with the tutor who is aware of the peculiarities of students' educational and cognitive activities, as well as of the personal characteristics of each.

Conclusions

The conducted research on the problem of revealing ways to increase the attractiveness of education in the field of fine and decorative arts for contemporary youth has allowed us to draw such conclusions as well as present the following outcomes:

1. Comparison of professional guidance of the educational system in the retrospective view of the modern system of gradual training of a specialist in fine and decorative art, design, a teacher or a head of the circle has allowed noting the emergence of new elements in the educational system that promote the choice of artistic or artistic-pedagogical profile (lyceums, gymnasiums/grammar schools of aesthetic profile, collegiums, children's academies of aesthetic profile, etc.); the fact of the emergence of a flexible system of formal and informal extracurricular out-of-school education forms, museums, exhibitions, competitions, participation of schoolchildren in art projects; the rise in the emergence of vocational art colleges, art institutes, higher colleges of art, design, arts and crafts, institutes of arts; academies and universities of national importance, exchange programs between domestic and foreign higher education institutions, grant and charity programs; internships, workshops, training programs, new forms of postgraduate education.
2. There have been analysed the possible ways of forming attractiveness of art and art-pedagogical education at separate educational levels.
3. The pilot study realised by means of questionnaire survey of students in art-pedagogical (Secondary education. Fine arts) and art (Design) specialties has enabled us to diagnose the motives influencing a young person in taking his or her decision to pursue a career in creative profession and to obtain the appropriate profession; the pilot study has also allowed us to choose the highest by rating of influence factors,

namely: personal – abilities and talent of the individual, motivational factors, in particular – "prestige of the profession", information and organizational factors (awareness of opportunities for self-realization of life prospects and the demand of profession in the labour market). The attractiveness of the highlighted factors - 71.1% for students of the specialty "Design" in comparison with the choice of students of a pedagogical specialty "Fine Arts" (61.0%) prevails by 11% for future artists-designers. The comparatively lower choice of respondents – future teachers of the statements "I want to do teaching", "The future profession gives prospects for career growth" or "I consider the profession prestigious" is caused by insufficiently high prestige of the modern teaching profession in Ukraine.

4. There are recommendations given for their implementation, which, in our opinion, will definitely stimulate an increase in the level of attractiveness of education in the field of fine and decorative arts.

The carried-out study does not exhaust the laid-out problem, it still remains quite debatable and requires further scientific research on specifying new forms and methods in order to increase the motivational choice of education in the field of fine and decorative art at all its levels along with their methodological substantiation demand.

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ДИСТАНЦИОННОЕ ОБУЧЕНИЕ В ПЕДАГОГИЧЕСКОМ ВУЗЕ: ПРОБЛЕМЫ И ПЕРСПЕКТИВЫ

Distance Learning in a Pedagogical University: Problems and Prospects

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Abstract. *The article discusses the possibilities, problems and prospects of using distance learning in the process of training primary and secondary school teachers. The presented results are based on a survey of students and undergraduates of one of the largest pedagogical universities in Russia. The identified problems that was based on data processing, are presented in an ordered form. The authors suggest possible solutions to problems based on many years of experience in using distance learning technologies in training of future teachers.*

Keywords: *distance learning, distance learning technologies, school teacher training, quality of teacher education, conditions of using distance learning technologies.*

Введение ***Introduction***

В современном быстро меняющемся мире, который характеризуется глобальными изменениями в науке, экономике и общественной жизни, лавинообразным внедрением информационных технологий во все сферы деятельности человека, появлением на рынке труда новых профессий, все больше заявляет о себе феномен дистанционного обучения как эффективный инструмент достижения запланированных образовательных результатов.

Запрос на обучение вне контактов с учителем, педагогом, преподавателем возник уже давно. Известно, что в XVIII в. в Западной Европе, когда почтовая связь стала доступной и регулярной, появилось так называемое «корреспондентское обучение». Оно позволило вести переписку, получать необходимые материалы, выполнять задания, отчитываться о проделанном в письменном виде или сдавать экзамен

доверенному лицу по месту проживания.

В наши дни многие учебные заведения практикуют такой вариант обучения (заочное обучение), используя более современные виды связи (Judalevich, 2011).

Развитие информационных технологий существенно расширило возможности обучения вне непосредственных контактов с учителем, преподавателем. Появилось дистанционное удаленное обучение как способ получения образования любого уровня на основе использования компьютерных и телекоммуникационных технологий при опосредованном (на расстоянии) контакте обучающегося и педагога. Подобный подход к обучению изначально использовался только в работе с достаточно зрелыми людьми, отличающимися высокой мотивацией, самодисциплиной и сознательностью, со сформированным умением учиться и способными преодолевать трудности в процессе достижения цели. Современные коммуникационные технологии позволяют при дистанционном обучении вести диалог в режиме реального времени.

Теоретические основы исследования *Literature Overview*

Разными аспектами дистанционного обучения занимались многие российские и зарубежные исследователи (Polat & Buharkina & Moiseeva, 2004; Hutorskoj, 2005; Snegurova, 2010 et al.). Однако содержание этого понятия в работах разных исследователей весьма различно. Нередко приводимые авторами определения лишь отчасти отражают суть дистанционного обучения, поскольку они затрагивают не все стороны этого сложного многогранного явления. Следствием этого является то, что в российской педагогике дистанционное обучение рассматривается и как технология, и как новая форма обучения, и даже как вариант заочного обучения.

Существенным толчком к изучению сущности дистанционного обучения и подходов к его использованию в образовании на разных его ступенях стало включение статьи о дистанционных образовательных технологиях (ДОТ) в закон об образовании в Российской Федерации. В нем понятие ДОТ определяется как «образовательные технологии, реализуемые в основном с применением информационно-телекоммуникационных сетей при опосредованном (на расстоянии) взаимодействии обучающихся и педагогических работников» (статья 16) (Federal'nyj zakon «Ob obrazovanii v Rossijskoj Federatsii»). Большинство исследователей и практиков дистанционного обучения (Polat, 2004, Hutorskoj, 2005; Surikova, 2015 et al.) рассматривают его как форму обучения, в процессе которой взаимодействие

педагога и обучающихся, а также обучающихся между собой осуществляется на расстоянии, при этом сохраняются все компоненты учебного процесса – цели, содержание, методы, организационные формы, с использованием специфичных инструментов интернет-технологий или других интерактивных средств. В последнее время в научных публикациях все чаще рассматриваются вопросы использования дистанционного обучения при подготовке учителей (Surikova, 2015; Granichina & Vergeles, 2020; Bates, 2015; Krokmark, 2015) Актуальность исследования этих вопросов возросла на фоне уникального педагогического опыта, который был приобретен в течение 2020 г., когда практически все вузы Российской Федерации, в том числе педагогические, были вынуждены перевести образовательный процесс в дистанционный режим.

Полученный опыт дистанционного обучения высветил проблемы его использования и перспективы реализации в подготовке будущих учителей. Авторы, опираясь на собственный педагогический опыт, выявили несколько наиболее существенных проблем, с которыми столкнулись большинство педагогов при реализации дистанционного обучения.

Во-первых, проблема организации образовательного процесса. Переход на дистанционный формат был довольно стремительным. В силу этого, по инерции многие преподаватели стали использовать прежний традиционный подход, используемый при очном обучении. Однако трудность восприятия лекций, сложности взаимодействия в системах преподаватель-учащийся и учащийся-учащийся, трудности в реализации текущего и промежуточного контроля и прочее высветили со всей очевидностью невозможность механического переноса прежних форм организации образовательного процесса в дистанционный формат.

Второй существенной проблемой стала необходимость применения специальных технических и программных средств организации дистанционного обучения. Как выяснилось сразу же после введения режима удаленного обучения не все преподаватели и студенты располагали техническими возможностями для полноценного включения в такой формат обучения. Серьезным испытанием и вызовом для образовательных учреждений стало мобильное совершенствование платформы для дистанционной поддержки обучения.

Еще одной существенной проблемой, препятствующей продуктивному использованию дистанционных технологий, стала недостаточная готовность субъектов образовательного процесса к такой форме его организации.

Рассматривая готовность преподавателя к осуществлению дистанционного обучения, мы выделили наиболее существенные, на наш взгляд моменты:

- понимание специфики дистанционного обучения;
- овладение разнообразными видами связи для установления контактов с обучающимися;
- способность и обладание достаточной компетенцией для разработки электронных курсов – поддержки дистанционного обучения;
- овладение технологией, методикой дистанционного обучения, умение строить работу со студентами в дистанционном режиме;
- умение сочетать различные виды работы – фронтальную, групповую и индивидуальную – со студентами в процессе дистанционного обучения;
- умение организовать самостоятельную работу студентов;
- умение привлекать разнообразный демонстрационный материал для лучшего усвоения запланированного содержания студентами;
- владение разнообразными видами контроля, обеспечивающими обратную связь;
- умение разрабатывать систему промежуточной оценки, позволяющей студентам видеть свои успехи и неудачи.

Все это относится к так называемым цифровым компетенциям учителя (Digital Competence of Educators) и является предметом многочисленных исследований как в Российской Федерации, так и за рубежом (Bates, 2015; Krokmark, 2015).

Готовность студентов к обучению в дистанционном формате, на наш взгляд сводится к следующему:

- наличие достаточной мотивации к освоению будущей профессии;
- развитие волевой сферы личности – целеустремленность, самостоятельность, организованность;
- овладение техническими средствами связи;
- умение корректно и продуктивно общаться со всеми участниками взаимодействия в процессе дистанционного обучения.

Выше перечисленные условия относятся к требованиям подготовки любых специалистов с использованием дистанционных форм обучения. При этом возникает вопрос: существует ли какие-то особенности использования дистанционных образовательных технологий в процессе подготовки специалистов в сфере образования?

Очевидно, что сам процесс обучения в педагогическом вузе традиционно строится с учетом формирования соответствующих

компетенций, необходимых будущему учителю. И это определяет не только набор и содержание учебных дисциплин, но и формы, методы и средства обучения. Используются, как правило, групповые формы работы, инсценирование (проигрывание) фрагментов уроков, дискуссионные обсуждения и др. Особое значение в становлении будущих педагогов имеет личное (порой неформальное) общение с преподавателем. Все это требует от участников образовательного процесса особых усилий даже при традиционной (очной) форме обучения. Тем более такое взаимодействие педагога и студентов сложно реализовать в условиях дистанционного обучения.

Процесс наблюдения за работой студентов и преподавателей в период вынужденного перехода на дистанционное обучение в марте-июне 2020 года выявил наличие значительных трудностей, которые испытывали при этом студенты педагогического вуза. Это привело к необходимости уточнения и осмысления данных проблем и выявления способов их решения, что впоследствии позволило бы улучшить качество подготовки учителей в условиях использования дистанционных образовательных технологий.

Эмпирическое исследование ***Methodology***

С целью подтверждения и конкретизации выделенных нами проблем на основе наблюдения за организацией процесса обучения в дистанционной форме в период пандемии, а также для выявления специфики дистанционного обучения будущих педагогов нами было проведено анкетирование студентов одного из крупнейших педагогических университетов России – Российского государственного педагогического университета им. А.И. Герцена. В анкетировании приняли участие 345 студентов бакалавриата 1-4 курсов и магистрантов 1-2 курсов, получающих образование в области подготовки учителей начальных классов, учителей математики для средней школы, а также в области дошкольного и дополнительного образования; 75 % респондентов в выборке – это студенты и магистранты очной формы обучения.

Результаты исследования ***Research Results***

Первая серия вопросов анкеты позволила выявить степень удовлетворенности студентов новой для них формой обучения. Авторы исследования предварительно выделили уровни удовлетворенности – полностью удовлетворен, скорее удовлетворен, средний уровень удовлетворенности, скорее не удовлетворен, совершенно не удовлетворен.

Анализ данных (рис. 1) показал, что степень удовлетворенности студентов университета соответствует нормальному распределению. Такая же тенденция сохраняется и в отношении студентов отдельных факультетов, принимавших участие в анкетировании.

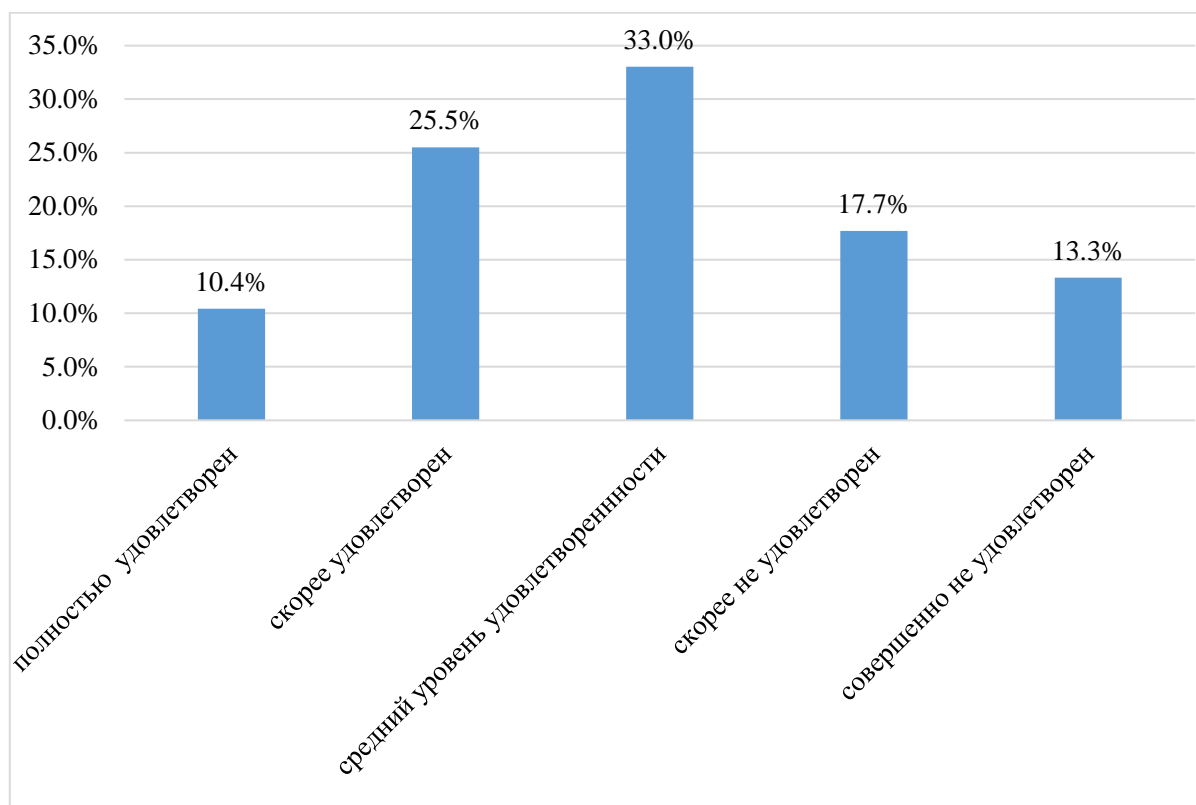


Рис. 1. Степень удовлетворенности студентов РГПУ им. А.И. Герцена процессом обучения в дистанционной форме (июнь 2020 г.)

Figure 1 The Degree of Satisfaction of Students the Herzen State Pedagogical University with the Distance Learning Process (June 2020)

Отмечая положительные стороны дистанционного обучения (открытый вопрос анкеты), студенты и магистранты чаще всего выделяли традиционные преимущества данной формы: возможность находиться территориально в любом месте (71 %), возможность располагать своим временем более свободно (56 %), в частности, экономить время на дорогу до университета. Многие респонденты отметили возможность неоднократного просмотра записи лекции, повторного обращения к письменным ответам преподавателя (на форуме или в чате). Других положительных сторон дистанционного обучения респонденты не указали.

Отмечая трудности, с которыми студенты столкнулись в процессе дистанционного обучения (открытый вопрос анкеты), респонденты в первую очередь выделили отсутствие возможности личного общения с

преподавателем (70 %) и с однокурсниками (59%). Осложняло процесс обучения и отсутствие оперативности связи с преподавателем при дистанционном общении (46 %). Многим студентам было трудно организовать процесс обучения из-за отсутствия мотивации (39 %). Заметим, что проблема формирования учебной мотивации у студентов бакалавриата является традиционной и нередко осложняет процесс обучения даже в очном формате. Тем более ситуация осложнилась при переходе к удаленному взаимодействию.

Студенты бакалавриата указали на трудности, связанные с усвоением информации, размещенной на электронных носителях (23 %). Такие результаты подчеркивают необходимость целенаправленной работы преподавателей университета по формированию у студентов информационной компетентности.

Среди трудностей дистанционного обучения респонденты также указали на отсутствие возможности обратиться за консультацией к педагогу в момент изучения нового материала или в процессе выполнения заданий (47 %). Особенно это связано с содержанием дисциплин естественно-научного цикла.

Некоторые из опрошенных (32 %) отмечали возникновение проблем со здоровьем в силу необходимости длительного использования компьютера во период онлайн занятий и при выполнении заданий.

Лишь 7 % респондентов не испытывали трудностей.

Вторая серия вопросов анкеты касалась оценки перспектив применения дистанционных технологий в процессе обучения.

Оценивая возможность освоения дисциплин в таком формате (закрытый вопрос анкеты), 53 % респондентов высказали мнение, что в педагогическом вузе все дисциплины необходимо изучать в условиях личного контакта с преподавателями и с однокурсниками; 35 % опрошенных полагают, что ряд непрофильных (базовых) дисциплин (информационные технологии, экономика, философия и др.) можно осваивать дистанционно, но при наличии специально разработанных заданий; 10% респондентов указали, что возможен полностью дистанционный формат обучения; 2 % затруднились ответить на этот вопрос. Таким образом, 88 % опрошенных студентов высказали мнение, что подготовить педагога в дистанционном формате обучения невозможно.

Выделяя дисциплины, которые сложно изучать дистанционно, 96 % респондентов отметили группу математических дисциплин, дисциплины естественно-научного цикла, а также все дисциплины методической направленности. В своих ответах они подчеркивали важность личного общения с преподавателем для успешного овладения соответствующим содержанием.

Заочная форма обучения изначально подразумевает минимальный непосредственный контакт с преподавателем. Но и здесь практически половина респондентов – студентов бакалавриата, обучающихся по заочной форме (48 %) не хотят учиться полностью дистанционно, мотивируя свой ответ важностью личного контакта с преподавателями. Только 22 % согласны изучать дистанционно отдельные (в основном непрофильные) дисциплины. Полностью дистанционная форма обучения устраивает 19 % студентов заочной формы обучения. Отметим, что половина из них – это студенты 1 курса, которые находятся на этапе освоения базовых (не профильных) дисциплин программы.

Выводы *Conclusion*

Как и любая форма обучения, дистанционное, являющееся экономически более выгодным, чем традиционное, должно использоваться только в том случае, если оно положительно влияет на качество образования, расширяет доступ к нему разных групп населения. Повышение качества планируемых результатов достигается за счет того, что в процессе дистанционного обучения есть возможность использовать лучшие из накопленных в базах данных материалы, созданные специалистами высокого уровня в различных областях знания.

Анализируя проблемы, связанные с применением дистанционных средств связи при реализации образовательного процесса в период вынужденной самоизоляции, мы должны подчеркнуть, что использованный формат нельзя назвать в полной мере дистанционным обучением, поскольку не были разработаны особые дидактические материалы для освоения нового содержания, специальные фонды оценочных средств (для контроля и самоконтроля); форма проведения занятий при переходе в дистанционный режим во многих случаях оставалась прежней (лекции, семинары, практические занятия). Тем не менее, полученная в ходе анкетирования информация представляет определенную ценность для исследователей. Выявленные проблемы и трудности, с которыми столкнулись студенты, позволяют определить направления совершенствования процесса использования дистанционных образовательных технологий при обучении будущих педагогов: формирование учебной мотивации, повышение уровня информационной компетентности, совершенствование культуры коммуникации, развитие саморегуляции.

Однако следует подчеркнуть, что особую важность при подготовке специалиста в сфере образования имеют личное общение преподавателей со студентами, обсуждение хода решения профессиональных задач,

возможность непосредственного контакта студентов между собой. Поэтому мы убеждены, что дистанционное обучение в педагогическом вузе может рассматриваться только как экстренная вынужденная мера, а использование дистанционных образовательных технологий – только как поддержка традиционного процесса обучения в очном и заочном формате.

Summary

The article discusses the possibilities, problems and prospects of using distance learning in the process of training primary and secondary school teachers. The presented results are based on a survey of students and undergraduates of one of the largest pedagogical universities in Russia. The identified problems that was based on data processing, are presented in an ordered form. The authors suggest possible solutions to problems based on many years of experience in using distance learning technologies in training of future teachers.

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SPACE LAW - THE NEW SUB-BRANCH OF LAW STUDIES IN LATVIA

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Abstract. *Latvia became an associate member of the European Space Agency (ESA) in 2020. The ESA is an intergovernmental organisation dedicated to the exploration of space. According to the Article II of the Convention of establishment of a European Space Agency, the purpose of the ESA is to promote, for exclusively peaceful purposes, cooperation among European States in space research and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems. “The Space Strategy for Latvia 2021-2027” (Strategy) recently was collectively developed by the Ministry of Education and Science and the Ministry of Economics of the Republic of Latvia. It establishes a focused framework for the cooperation of Latvia with the ESA and contributes to the achievement of the objectives, priorities and actions defined in the Latvian National Development Plan 2021-2027, the National Industrial Policy Guidelines 2021-2027 and the Science, Technological Development and Innovation Guidelines 2021-2027. As it is indicated in the Strategy, Latvian higher education institutions ensure the development of an adequate base of expertise and skills in graduates to be able to serve the needs of the space sector in Latvia. It is proposed in Strategy that Universities in collaboration with local industrial partners develop higher-education courses and lifelong learning programmes to respond to the national space industry need. Novelty of the research: this is one of the first academic research concerning the possible studies of space law in the Latvian higher education institutions. Just now law studies are provided by 8 higher education institutions; but no one offers single study course on space law. The research aim is to analyse necessity to teach space law in the universities of the Republic of Latvia, taking into account the fact that Latvia now is an associate member of the ESA. The author has used descriptive, analytical and deductive-inductive research methods in the article. After review and analysis of the legal acts, policy planning documents and different reports, the author has made conclusions and recommendations. Preliminary it seems that space law must be taught as separated study course (or at least this topic must be included in the study course “International air law” or similar study course); publication of teaching book “Space law” also is desirable in latvian language.*

Keywords: *European Space Agency; space law; the Space strategy.*

Introduction

The European Space Agency (hereinafter – ESA) is an intergovernmental organisation dedicated to the exploration of space. According to the Article II of the Convention of establishment of a European Space Agency, the purpose of the

ESA shall be to provide for, and to promote, for exclusively peaceful purposes, cooperation among European States in space research and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems (European Space Agency, 2010). Latvia became an associate member of the European Space Agency (ESA) in 2020: the respective Agreement between the Government of the Republic of Latvia and the ESA was signed on 30 June 2020 (Latvijas Republikas Saeima, 2020); the Saeima (the parliament of the Republic of Latvia) has adopted law ratifying the Agreement on 27 July 2020 (Latvijas Republikas Saeima, 2020). The research aim of the present article is to analyse necessity to teach space law in the universities of the Republic of Latvia, taking into account the fact that Latvia now is an associate member of the ESA. Novelty of the research: this is one of the first academic research concerning the possible studies of space law in the Latvian higher education institutions. Just now law studies are provided by 8 higher education institutions; but no one offers single study course on space law. Descriptive, analytical and deductive-inductive research methods are used. Legal acts, policy planning documents and different reports were reviewed and analyzed, and subsequently conclusions and recommendations were made.

Space Law as the Legal Discipline Literature Review

Doctor of international law Juris Bojars has overlooked the space law in his first book on international law (Bojars, 1996). Ten pages cover topics such as the concept of space law and the development of space exploration; the main principles of space law, as well as actions in space and the registration of space objects; the legal regime of moon and other celestial bodies, international responsibility for space actions; satellite communications, etc.

Even more briefly, space law issues are also described in the book of A. Fogels on modern international law: the concept and key law sources; the legal status of space and celestial bodies; the legal status of space objects; international responsibility related to space; space communications and cosmic meteorology; legal issues for national cooperation and mutual assistance for the exploration and use of space (Fogel, 2009).

Since 2012 Engineering Research Institute „Ventspils International Radio Astronomy Centre” (hereinafter - ERI VIRAC) of the Ventspils University of Applied Sciences (hereinafter - VUAS) publishes once per two years journal “Space Research Review”. It is peer-reviewed international journal intended for publication of broad-spectrum original articles, reviews and short communications about actual problems of frontier space technologies: space science, including space and atmospheric physics, Earth observation and remote

sensing from space, planetary sciences, astrochemistry, astrobiology and life sciences, and spacebased astronomy and astrophysics; space engineering, including communications, navigation, space operations, satellite design, testing, and implementation, engineering of new generation telescopes; space IT solutions, including data acquisition, signal processing, data correlation, parallel and high performance and cloud computing techniques; as well as innovations in space education and training (Ventspils University of Applied Sciences, 2018). The author of the present article did not find any article relating to the space law in “Space Research Review”.

It is interesting that some of a very prestigious books on international law do not have chapter on space law at all: for example, book published by Oxford University press, missing chapter on space law (Evans, 2006).

M. Sudārs describes the exploration of space, along with the exploration of the celestial bodies, including the use of space object and space resources in the economy, for meteorological and natural observations, for communication, navigation, as well as for military purposes in the Latvian National Encyclopedia (Sudārs, 2020).

Methodology

The research object of the article is the role of the universities and the other institutions of higher education and state for providing education in the field of space law. The tasks of the research are the following: 1) to make brief general overview of how the space regulation is taught in other EU universities and possibilities to teach space law in universities and the other institutions of higher education in Latvia; 2) to indicate practical benefits from space industry and its connection with space law studies; 3) to elaborate suggestions for introduction of legal studies of space law in universities and the other institutions of higher education in Latvia. Descriptive, analytical and deductive-inductive research methods are used. Legal acts, policy planning documents, literature and different reports were reviewed and analyzed, and subsequently conclusions and recommendations were made. The article is dedicated to issues and perspectives of education in the field of space law and content of such studies in the Republic of Latvia.

Research Results

As it is indicated by M.N. Shaw, the legal regime of outer space was clarified by the signature in 1967 of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (hereinafter – Space Treaty). This reiterates that outer space,

including the moon and other celestial bodies, is not subject to national appropriation by any means and emphasis that the exploration and use of outer space must be carried out for the benefit of all countries. The Space Treaty does not establish as such a precise boundary between airspace and outer space but it provides the framework for the international law of outer space (Shaw, 2003, p.481).

Just now the United States of America, China, the European Union, Russia and other countries are going to make bases on the Moon, and commercial firms are building technology on how space raw materials could be extracted and recycled. Problem: There is no internationally recognised treaty to manage the exploitation and exploitation of space resources. At the same time, there is a growing threat of the militarisation of space, a lack of management agreements and mechanisms to ensure legal and peaceful development. It is important to note that the previous president of United States Mr. Donald Trump had issued even a presidential order stipulating that the United States will act with all the diplomatic means in such a way that the Moon Treaty loses its legitimate power and the U.S. can set the order in space (Beldavs, 2020).

“The Space Strategy for Latvia 2021-2027” (hereinafter - Strategy) recently was collectively developed by the Ministry of Education and Science and the Ministry of Economics of the Republic of Latvia. It establishes a focused framework for the cooperation of Latvia with the ESA and contributes to the achievement of the objectives, priorities and actions defined in the Latvian National Development Plan 2021-2027, the National Industrial Policy Guidelines 2021-2027 and the Science, Technological Development and Innovation Guidelines 2021-2027. As it is indicated in the Strategy, Latvian higher education institutions ensure the development of an adequate base of expertise and skills in graduates to be able to serve the needs of the space sector in Latvia. It is proposed in Strategy that Universities in collaboration with local industrial partners develop higher-education courses and lifelong learning programmes to respond to the national space industry need (The Space Strategy for Latvia 2021-2027, 2020, p.18-19).

Thanks to the associate membership of Latvia in ESA, Latvian business entities start to participate actively in space related business. Already on 15 September 2020, the ESA concluded a contract of total amount of 129.4 million of Euros for the implementation of the first ESA planet defence mission HURA. The project aims to study the effectiveness of the impact of the shock to address potential asteroid threats to humanity in the future. The Latvian company SIA “Eventech” has developed a specialised time measurement module with its international co-operation partners, which measures light flight time in space. The participation of the Latvian company in this world-level mission is possible thanks to the investment of the Ministry of Education and Science in the ESA European

Cooperation State Plan, in which this technology was developed (LVportals.lv, 2020).

Also ERI VIRAC of VUAS is interested actor in collaboration with ESA as it is a science education center specializing in the field of space technology and signal processing. As we can see from their homepage, the strategic goal of ERI VIRAC is to become a global provider of research services in the field of astronomy and space technology in Latvia (VIRAC, 2021). Member of Saeima V.A. Terauda also have indicated, that cooperation with ESA provide substantial development funding for Latvian scientific institutes. Thus, Latvia has the opportunity to implement space-related scientific projects (Tērauda, 2019). Latvia generally has excellent scientific training for so called STEM disciplines (Science, Technology, Engineering, and Mathematics) which are a very important for space scientific and practical projects (The Space Strategy for Latvia 2021-2027, 2020, p.18-19). Space research includes elements from nearly all science and partly engineering science. Space research-related sciences shall be divided into two groups: (1) natural and engineering necessary for the realisation of space research; and (2) science, which uses space objects for its own research. (Sudārs, 2020). But space sector makes demand also for legal knowledges of space regulation. STEM disciplines need support of space law specialists, starting from issues in connection with spaceports and small satellite constellations, on-orbit servicing and finally with harmful interference, jamming, signal interception and cyber security. As it is indicated by the European Commission, the growing market for space products and services, development of space activities requires to decide on legal issues both at European level and at Member States level in through national law. Still the majority of Member States have not yet developed national space legislation; but we have to recognise that the scope and objectives of such regulation have implications that go beyond national boundaries (Communication, 2013). We need harmonisation of legal framework of national legislation in order to ensure a coherent coverage of space-related legal issues within EU internal market. Such harmonized EU space regulation will prevent diverging national legal frameworks. As an example, some EU Member States have national legislation which foresees the liability for physical damage caused by space activities. Some EU Member States have limits for the liability up to a certain amount, some countries claim an insurance or another financial guarantee to compensate possible damages. Such non-harmonized rules in EU Member States could create distortions of competition on the internal market and lead to "forum shopping" (Communication, 2013). Therefore we need to start space law studies in Latvia in order to prepare qualified lawyers which are able to participate in development of national and EU level space legislation.

The author of the present article made research about study courses in the law faculties concerning space law. Just now law studies are provided by

8 universities or higher education institutions, but no one offers single study course on space law (Baltijas starptautiskā akadēmija, 2021; Biznesa augstskolas “Turība” Juridiskā fakultāte, 2021; Daugavpils Universitāte, 2021; Ekonomikas un kultūras augstskola 2021; Latvijas Universitātes Juridiskā fakultāte, 2021; Rīgas Juridiskā augstskola, 2021; Rīgas Stradiņa universitātes Juridiskā fakultāte, 2021; Rēzeknes tehnoloģiju akadēmija, 2021). According to the information provided by ESA, there are a lot of universities which are providing study courses on space law in European Union.

Table 1 Study Courses in Space Law in Europe

Country	University or institution
AUSTRIA	University of Graz
AUSTRIA	University of Vienna
BELGIUM	University of Gent
BELGIUM	Interdisciplinary Centre for Space Studies (ICSS), Leuven Catholic University
FINLAND	University of Lapland
FRANCE	Institut de Formation Universitaire et de Recherche du Transport Aérien (IFURTA), University Paul Cézanne, Aix Marseille III
FRANCE	Institute of Space and Telecommunications Law , University of Paris-Sud XI
FRANCE	International Space University
FRANCE	University of West Brittany, Brest
FRANCE	University of Paris I Panthéon - Sorbonne
GERMANY	Institute of Air and Space Law (IASL), University of Cologne
HUNGARY	University of Szeged
HUNGARY	Pázmány Péter Catholic University, Faculty of Law and Political Sciences
ITALY	University of Padua
ITALY	Sapienza University of Rome
ITALY	Italian Society for the International Organization (SIOI), Rome
LUXEMBOURG	The University of Luxembourg
THE NETHERLANDS	International Institute of Air & Space Law (IIASL), Leiden University
UNITED KINGDOM	British Institute of International and Comparative Law (BIICL), London
UNITED KINGDOM	London Institute of Space Policy and Law
UNITED KINGDOM	Centre for Law and the Environment: Satellites and the Law, University College London
UNITED KINGDOM	University of London

Source: European Space Agency (2021).

As we can see from the Table 1, not only European space exploration superpowers like France, Germany, Italy and United Kingdom provides teaching of space law, but also smaller countries like Austria, Belgium, Finland, Hungary and Luxembourg have study courses on space law in their universities. What are the space law studies content? The author of the present article investigated a several study courses from the above mentioned universities. For illustration I will give small inside of a study course prepared by London Institute of Space Policy and Law, which, in my view, is one of the best.

Table 2 Space Law Studies Content

Topic	Content
SPACE ENVIRONMENT AND TECHNOLOGY	Delimitation of Space and Airspace Environmental characteristics Orbits, types of spacecraft, mega-constellations
POLICY REGIME, FORMULATION AND INSTITUTIONS	Policy Principles, Peaceful Use, Non-appropriation, Cooperation and Non-interference Policy development and institutions International and National Institutions - nature and role UN COPUOS, ESA, Regional Organisations and Operating Method
THE LEGAL REGIME	Sources of Space Law, Outer Space Treaties, UN Resolutions; Other regimes - Antarctic, Maritime and Air Law International Responsibility and Liability distinguished National space laws and Licensing
THE LAWS GOVERNING SPACE APPLICATIONS	Sovereignty, Property Rights Remote Sensing: UN Principles and Disaster Charter Scientific experiment, Exploration and Exploitation Manned space activities: The ISS & its IGA; Chinese Space Station
SATELLITE COMMUNICATIONS	Telecommunications and Broadcasting: The Role of the ITU Orbital Positions, Co-ordination Spectrum management: Frequency Efficiency and Market Reach Harmful interference, jamming, signal interception, cyber security
COMMERCIAL SPACE ACTIVITIES	Nature and range of commercial space ventures PNT Applications and Services Spaceflight and Spaceports Small Satellite Constellations, On-orbit Servicing
CURRENT AND FUTURE DEVELOPMENTS	EU and ESA Relationship Impact of UK Withdrawal from EU Space Powers Mid-century, US, China, Russia, India, Japan, EU

Source: ISPL (2020).

Conclusions and Discussions

1. The participation of the Republic of Latvia in ESA opens up a new opportunities for Latvian universities, research institutions and commercial companies to actively engage in space research, obtain additional financing outside Latvia and demonstrate our knowledge and capacity in this sector.
2. ESA provides excellent scientific training for scientists from so called STEM disciplines (Science, Technology, Engineering, and Mathematics) which are a very important for space scientific and practical projects; simultaneously space sector makes demand also for legal knowledges of space regulation.
3. Just now law studies are provided by 8 universities or higher education institutions in Latvia, but no one offers single study course on space law. The author of the article recommends that space law must be taught as separated study course (or at least this topic must be included in the study course “International air law” or similar study course); whether to teach a study course on space law in one of the faculties of legal education or, for example, in Ventspils University of Applied Sciences, it is a matter of discussion.
4. The study course “Space law” must include the main areas of space law, like sources of space law, Outer space treaties, UN resolutions; delimitation of space and airspace, environmental characteristics, orbits, types of spacecraft, mega-constellations; telecommunications and broadcasting: the role of the ITU, orbital positions, co-ordination spectrum management: frequency efficiency and market reach, harmful interference, jamming, signal interception, cyber security etc.
5. We have some textbooks with chapters about space law in Latvian books on the international law written by J. Bojars and A. Fogels, but the amount of information on space law is not enough. Therefore, in order to develop also space terminology in Latvian language, publication of a new comprehensive teaching book “Space law” also is desirable in Latvian language.
6. At the moment, it is too early to conclude how effective will be membership of the Republic of Latvia in ESA. STEM universities and also law faculties of the Republic of Latvia must contribute to the development of the space industry in Latvia.

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STEM STUDENTS' ENGAGEMENT TO FOSTER INTERNATIONAL MARKETING THROUGH DIGITAL CONTENT

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Abstract. *This article aims to find the opportunities how to facilitate the interaction among students, university staff and future students in order to attract more and better students in the field of STEM by sharing students' digital content on social media. As a potential student group – generation Z are already technology geeks, spend a lot of time on social media, know about the newest technologies and know how to use them it's crucial to provide content that can impress them as future STEM students with technologies, opportunities, skilled staff and successful alumni.*

This paper includes the transformation and adjustment of the main aim for each stage, functions, digital content categories and subcategories, as well the interaction level among students, university staff and future students.

Keywords: *international marketing, digital marketing, generation marketing, STEM marketing, content marketing.*

Introduction

Declining enrolment figures, reduction in funding, and global competition are seen as the main reasons why universities worldwide are increasingly investing in marketing activities (Whisman, 2011), at the same time focusing on the industries where there is a lack of qualified specialists. The Eurostat data about digital economy (Eurostat, 2019) show that the problem with the employment of STEM (Science, Technology, Engineering, and Mathematics) (www.ed.gov) specialists exists not only in Latvia where 700 specialists graduate every year, but at least 3000 are needed, but also in other European countries (Eurostat, 2019).

Universities need to think about proper marketing activities for potential students to help to improve the situation in universities and the industry. Taking into account the profile of being a small university in Northern Europe, Vidzeme University of Applied Sciences (ViA) saw a potential in testing new approaches

for STEM students' international marketing activities, which was also part of the project "Next Generation Micro Cities of Europe" (www.va.lv/en).

In 2019 ViA had a round of discussions for its marketing strategy on recruiting students in the information technology field (STEM). In order to attract ambitious, self-determined, active and interested students, the involved experts agreed that it was necessary to look for integrated solutions in cooperation with professional partners, schools and international partners, as well as use the internal diversity of study fields to strengthen the uniqueness of one study program (ViA strategy 2020, 3-7). The missing link in designing the university marketing ecosystem was a detailed insight in how to involve STEM students in co-creation of international marketing digital content and how to embed it as a part of orchestrated marketing network. Customer engagement is one out of ten types of in Dublin Innovation framework, which is used by Deloitte (Deloitte, 2019, 23). Following the method of resonating innovation cycles (Project proposal: Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions (E³UDRES²), 2020, 6), the group of researchers worked on "dynamic experiments based on a process of inquiry" (Harvard Business Review, 2019, 137). During 2019 and 2020, ViA marketing and researchers' team defined and designed the STEM students' engagement concept.

Many research papers have shown the importance of a well-planned online marketing plan for universities (A. Duesterhaus, M. Duesterhaus, 2014, 169-183). According to the research, the digital marketing has changed the world, and the higher education sector is no exception (Palmer, 2013: 333-344). The use of social media for attracting students has become a reality for European institutions (Asderaki, Maragos, 2012, 498-510). Although practitioners' reports based on the impact of social media marketing are still studied every year, academic evidence revealed its positive results already 10 years ago (Steinfeld et al., 2009).

The aim of the paper is to find the opportunities how to facilitate the interaction among students, university staff and future students in order to attract more and better students in the field of STEM by sharing students' digital content on social media. A literature review, focus group discussions, surveys, content analysis, and a benchmarking exercise involving a similar university provided the main findings for this publication.

Literature Review

Digital Marketing and Higher Education Institution

Digital marketing is an umbrella term for the marketing of products or services using digital technologies, mainly on the Internet, but it also includes mobile phones, display advertising, and any other digital medium (Sathya, 2017). The development of information and communication technologies in recent

decades has significantly influenced the marketing activities and plans of universities. Tools and possibilities open up unprecedented opportunities, but at the same time present challenges in finding the best and most appropriate solution to attract and retain potential students, especially when other institutions use similar methods, and other approaches are time-consuming or expensive (Dwivedi, 2020).

Everybody is looking for the best way to attract students using social media, artificial intelligence and other technologies and marketing solutions that help to deliver digital content to prospective students, but do not help to create one (Pew Research Center, 2020). Social media has changed the way communication and engagement take place, including the possibility of influencing each other through their use (Labrecque, 2014, 43-50). Using social media, content can be shared by anyone, regardless of their social status, popularity or number of readers, such as posting stories, sharing thoughts live, and more (Labrecque, 2014, 37-50). Some people become more interesting to society than others and over time influence what other people think, want to wear, and so on.

Smith (2018, 35) asserts that “the key to making a difference through social media is being proactive about how you present yourself, thereby, influencing the information people find” (Vitelar, 2019, 263-268). Finding the way how to use social media as a higher education institution brand will allow reaching more people, saving money and getting feedback, although the social media platforms used for personal branding are various (Vanderford, 2017, 119-138).

Due to three big structural changes in the economy: 1) rollback of regulations; 2) blurring of separation between product and services; 3) development of technology, the ecosystems, especially designed ones, are on the rise (Harvard Business Review, 2019, 130). On the other hand, the number of stakeholders for universities has increased significantly, and in the annual conference of the European Association of International Education in 2019 Bert van der Zwaan from Utrecht University (the Netherlands) defined 18 forces that will affect university strategy in 2040 (EAIE, 2019, 5). The traditional organizational approach of the university cannot ensure such level of communication and marketing activities in order to take into account the needs of all the stakeholders. However, the proposed solution of “focusing on the competition between digitally enabled designed ecosystems that span traditional industry boundaries and offer complex and customizable product-services bundles” might work not only in the business environment, but also in higher education (Harvard Business Review, 2019, 132). According to Deloitte Innovation Survey 2019, being part of an ecosystem is crucial to shorten innovation cycles and remain in touch with trends (Deloitte, 2019, 23). There is already an example from Finland – Finnish Ministry of Education and Culture and Laurea University of Applied Sciences on the ongoing research on co-creation

orchestration as an evidence-based governance model enhancing the ecosystem's value in co-creation, knowledge transfer, and business development (Äyväri, 2019, 388). The European research and innovation policy has emphasized the engagement of citizens, local communities and civil society at the core of the new European Research Area to achieve greater societal impact and increased trust in science (European Commission, 2020, 16). The ecosystems as orchestrated networks (Harvard Business Review, 2019, 130) are a new way of governance not only at the policy and organisational level, but also at the individual department level within an organisation.

For a particular group of people – Generation Z, a professional image and brand is an important part not only for them as individuals, but also looking at organisation, products, services, etc. they might use (Harris, Rae, 2011). Generation Z members are content creators (Madden, 2017). They use social media and instant Internet connectivity for accessing resources (IPSOS MORI, 2018, 105). They more often use mobile phones, tablets and other devices and also are a big part of social media such as Facebook, Instagram, Tik Tok, Youtube, etc. (IPSOS MORI, 2018, 78), and that is the way they receive most of the information (Zinātnes komunikācijas project, SKDS 2019, Civitta study) mostly through a video format (IPSOS MORI, 2018, 78).

STEM Education for Generation Z

Generation Z is coming of the age as the first talents of Generation Z join the workforce. The existing literature describes Generation Z as a cohort of individuals born between 1995 and 2009, currently between the ages of 10-24 years. However, there are slightly different approaches regarding the years encompassing this younger generation: Tapscott (2008) frames this generation between 1998 - 2008, Dimock (2019), Madden (2017) consider anyone born between 1995 and 2009 a Post-Millennial or Generation Z member. Most members belonging to this generation are still in their teens, the older ones just reaching the age of 24 years (Vitelar, 2019, 260-261).

Generation Z members have grown up with instant global connectivity facilitated by smartphones, tablets, wearable devices, social media platforms and so forth (Madden, 2017). With the all the opportunities they have, Generation Z-ers are highly creative, constantly adaptive (Madden, 2017), and have a highly marketable digital mindset (Lyons, etc., 2017).

They deeply understand digital transformation. Today's students have a deep understanding of how technology can transform the way we work and live, and colleges and universities have the challenge of maintaining relevance among students who are increasingly more reliant on technology as a communication source, (Kusumawati, 2019, 1-10) also thinking about studies. There are many

factors that have an impact on the subject choices that students make. Palmer, Burke, and Aubusson (2017) found out that students ranked enjoyment, interest and ability, and the perceived need in their future study or career plans as the most important factors in both choosing and rejecting subjects. They considered advice from teachers, parents, or peers to be relatively less important. According to several studies, enhancing students' enjoyment, interest, and perceptions of their ability in science, and their attitude towards it, as well as increasing student perceptions of the value of science in a future career may result in more students studying science at school (Palmer et al., 2017, 645-662).

But the Internet and the widespread use of smart phones has also had a major impact on learning styles. The members of Generation Z have grown up in a world that is always connected. The answer to any question is just a Google search away. According to a study by Seemiller and Grace (2017), Generation Z students like independent, self-paced learning with opportunities for collaboration as needed. They see their instructor as a learning facilitator who helps them to develop relevant and practical skills. They may also need help to critically evaluate online sources and learn how to process large amounts of information (Moore, Jones etc., 2017, 111-126). All these needs affect the way how universities' lecturers should teach students and how marketing specialists should promote study opportunities, thinking about a student-centred approach.

Student-centred Approach in Marketing

The student-centred approach is based on the hypothesis that students who are given the freedom to explore areas based on their personal interests, and who are accompanied in their striving for solutions by a supportive, understanding facilitator not only achieve higher academic results, but also experience an increase in personal values, such as flexibility, self-confidence and social skills (Renata, Holzinger, 2002, 160-162). The main strategy of marketing is the same – bring together different parties (students, staff, etc.) in order to jointly produce a mutually valued outcome (Prahalad, Ramaswamy, 2014, 5-14).

This approach, also known as experiential learning, requires specific personal attitudes on the side of the instructor who takes over the role of a facilitator. These attitudes are highly transparent, open communication, positive regard towards students and search for deep understanding (Rogers, 1983).

In such a complex system (Kurtz and Snowden, 2003, 462), in order for the co-design process to function and develop in an optimal and fluid way, it is useful to identify what can stop or – on the contrary – stimulate the motivation of individuals to engage as co-designers or at least contributors in a process over which they seem to have no control (Dupont, etc., 2019, 1-53).

Koschatzky said that “firms which do not cooperate and which do not exchange knowledge reduce their knowledge base on a long-term basis and lose the ability to enter into exchange relations with other firms and organizations” (Koschatzky, 2001, 6), in case of universities and colleges it can be related to the work with students and staff.

The main thing is to find a balance between the student's wishes and opportunities to create content and the university's need for content that could be used for marketing. Innovation requires creativity and a certain amount of risk-taking, so the results are uncertain and unpredictable, making it impossible to draft precise terms and clauses of a contract in advance.

Research Design

For the purposes of designing a digitally enabled international marketing ecosystem, part of the research was implemented via a dynamic experiment. The main aim of this experiment was to define interaction principles, the aim and functions for STEM students' engagement, as well as the main categories and subcategories of digital content. Based on the findings from the literature and the resonating innovations cycles methodology, a combination of different scientific methods was used for the co-creation of the STEM students' engagement concept. The resonating cycles describe the circular process, which connects strategy development, implementation, evaluation and the adaption of higher education institutions strategy. Resonating innovation cycles (Figure1.) adapt successful innovation methods to the specific needs. These maturity spirals start with small, manageable, easily calculable, prototypical tasks and actions. While the analysis of errors and inadequate results serves as the basis for new ideas and concepts, the following steps are repeated with promising approaches: (1) share, pool, map, discuss and reflect on existing knowledge, experience and good practice, (2) prioritise missions, identify and define challenges, (3) co-ideate promising approaches, (4) co-create using human-centred design to develop and explore prototype solutions, (5) test and experiment within defined environments and frameworks, (6) evaluate: measure output, verify outcome, determine impact, (7) learn and improve: document new knowledge, reflect on new experience, collect good practice examples (Project proposal: Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions (E³UDRES²), 2020, 6).

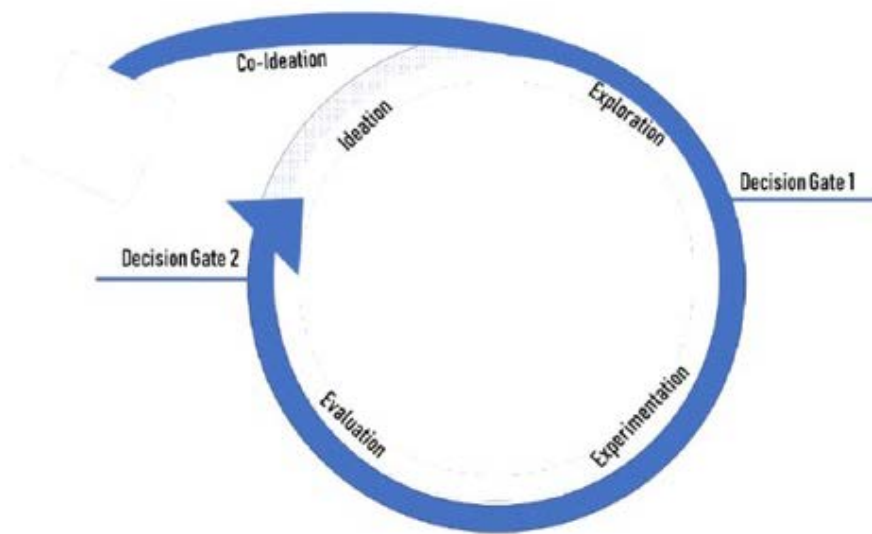


Figure 1 Resonating Innovation Cycles

(Project proposal: Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions (E³UDRES²), 2020, 6)

The researchers' team selected various methods for each stage. To identify the background information for international marketing ecosystem at Stage 1, the following research methods were used:

- 1) **literature studies** about digital marketing in higher education institutions, Generation Z students, STEM students, designed ecosystems, and the student-centred approach;
- 2) the **peer-consulting method** on the uniqueness of information technology study program with 12 ViA Engineering Faculty teachers;
- 3) the **focus group discussion** with 7 STEM students who responded to the university invitation. The idea of the focus group was to talk about their experience in sharing information on social media, and find out what kind of platforms they use and if they would like to be part of the university marketing.

During Stage 2, after the first full round of STEM students' engagement in creating digital content, the experiment was evaluated using the following methods:

- 1) the **analysis of questionnaires** from 12 students who participated in Stage 2 and worked on creation of unique digital content (in total 15 students participated, 12 students submitted questionnaires);
- 2) the **qualitative analysis of the created digital content** - 30 videos provided the necessary data in order to adjust the defined functions, define and map categories and subcategories for connecting ViA STEM students and future local and international students;

- 3) the analysis of 60 **first-year students' questionnaires** on the opinion about the main factors influencing their decision on studies at ViA;
- 4) **the benchmarking exercise** with a similar activity at the project partner university: Ventspils University of Applied Sciences (Latvia) for comparing the results of the STEM students' digital content and the analysis of interaction level during the experiment.

Discussion: STEM Students' Engagement Concept (3 Stages)

The goal of the experiment was to involve 15 STEM and media students who create digital content (photo, video, blogs, pools, etc.) and share them on their social media during spring 2020. The university provided the necessary equipment and editing software, regular consultations on technical questions for creating own digital content. Part of the experiment was influenced by the COVID-19 pandemic, and students had to look for solutions how to finish the tasks while observing social distancing.

Stage 1 – Starting point – UNIVERSITY – defining the initial framework for the students' engagement concept - what is there for the university?

Taking into account the university discussions on the marketing strategy and the need for a purpose of Generation Z, the marketing team defined the main aim of the STEM students' engagement concept – what can you teach everyone while studying information technologies in ViA, Valmiera? Thus, showing why they have to study STEM in this university and in this micro-city.

The marketing team also defined the first set of functions of the students' digital content:

- 1) help others in their STEM subjects' studies;
- 2) give advice on how to solve everyday problems related to information technology field (for example, how to install antivirus);
- 3) provide a broader use of the acquired knowledge, thus improving the study results by sharing examples with peers and pupils;
- 4) show the benefits of the study program and profession.

In order to test the chosen approach with STEM students, the researchers organised a focus group with 7 STEM students and introduced the initial STEM students' engagement concept. The following drawbacks were identified on why this concept might not work:

- 1) students were puzzled as to what is expected from them;
- 2) they emphasized that too much effort will be needed to create such type of digital content;
- 3) they were not sure how to use the study course materials for the purposes outside courses;

- 4) students were not ready to share this content on their social media (the most likely reasons were not enough confidence in the ability to create good digital content and resistance to use personal social media for promoting the university).

Following the results of the STEM students' focus group, several changes were made to the initial concept taking into account the student-centred approach.

Stage 2 – STUDENTS – adapting the STEM students' engagement concept - what is there for STEM students?

Using the student-centred approach, the marketing team made changes to the aim of the student digital content – create useful digital content, which introduces to the profession and creates the interest in STEM.

The revised functions of the student digital content were (starting with the least effort requiring to the most challenging):

- 1) introduce STEM students by posting their public presentations in the university or visiting schools in their social media;
- 2) provide insight into STEM studies and the specific terminology by interviewing STEM students;
- 3) share examples from the best STEM graduates' final thesis, successful projects, and well-evaluated practical training;
- 4) create unique digital content, which describes why you should study information technologies, what you should know before studies, why study information technologies, 10 things students should know;
- 5) encounter STEM stereotypes via live videos and podcasts;
- 6) create opinion leaders among ViA students – encourage and raise interest to share different type of information about their studies (study process, environment, lectures, professionals from the industry) via the following subcategories: innovative and applied methods; culture and affiliation; job opportunities; entertainment; weather; accommodation.

15 STEM and media students participated in Stage 2 during spring 2020 and created 30 digital content examples, which they shared in their social networks. 12 questionnaires from the participating students, the qualitative analysis of 30 videos, 60 questionnaires from the first-year students, and benchmarking with a similar university were used to evaluate Stage 2: measure output, verify outcome, and determine impact.

The following drawbacks were identified from the 12 questionnaires from 15 students who worked on the digital content:

- 1) it was challenging to come up with and create interesting and useful content;
- 2) adapting to the COVID-19 situation and limitations to use the university equipment and editing software;

- 3) too many materials with similar content (for example, time-lapse on studies, free time, sport);
- 4) students were still resistant to use private social networks for publishing the created content (several students created new profiles in order to post their materials instead of using the existing profiles);
- 5) there were no videos with advice for peers or future students or examples how to solve everyday problems related to information technologies.

The first positive results:

- 1) the first examples of STEM students' digital content were published, it had a wider audience than the interaction of average ViA posts (including after sharing the same content at the university's official social networks);
- 2) a greater credibility of students' published content than ViA content;
- 3) very good cooperation with students from communication study programs and the co-created digital content (for example, the communication student who interviews the information technology student).

Figure 2 summarizes the benefits of engaging in the creation of digital content, Figure 3 provides the insight in the main challenges during this activity, and Figure 4 provides the general evaluation from the students' point of view.

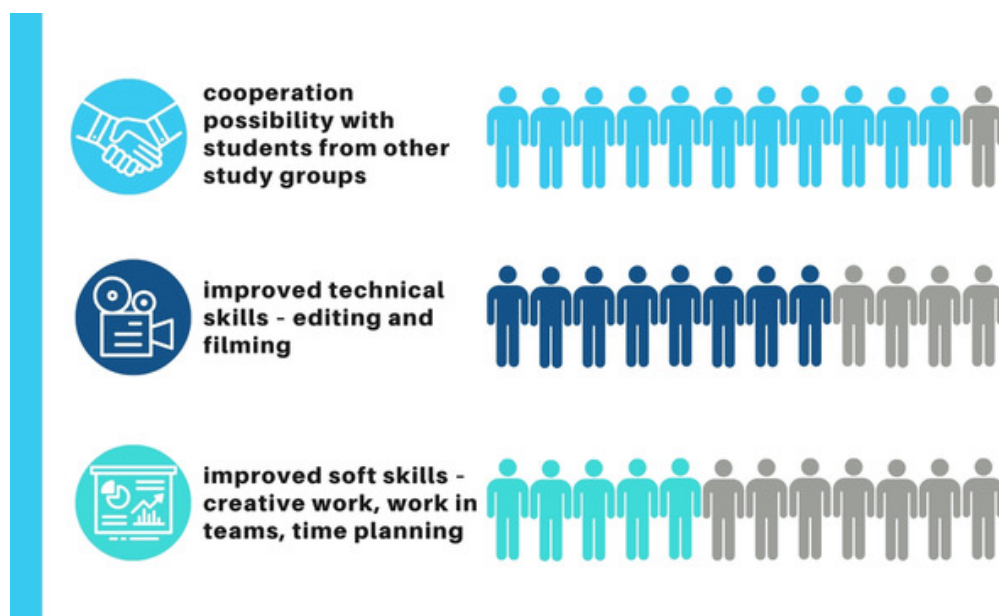


Figure 2 Benefits from the Participation in the STEM Students' Engagement Activity (the number of students who mentioned the following benefits in their questionnaires from the total number of students who submitted the questionnaires; 15 students participated, 12 students submitted questionnaires)

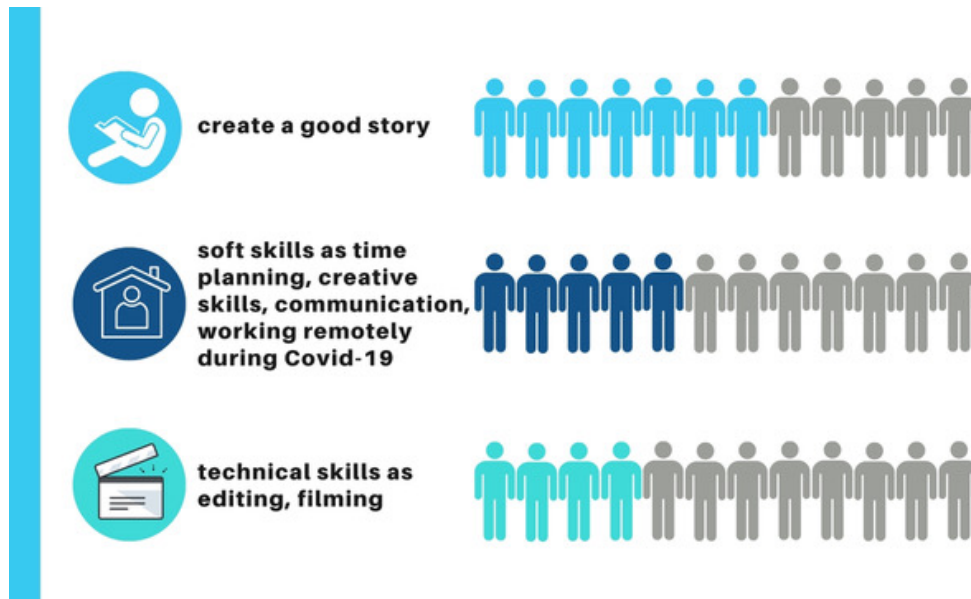


Figure 3 Identified Challenges during the Participation in the STEM Students' Engagement activity (the number of students who mentioned the following challenges in their questionnaires from the total number of students who submitted the questionnaires; 15 students participated, 12 students submitted questionnaires)

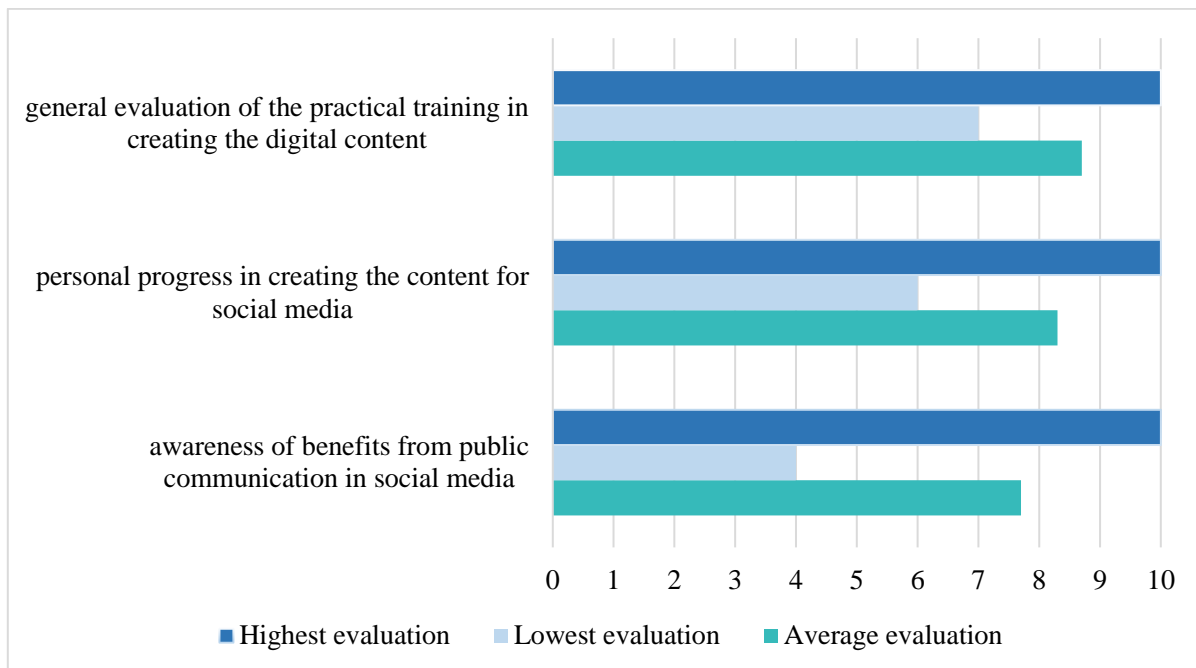


Figure 4 General Evaluation of the Participation in the STEM Students' Engagement Activity

Before Stage 2, the marketing team planned that the STEM students' digital content would address 6 functions and 6 subcategories of their studies. The

researchers used real examples of STEM students' videos and their content to specify functions, categories and subcategories in order to facilitate the intended interaction from the university's point of view and the students' perspective (see Table 1).

Table 1 The Overview of Functions and Categories in Comparison: Planned Versus Actual Materials

Functions planned for Stage 2	Whether the STEM students' digital content represents this function	Comments or examples	Suggestions for the next stage
Introduce STEM students by posting their public presentations in the university or visiting schools on their social media	No	The function too general, probably no added value or the task was not challenging enough for the students	Cancel
Provide insight into STEM studies and the specific terminology by interviewing STEM students	Yes	3 videos - the content was more related to study opportunities in general, free time activities, Valmiera, sports possibilities; few examples on the specifics of STEM studies.	Rename as: get to know STEM students, their reasons for choosing studies, free time activities, hometown, Valmiera, etc.
Share examples from the best STEM graduates' final thesis, successful projects, and well evaluated practical training	No	The students were first-year students. They are still on the way to their first successful projects.	Needs to be modified
Create unique digital content, which describes why you should study information technologies, what you should know before studies, why study information technologies, 10 things students should know	No	Probably the topic was too broad, difficult to relate to individual students experience. However, some answers were provided during the interviews with company representatives.	Needs to be modified
Encounter STEM stereotypes via live videos and podcasts	yes	9 videos with the interviews of different company representatives discussing the everyday operations of the company, history, development, work conditions and opportunities for employees, competences needed, advice for students	Rename: get to know industry representatives, their companies, industry development trends, work opportunities, skills needed and advice for students

Create opinion leaders among ViA students – encourage and raise interest to share different type of information on their studies (study process, environment, lectures, professionals from the industry) via following subcategories:	Some examples	Probably the topica was too broad , difficult to relate to individual students experience. However, many examples were provided in the specific categories.	Rename using specific categories and subcategories.
innovative and applied methods	yes	1 video - one day as a video game	-
culture and affiliation	yes	11 videos on the typical day for students during the pandemic and how they adapted	-
job opportunities	yes	See the description of the company representatives’ videos	-
entertainment	Some examples	Due to the COVID-19 pandemic, only examples related to time outdoors	-
weather	yes	9 videos on the weather and nature in the area where students live	-
accommodation	Some examples	Due to the COVID-19 pandemic, video examples are more related to home accommodation in different cities in the region	-
-	New subcategory: everyday life	6 videos on the everyday life after studies	-
-	New subcategory: STEM student in an unusual setting	3 videos with entertainment elements	-

In order to find out what are the missing content elements, a further detailed insight was performed by analysing 60 questionnaires of the first-year students on the factors they found important for choosing studies and the STEM students’ content they found the most attractive. The students were provided with 34 factors to consider how they influenced their decision on studies by ranking those factors from 5 (highest impact) to 1 (lowest impact). The top ranked factors were: 1) received the scholarship for studies; 2) STEM specialists are demanded in the job market, have good career opportunities and a well-paid job; 3) there are

possibilities to receive the scholarship; 4) the study programme is unique and I am interested in this field. The top ten factors included also: the high reputation of the university and education of high quality; professional and not academic studies; positive recommendations and feedback from friends and relatives; modern and well-equipped university and facilities; good location; integration of social and technical studies. There were two factors that the students did not address in their digital content: 1) information on scholarships and study costs; 2) showing examples of the study programme uniqueness.

The next step was to identify and map different categories and subcategories, which were represented in the digital content. The overview is available in Figure 5. It summarizes the development of functions, categories and subcategories during the several stages: 1) categories and subcategories, which were identified in the STEM students' digital content; (4 functions, 10 categories, 18 subcategories); 2) important factors for futures students (2 functions, 3 categories, 13 subcategories); 3) frequently addressed categories and subcategories, which were identified in the benchmarking exercise (1 function, 2 categories, 12 subcategories).

The benchmarking exercise involving a similar activity at the project partner university Ventspils University of Applied Sciences showed several differences in how the STEM students' engagement concept was implemented. The total number of digital materials was much higher in Ventspils, however, those examples were shorter and covered fewer content categories. The functions of Ventspils students' digital content slightly differed from ViA students' content, however, the mapping of categories and subcategories provided new topics to be included in Stage 3. As a result, one more function was added to the STEM students' engagement concept and 2 categories, 12 subcategories.

Stage 3 – FUTURE STUDENTS - adapting the students' engagement concept - what is there for future STEM students?

Concluding the evaluation phase of the first resonating innovation cycle, the researchers propose the co-created STEM students' engagement concept for Stage 3 and the next cycle.

The aim – to generate interest in STEM subjects.

The following functions worked well during Stage 2 and should be used for the next stage:

- 1) get to know STEM students;
- 2) get to know STEM industry representatives;
- 3) get to know weather and nature in the region;
- 4) get to know creative and funny side of STEM students;

Two more functions were added as they address the missing most important factors for future students:

- 5) inform on scholarships and study costs;

6) show examples of study programme uniqueness;

And one function was added as it was frequently addressed in Ventspils students' digital content and could contribute to the aim of the Stage 3:

7) get to know STEM teachers and professors.

The overview of functions, categories and subcategories for the STEM students' engagement concept is presented in Figure 5. The final mapping is the result from the different stages of evaluation and justification to the specific function and category: 1) represents categories and subcategories in STEM students' digital content from Stage 2; 2) represents categories and subcategories from the analysis of future students' opinion; 3) represents categories and subcategories frequently addressed in Ventspils STEM students' digital content.

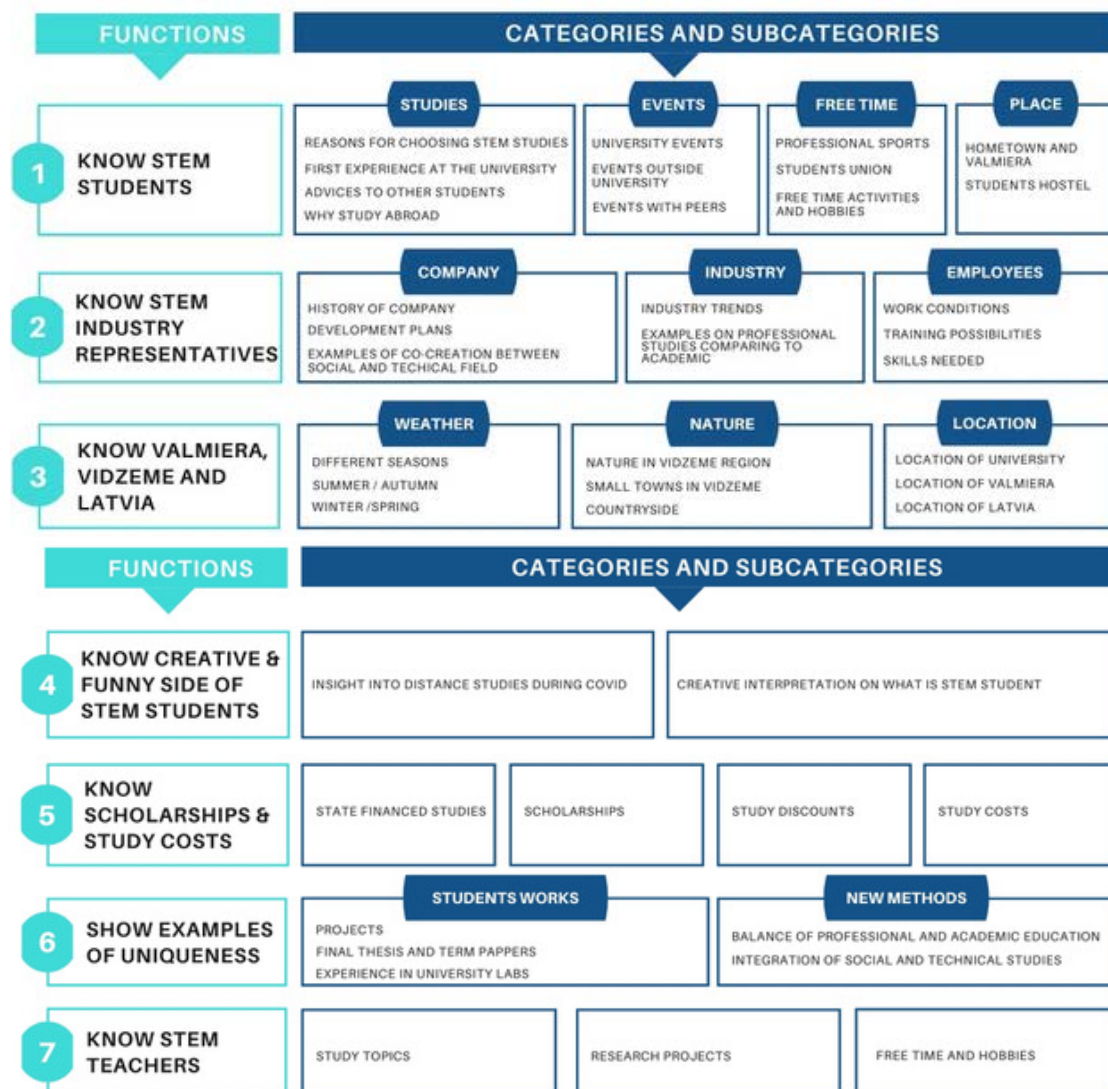


Figure 5 Overview of Functions, Categories and Subcategories of the STEM Students' Engagement Concept

Results

The researchers summarized and provided a broader insight in the results from the co-creation and transformation of the STEM students' engagement concept during the two stages and provided the suggestions for the next - Stage 3. This includes the transformation and adjustment of the main aim for each stage, functions, digital content categories and subcategories, as well the interaction level among students, university staff and future students.

The experiment revealed the transformation how universities can implement the transition from the university-centred approach to the student-centred approach in creation of marketing digital content, what drawbacks can be expected and what solutions might be introduced. The Figure 6 summarizes the transformation of the main aim for the STEM students' engagement concept. In Stage 1, the main aim was defined based on the interest from the university and the marketing point of view, which was too confusing and not understandable for students, therefore it was adjusted for Stage 2 according to the results of the students' focus groups. However, after the evaluation of Stage 2 and the analysis of future students' needs, the researchers' team transformed the aim of Stage 3 with the focus on the interest in STEM subjects.

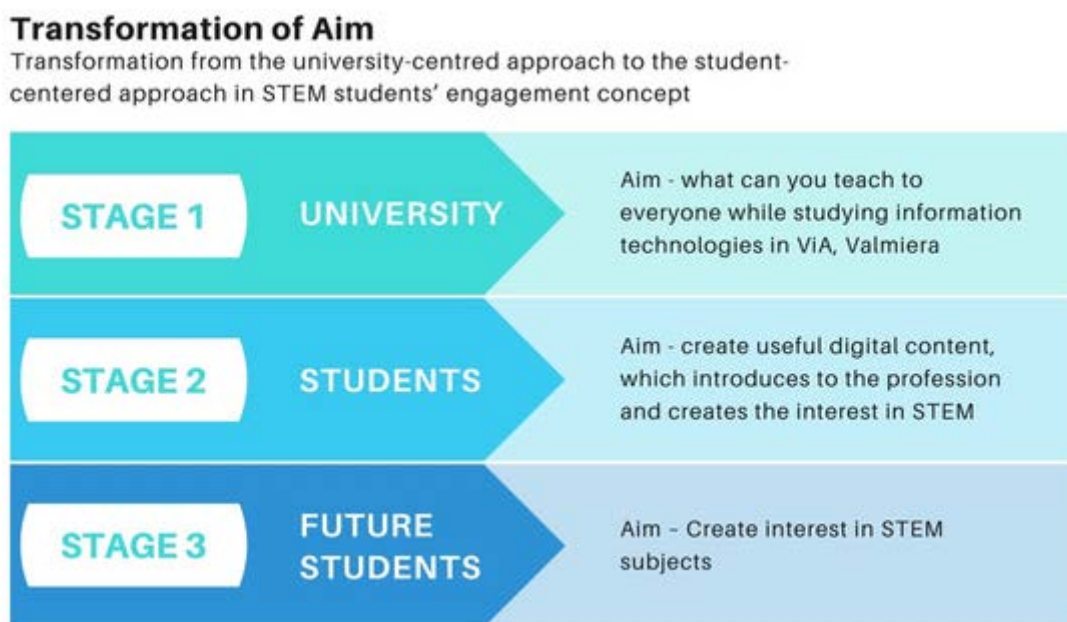


Figure 6 Transformation from the University-centred Approach to the Student-centred Approach in the STEM Students' Engagement Concept

The researchers' team used a similar approach to the adjustment and transformation of functions for the STEM students' digital content. The marketing team defined the functions for Stage 1, which were revised after discussions with

students and adjusted after evaluating Stage 2. Figure 7 summarizes the changes in the functions of digital content in all three stages.

Transformation of functions

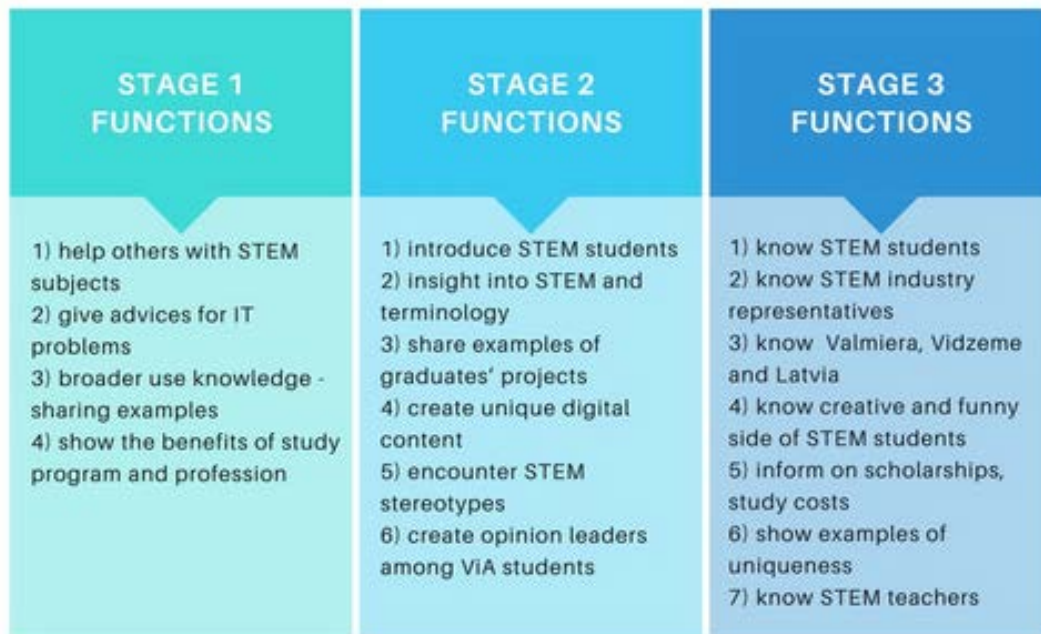


Figure 7 Transformation of Functions from More General to Better Structured and Justified Functions

However, creating an international marketing ecosystem requires a step-by-step development and cannot be set up during a short period of time. There is also a need for many individual adjustments according to every university's culture and mindset as the interaction level among involved parties increases at every stage. Figure 8 shows the development of interaction in ViA international marketing ecosystem through various stages. There were 3 main parties: STEM students, media students and industry representatives who cooperated in the process of creating digital content during Stage 2. The digital content after this stage represented 4 functions, 10 categories and 18 subcategories. More detailed analysis of future students' expectations provided the necessary information for first adjustments: 2 more functions, 3 categories and 13 subcategories were identified as a significant digital content. In order to spot more opportunities, the benchmarking exercise helped to extend and justify the functions and categories by adding one more function, 2 categories and 12 subcategories. In total 7 functions, 15 categories and 43 subcategories were mapped for Stage 3. This will require the interaction of five involved parties at various settings and teams: STEM students, media students, industry representatives, teachers and future students.

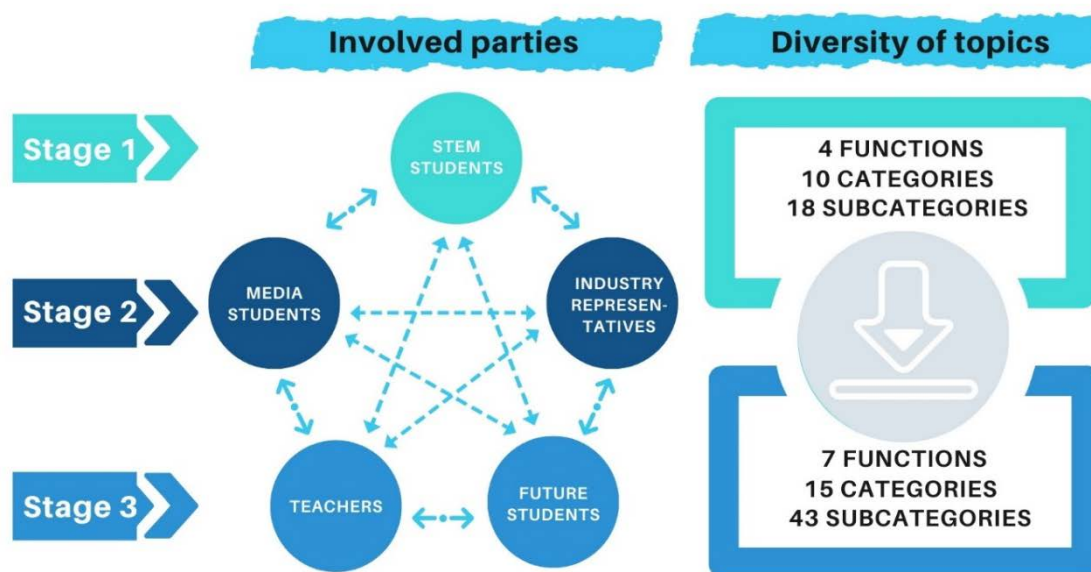


Figure 8 Interaction Level among Involved Parties in the Process of Creating Digital Content during Various Stages

Conclusions

This paper describes the interaction level which is needed for STEM students' engagement to foster international marketing. The three stages clearly indicate moving from a more general aim and functions to more specific, better structured and justified functions that are easier to perceive not only by the existing students, but also by future students. All aspects such as the target audience, social media platform, message and the common concept are an important part to make the syntax between a content maker and a receiver. As a potential student group – Generation Z are already technology geeks, spend a lot of time on social media, know about the newest technologies and know how to use them, it is crucial to provide content that can impress them as future STEM students with technologies, opportunities, skilled staff and successful alumni.

The used method and the combination of recent theoretical findings and a dynamic experiment provided the needed flexibility for moving from the university-centred to the student-centred approach. At the same time, this approach showed the areas where the framework is necessary in order to focus the message of STEM students' digital content and relate it more to future students' needs.

There is a growing demand for matching needs and personalization opportunities - finding and choosing what you are interested in or what is needed in a particular situation, ignoring everything that is not relevant or interesting or unnecessarily delays time. It is important for this generation that education is

student-centred (focused on student opportunities, not university achievements), and at the same time it must demonstrate a link with global trends and events. The most evident limitation of this study is that a relatively small number of respondents (university students) was involved in the research and more representatives of other technical study programs should be engaged for a broader view. Also the shortage of foreign students may have affected the current results. Expanding the number of respondents, and using these combined methods of research should be extremely useful for broadening the knowledge in this field and finding the way to attract more foreign and local students to STEM study fields.

The findings of this research is the first step in an ongoing study on the generation marketing and expanding student digital content in the marketing ecosystem. The research will continue until 2021 and will look into introducing digital tools in supporting the marketing ecosystem.

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ПРИМЕНЕНИЕ ИНТЕРНЕТ-ТЕХНОЛОГИЙ В МЕДИЦИНСКИХ УЧЕБНЫХ ЗАВЕДЕНИЯХ

The Use of Internet Technologies in Medical Educational Schools

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Abstract. *The article emphasizes the need for the application of innovative Internet technologies in medical schools. The authors submit some practical aspects of using educational blog Blogger, mental maps Mindomo and application Learning Apps in training of medical students when they study the professional disciplines. The results of a survey of would-be doctors and junior medical staff are described. They prove the effectiveness of the use of blogs, mental maps and online exercises by means of Learning Apps in studying of professional disciplines. The purpose of the article is to highlight the methodology and results of experimental work aimed at the verification of the effectiveness of using of innovative Internet technologies in medical schools. The experimental verification of the effectiveness of the introduction innovative Internet technologies on the training of future junior medical staff in study of special disciplines is presented. It was specified that future doctors and junior medical staff of the experimental groups at the formative stage of the experiment received better results, than the students of the control groups and they have a higher level of readiness for professional activity. The statistical verification also confirmed the effectiveness of the implementation of Internet technologies.*

Keywords: *educational blog; Internet technologies; medical students; mental maps; online exercises Learning Apps.*

Введение

Introduction

В современных условиях информационного развития образовательной системы возникла проблема подготовки будущих медиков к профессиональной деятельности. Ежедневно количество новой информации увеличивается, появляются новые теории и взгляды. И традиционные технологии в нынешней системе образования уже не могут обеспечить эффективную трансформацию знаний и навыков у будущих медицинских работников в процессе обучения будущей профессии.

Современным выпускникам медицинских ВУЗов и колледжей необходимо обладать достаточным запасом профессиональных знаний, а также уметь мгновенно адаптироваться в любой экстренной медицинской ситуации, быть креативными, обладать клиническим мышлением, умением работать в команде и самостоятельно находить нужные базовые знания для применения их в будущей профессиональной деятельности. Для достижения желаемого результата медицинская система образования должна стремиться к формированию навыков самостоятельности, сотрудничества и максимально приближаться к условиям реальной клинической среды. Для этого необходимо использовать новые педагогические методы и технологии обучения. На этапе реформирования образовательной медицинской системы, а также во время эпидемии коронавирусной инфекции во всем мире особенно актуальным становится внедрение в образование технологий дистанционного обучения, а именно, инновационных интернет-технологий (Iliasova, 2019).

Целью статьи есть демонстрация практического применения образовательных блогов, ментальных карт и упражнений LearningApps в профессиональной подготовке будущих врачей и среднего медицинского персонала, а также экспериментальная проверка применения вышеназванных интернет-технологий в медицинском образовательном процессе.

Методология *Methodology*

В нашем исследовании мы использовали следующие методы научной работы: анализ, синтез, обобщение, сравнение теоретических и эмпирических данных, анкетирование, педагогический эксперимент. Для проведения статистических расчетов на формирующем этапе эксперимента использовались программа MS Excel и пакет программ Statistical Package for Social Science.

В статье описаны результаты исследования, которое проводилось в 2017-2019 годах среди преподавателей и студентов Винницкого медицинского университета им. Н.И. Пирогова и медицинских колледжей Винницкого региона (Винницкого, Бершадского, Гайсинского, Могилев-Подольского и Погребищенского). В эксперименте было задействовано 124 студента контрольных групп (КГ) и 123 – экспериментальных (ЕГ), а также 70 преподавателей специальных дисциплин.

Обзор литературы *Literature Review*

Анализ научных исследований свидетельствует, что проблемы использования интернет-технологий в образовательном процессе нашли отражение в работах отечественных и зарубежных ученых. Опыт использования блог-технологий в образовании представлен в публикациях зарубежных ученых Z. Amir, V. Dennen, H. Du, K. Ismail, S. Hussin и других (Du, 2006). Они считают (Amir, Ismail & Hussin, 2011), что внедрение блогов крайне необходимо, и выделяют учебный потенциал как основную составляющую образовательных блогов. V. Dennen разделяет участников коммуникации в блоге на группы (Dennen, 2014): 1) блоггеры; 2) активные комментаторы; 3) наблюдатели; 4) прохожие и 5) персонажи. Ценными для нашего исследования есть научные разработки проведенного анализа дистанционного обучения в высшей школе Н. Большаковой и З. Митченко (Bolshakova & Mitchenko, 2020). Ученые выделяют основные преимущества онлайн-форм дистанционного обучения (многоканальность использования информации, вариабельность форм, гибкость структуры обучения студентов и др.) и недостатки (отсутствие непосредственного общения студентов и преподавателей и другие факторы академической среды).

В контексте нашего исследования особого внимания заслуживают научные труды, в которых освещаются особенности использования ментальных карт в образовательном процессе. Основоположником теории использования ментальных карт является английский ученый Тони Бьюзен (Buzan, 1994). В работах P. Farrand, H. Fearzana, E. Hennessy отмечено, что ментальные карты стимулируют студентов к более глубокому уровню обучения, поскольку позволяют индивидуализировать восприятие информации (Farrand, Fearzana & Hennessy, 2002).

Наиболее популярными ментальными картами являются WiseMapping, Coggle, MindNode, Mind42, Mindomo, MindMeister и другие. Coggle является бесплатным интернет-приложением, которое имеет функцию совместной работы при обучении. Он может разрабатывать яркие и простые ментальные карты. Данный интернет-ресурс удобен в управлении. Coggle поддерживает использование картинок, разнообразных цветовых гамм, и в этом приложении можно просматривать историю созданной карты (Besh, Kalugin & Osokina, 2017).

MindNode – это платное online-приложение для создания мыслительных карт. Сервис обладает современным дизайном, прост и удобен в использовании. Программа поддерживает интеграцию с устройствами Apple. Интернет-приложение позволяет экспортировать уже

готовые ментальные карты в форматы: jpg, pdf, tiff и текстовые форматы (Bech, Kalugin, & Osokina, 2017).

Достоинствами ресурса MindMeister являются возможность совместной работы с другим пользователями над ментальной картой в режиме реального времени, мобильный доступ к приложению с возможностью редактирования и синхронизации, наличие бесплатного пакета (хранить онлайн можно не более 3 ментальных карт), а также работа в режиме офлайн с сохранением данных локально с их последующей синхронизацией (Dronova, 2017).

Онлайн-ресурс WiseMapping – бесплатное приложение для создания ментальных карт, работающее на коде html5. Сервис можно использовать на сайте разработчиков online, а также при скачивании открытого кода программы и установки ее на свой веб-сервер. WiseMapping имеет достаточное количество разнообразных функций для работы с интеллектуальными картами (Bech, Kalugin, & Osokina, 2017).

В контексте нашего исследования мы использовали ментальные карты сервиса Mindomo. Этот онлайн-сервис имеет бесплатную и платную версии работы. У бесплатной версии несколько ограничены функции, но при этом также можно создавать ментальные карты высокого уровня. Mindomo имеет простой и удобный русскоязычный интерфейс. Данный сервис интегрируется с большим количеством сервисов, что позволяет создавать интеллектуальные карты практически на любом устройстве. Программа позволяет даже непрофессионалам создавать ментальные карты, публиковать их в сети, обмениваться, организовывать совместную работу над созданием карт, добавлять разнообразные мультимедийные конструкции.

Нам интересны труды Т. Радомской и Н. Кононец, которые отдают предпочтение именно ментальным картам данного сервиса. Как отмечает Т. Радомская, Mindomo – это программа, которая позволяет создавать и редактировать ментальные карты, а также делиться ими с друзьями и коллегами (Radomska, 2017). Н. Кононец (Kononets, 2014) считает основным преимуществом использования ментальных карт Mindomo в учебном процессе возможность редактирования и дополнения ментальных карт не только преподавателем, но и любым студентом или учеником. По ее мнению, гибкость созданной карты и легкость интерфейса позволяет использовать этот ресурс на лекционных и практических занятиях для организации индивидуальной, коллективной или групповой работы.

На основе проведенного анализа можно сделать вывод, что Mindomo – это условно бесплатный сервис, который обладает многофункциональными свойствами платных сервисов, и может широко использоваться в современном образовании, особенно сейчас, когда в связи с эпидемией

коронавирусной инфекции образовательный процесс перешел с офлайн обучения на новые технологии дистанционного обучения с применением инновационных онлайн-технологий.

Упражнения Learning Apps также являются интернет-технологиями, которые используются в нашем исследовании. Внедрение интерактивных упражнений в образовании нашло отражение в научных исследованиях С. Сидорова (Sidorov, 2013), М. Саблиной (Sablina, 2017) и др., что стало предпосылкой для создания собственных онлайн-упражнений.

С нашей точки зрения, вопрос использования инновационных интернет-технологий при обучении студентов-медиков требует большего внимания. Недостаточно изученной является проблема внедрения образовательных блогов, интеллект-карт и упражнений сервиса Learning Apps при изучении специальных дисциплин будущими медиками.

Результаты и дискуссия ***Results and Discussion***

В эпоху современного информационного прогресса любому образованному медику необходимо не только иметь профессиональные знания и навыки, но и свободно использовать компьютер и современные интернет-технологии в своей профессиональной деятельности. При опросе студентов Винницкого медицинского университета и медицинских колледжей Винницкого региона выявлено, что в большинстве случаев использование интернет-технологий в самостоятельной работе студентов в медицинских учебных заведениях сводится к поиску материалов в Интернете для написания рефератов, подготовки докладов на теоретических занятиях и создания презентаций. О возможности применения веб-блогов при обучении в ВУЗах была проинформирована большая часть опрошенных (89%), про использование ментальных карт и упражнений Learning Apps в образовательном процессе медицинского университета (16%), а в медицинских колледжах знают 7,6%.

Также был проведен опрос студентов в контексте их оценки современного преподавания профессиональных дисциплин. В своих ответах (46,5%) часто упоминалось, что при изучении этих дисциплин не хватает использования новых онлайн-технологий. В эпоху компьютеризации все студенты зависимы от гаджетов. В своих ответах неоднократно главными недостатками они называли «редкую демонстрацию настоящих больных» (36,7%), «традиционное проведение практик в аудиториях учебного заведения» (68,1%), «недостаточное посещение клинических баз практики» (59,3%). Студенты считают, что

удобно было бы «закачать лекции» по клиническим дисциплинам (11%) или видеоматериалы выполнения практических навыков на гаджет и самостоятельно готовиться к занятию, например, во время поездки домой (13%). Уровень умения пользоваться онлайн-технологиями преподавателями 23,1% студентов оценили как высокий, 52,7% – достаточный, 24,2% – низкий.

Анализируя результаты опроса, можно сделать вывод про необходимость использования онлайн-технологий при обучении студентов-медиков. Продемонстрируем собственный опыт использования вышеназванных педагогических технологий при изучении специальных дисциплин в медицинских ВУЗах.

Учебный веб-блог платформы Blogger (электронный адрес: <https://adresa1900.blogspot.com/>) предназначен для студентов-медиков специальности «Медсестринство» при изучении клинических дисциплин психо-неврологического профиля. Основная страница блога содержит информативную ленту, на которой регулярно обновляются организационные вопросы, необходимые студентам при изучении дисциплины. Здесь также можно увидеть методическую работу преподавателя: электронные учебные пособия, учебные видеосюжеты к каждой теме занятий, интеллект-карты, где структурирован весь курс дисциплины, презентации, а также основная информация об авторе блога (Iliasova, 2019).

Ведение образовательного блога позволяет преподавателю обобщать и демонстрировать свой педагогический опыт, систематизировать, архивировать учебный материал, осуществлять рефлекссию своей педагогической деятельности (Shevchenko & Iliasova, 2019).

Продемонстрируем нашу педагогическую инновацию, в частности, электронные учебные пособия, изложенные на страницах блога, «Медсестринство в психиатрии и наркологии» (URL: <https://www.mindomo.com/ru/mindmap/mind-map-69a26a4528cd43c8a4cc9ecedede062a>) и «Неврология и психиатрия» (URL: <https://www.mindomo.com/mindmap/mindmapadec2c464904415e8ea7f0cbbdd3282f>). Они созданы в формате ментальных карт Mindomo и содержат необходимый учебно-методический материал для изучения дисциплин психоневрологического профиля.

Онлайн-учебные пособия разделены на темы для удобного и быстрого ознакомления студентами с основной информацией по курсу неврологии, психиатрии и наркологии. Лекционный материал изложен лаконично и четко. Для каждой темы подобраны соответствующие видеосюжеты, к каждому видеосюжету можно перейти по указанной ссылке.

Ко всем созданным интеллект-картам подобран комплекс онлайн-упражнений сервиса Learning Apps. Ознакомиться с предложенными

упражнениями можно по ссылке (URL: [http://LearningApps.org.org / user / Юлия Илясова](http://LearningApps.org.org/user/ЮлияИлясова)).

Итак, при использовании интернет-технологий в образовательном процессе преподаватель может быстро изменять содержание учебно-методического материала. С помощью современных онлайн-технологий будущие медики могут пользоваться электронными образовательными ресурсами в любом удобном месте, поскольку практически у всех студентов есть мобильный Интернет, и они не привязаны к компьютерному классу или аудитории университета или колледжа.

В начале эксперимента мы хотели ознакомить и научить преподавателей профессиональных дисциплин в ЭГ пользоваться интернет-технологиями, а также внедрить их в образовательный процесс. Студенты КГ занимались по традиционным методикам, и преподаватели использовали традиционные методы и технологии, которые применялись на констатирующем этапе эксперимента.

Изучение результатов оценки эффективности применения инновационных интернет-технологий в образовательный процесс медицинских учебных заведений (рис. 1) свидетельствует о том, что в ЭГ количество студентов с высоким уровнем усвоения профессиональных знаний возросло с 8,94% до 26,83%, то есть на 17,89%, и соответственно, уменьшилось количество студентов ЭГ с низким уровнем знаний с 41,46% до 10,57%, то есть на 30,89%.

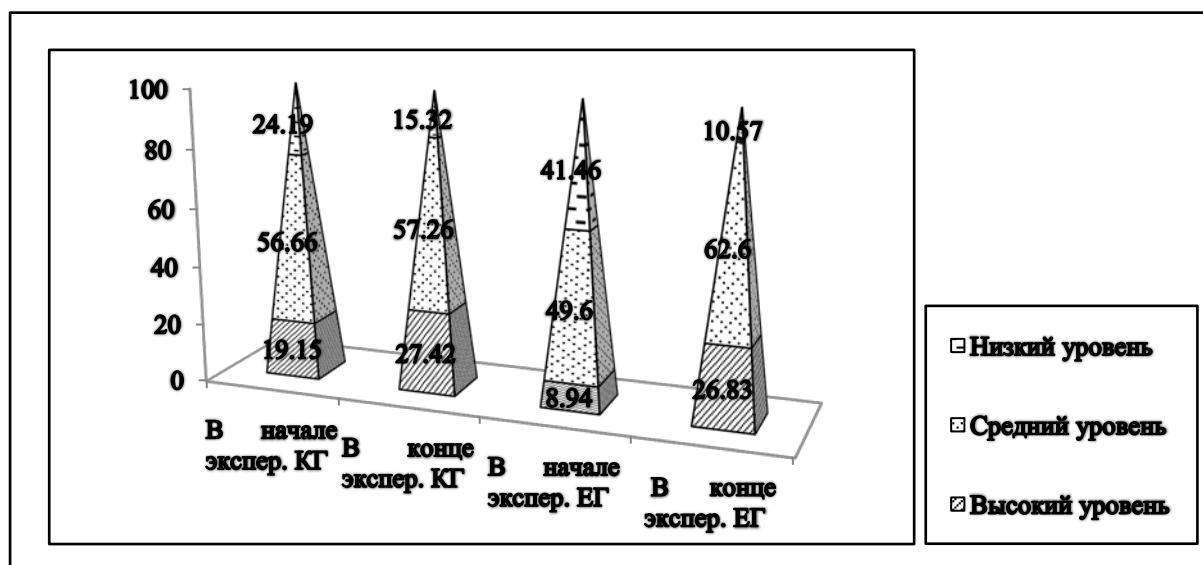


Рисунок 1. Результаты проведенного эксперимента
 Figure 1 Results of the Conducted Experiment

Количество студентов ЭГ со средним уровнем знаний после проведенного эксперимента с 49,6% увеличилось на 13% до 62,6%. У студентов КГ также произошли изменения, но они не являются весьма значительными. Для проведения статистических расчетов на формирующем этапе использовались программа MS Excel и пакет программ Statistical Package for Social Science.

Исследование достоверности полученных результатов проводилось с помощью парного t-критерия Стьюдента для сравнения двух зависимых выборок, к которым относятся результаты ЭГ и КГ в начале и в конце эксперимента (влияние независимой переменной). Как нулевую гипотезу H_0 было принято утверждение о том, что расхождение между средними значениями показателей является случайной, и альтернативную гипотезу, согласно которой это расхождение вызвано опытно-экспериментальной работой.

Для анализа результатов в программе SPSS 16.0 (см. рис. 2) рассчитано среднее арифметическое («Mean») и стандартное отклонение разности значений анализируемых переменных («Std. Deviation»), значение парного t-критерия Стьюдента, число степеней свободы («df») и уровень статистической значимости p («Sig. (2-tailed)») для ЭГ до и после эксперимента, и для КГ до и после эксперимента (см. табл.1). Поскольку по результатам вычислений парного t-критерия Стьюдента для ЭГ $p = 0,000$, что меньше 0,05, то нулевую гипотезу H_0 можно опровергнуть, а принять альтернативную гипотезу про то, что с достоверностью 95% расхождения между средними значениями среднего балла у студентов ЭГ не являются случайными, а есть результатом внедрения интернет-технологий в образовательный процесс подготовки будущих медиков.

Таблица 1. Результаты парного t-критерия Стьюдента для среднего балла студентов ЭГ и КГ в начале и в конце эксперимента
Table 1 Results of Student's t-criterion for the Mean before and after the Experiment

Группы	Среднее арифметическое («Mean»)	Стандартное отклонение разницы значений анализируемых переменных («Std. Deviation»)	Значение парного t-критерия Стьюдента (t)	Число степеней свободы («df»)	Уровень статистической значимости p («Sig.(2-tailed)»)
ЭГ	-0,471	0,452	-11,539	122	0,000
КГ	-0,085	0,344	-2,742	123	0,07

Paired Samples Statistics									
		Mean	N	Std. Deviation	Std. Error Mean				
Pair 1	ЕГдо	3,69	123	,642	,058				
	ЕГпісля	4,16	123	,604	,054				

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	ЕГдо & ЕГпісля	123	,738	,000

Paired Samples Test									
		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	ЕГдо - ЕГпісля	-,471	,452	,041	-,551	-,390	-11,539	122	,000

Рисунок 2. Результаты расчета парного t-критерия Стьюдента для среднего балла студентов ЭГ до и после эксперимента

Figure 2 The Results of Calculating the Student's t-criterion for the Mean of Students from the Experimental Group before and after the Experiment

Paired Samples Statistics									
		Mean	N	Std. Deviation	Std. Error Mean				
Pair 1	КГдо	3,97	124	,585	,053				
	КГпісля	4,06	124	,552	,050				

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	КГдо & КГпісля	124	,819	,000

Paired Samples Test									
		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	КГдо - КГпісля	-,085	,344	,031	-,146	-,024	-2,742	123	,007

Рисунок 3. Результаты расчета парного t-критерия Стьюдента для среднего балла студентов КГ до и после эксперимента

Figure 3 Results of Student's t-test for the Mean of the Students from the Control Group before and after the Experiment

Аналогичные расчеты проводились для анализа среднего балла студентов КГ (см. рис. 3), экспериментально получено $p = 0,07$, что выше $p > 0,05$, поэтому мы можем сделать вывод о том, что средний балл студентов КГ в начале и в конце эксперимента статистически не отличается. Таким образом, по результатам статистического анализа, расчета параметрического t-критерия Стьюдента можем сделать вывод о подтвержденной положительной динамике среднего балла у студентов ЭГ.

Выводы *Conclusions*

Итак, проведенный анализ позволил сделать выводы, что применение онлайн-технологий, а именно блогов, ментальных карт и упражнений сервиса Learning Apps в медицинских учебных заведениях может максимально развить познавательную активность у будущих медиков, сформировать у них основные профессиональные качества, а также обеспечить постепенный переход студентов от учебной к профессиональной деятельности. Мы хотели ознакомить педагогов с нашими разработками, а также рекомендовать использование данной методики как образец для изучения других дисциплин. Из вышеизложенного можно сделать вывод, что положительная динамика проведенного исследования дает основание считать, что применение интернет-технологий способно существенно повысить качество и эффективность профессиональной подготовки студентов в медицинских учебных заведениях. Считаем, что наши достижения использования данных инноваций на примере клинических дисциплин можно использовать при изучении гуманитарных и естественных наук в современных учебных заведениях.

Summary

The article emphasizes the need for the application of innovative Internet technologies in medical schools. The authors submit some practical aspects of using educational blog Blogger, mental maps Mindomo and application Learning Apps in training of medical students when they study the professional disciplines. The results of a survey of would-be doctors and junior medical staff are described. They prove the effectiveness of the use of blogs, mental maps and online exercises by means of Learning Apps in studying of professional disciplines. The purpose of the article is to highlight the methodology and results of experimental work aimed at the verification of the effectiveness of using of innovative Internet technologies in medical schools.

The research was conducted in 2017-2019 years. At the primary stage of researching an insufficient level of professional knowledge and practical skills of medical students was determined. There were identified shortcomings in the process of professional training of medical specialists in the study of professional disciplines, in particular, the traditional training and limited use of information communication technologies (ICT) in the educational process of medical schools. The empirical basis at the formative stage of the study included 247 students and 70 teachers of professional disciplines at Vinnytsia national medical university and medical colleges of Vinnytsia region. At the formative stage of the experiment students of the control groups studied according to traditional methods, and their teachers of professional disciplines used traditional teaching technologies. Students of the experimental groups studied according to innovative methods, and their teachers used Internet technologies. It was specified that future medical staff of the experimental groups received better results, than the students of the control

groups and they have a higher level of professional knowledge. It has been found out that the use of innovative Internet technologies in the research significantly improves quality and effectiveness of such training, brings the students closer to real clinical scenarios, enables them to clearly and qualitatively enhance their practical skills. The statistical verification also confirmed the effectiveness of the implementation of this modern technologies. Prospects for further researching are perceived in creation of teaching and methodological support for the formation of readiness of future medical staff to their professional activity by means of modern technologies at the studying of natural, socio-economic and humanitarian disciplines in medical schools.

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USING ROLE-PLAYING GAME FOR PROFESSIONAL SKILLS FORMATION OF PROSPECTIVE TEACHERS

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Abstract. *The features of using Role-playing games in educating students - prospective teachers are considered. In practical classes on teaching methods of various disciplines, Role-playing games are often used, associated with conducting a fragment of a lesson or a full lesson. Typically, these practical classes are organized on an empirical level. The version of the Role-playing game "Observing Mathematics Lessons", developed on the basis of the theory of contextual learning, is presented. Psychological and pedagogical principles: simulation of specific conditions, game modelling of the content and forms of professional activity, collaborative activities are used in the design of the game. These principles are the basis for creating a game model, which consists of: game goals, a set of roles that indicate the functions of the player, the scenario and the rules of the game. The simulation model contains: didactic goals, the subject of the game and the evaluation system. An important difference developed by the Role-playing game is to take into account the personality types of students - participants in the game. Students with personality types typical for STEM students were selected for the role of "good pupil". The roles of the "bad pupils" were played by students with personality types typical for students who usually do not have academic success in mathematics. A survey has been conducted, which showed that the proposed Role-playing game enable the simulation of the real situation of an observing mathematics lesson.*

Keywords: *observing mathematics lessons, personality types, role-playing games.*

Introduction

The business game is widely used to train prospective managers (Fito-Bertran, Hernandez-Lara, & Serradell-Lopez, 2014). The idea of this method is to simulate situations that arise in real life in the educational process (Lui & Au, 2020). In pedagogy, the more commonly used term is role-playing game. This term has a broader interpretation. In the phrase "role-playing game",

some researchers put the word "game" in the first place (Shafie & Fatimah, 2011). Role-playing game is understood as teaching methods based on the creation of game situations or increasing the interest of students through the presentation of material in the form of a game. With this approach, the use of computer games is a role-playing game (Ahmad, Shafie & Latif, 2010). It is suggested to use Math Quest for teaching primary schools pupils. The use of the arcade genre has been known for a long time. The use of computer graphics increases interest in the game, but do not change its essence. To a certain extent, computer graphics can entertain the pupils and distract him from studying mathematics. Massive Multiplayer games are even more popular with children, but even more distracting from the Math. In the study (Anagnostopoulou & Olivotos, 2019) note that Massive Multiplayer games are - "such that players are enjoying first and learning simultaneously". Another use of games in learning mathematics is playing with school objects. This is the use of well-known counting sticks and various other objects (Kilgour, Reynaud, Northcote, & Shields, 2015). Games of this type are effective in teaching primary school pupils. The use of games with school objects and arcade games in high school is impractical and even less suitable for teaching university students. To prepare prospective teachers, it was proposed to use the program Second Life. This program allows you to create a variety of content that simulate the real world or fictional reality. Using the capabilities provided by the program, situations in the lesson are simulated (Mahon, Bryant, Brown & Kim, 2010). Each student can be assigned an avatar. This computer character is endowed with certain characteristics that emphasize his personality (Ma et al., 2016). It is noted that role-playing games are important for modelling relationships in society (Jarvis, Odell, & Troiano, 2002). Examples of the use of this teaching method for projecting historical realities on students or getting them into the image of a representative of another race are given. The full benefits of role-playing game can be realized when simulating situations by students, and not by computer characters. The tournament of young physicists simulates the interaction of researchers in solving a scientific problem (Vanovski, 2014). The situation of the scientific report is also modelled. The speaker from one team is opposed by an opponent from the other team, there is also a reviewer - this is a representative of the third team. A specific set of positions that engineers can work in is presented in the role-playing game - Formula Student (Chryssolouris, Mourtzis, Stavropoulos, Mavrikios, & Pandremenos, 2008). This version of the game is closest to the business one. It was noted that pupils should be selected into teams taking into account their personality characteristics (Crow & Nelson, 2015). The selection of team members can be done based on Belbin's team roles. To model the personal characteristics of students, it is preferable to use the personality types of Myers Briggs (Ivanova, Dimitrov, Ivanov & Naleva, 2019).

Methodology of Role-playing Game

At training prospective teachers role-playing game associated with conducting a fragment of a lesson or a full lesson is often used. Such game is used in practical classes on methods of teaching various disciplines. However, these games are often organized on an empirical level, without the use of modern theoretical developments in role-playing games.

For students - prospective teachers of mathematics, a role-playing game “Observing Mathematics Lessons” was developed based on the theory of contextual learning. This theory is proposed by John Dewey (Dewey, 1927) and developed other researchers: (Johnson, 2002; Verbickij & Larionova, 2009; Schmidt, 2010). The authors of this theory assume that the education of students at the university should be as close as possible to their future professional activity. Therefore, it is important to model the substantive and social content of this activity by creating real professional situations, for example, when conducting role-playing games.

When designing the game “Observing Mathematics Lessons”, the psychological and pedagogical principles of the theory of contextual learning were used:

- simulation of specific conditions;
- game modelling of the content and forms of professional activity;
- joint activities;
- dialogical communication;
- principle of two-dimensionality;
- formulation of problems related to the content of the simulation model, and discussion of possible options for their solution in the process of game activity.

The first two principles are inseparable, since the modelling of specific conditions is the modelling of professional activity, which is carried out in the form of games. The principle of joint activity provides that a group of students participate in a role-playing game. For the presented version of the game “Observing Mathematics Lessons” the minimum number of participants is 7-8 people. It is substantiated that with a smaller number of participants, no opportunities are created to imitate the specific conditions of professional activity, that is, the second principle is violated. The principle of dialogical communication acts as a necessary condition for achieving learning goals in a specific lesson or part of a lesson. The implementation of this principle is provided by the role positions of the participants. Each participant must analyze problematic situations that arise during the game and act in accordance with the chosen role. The principle of two-dimensionality provides that the achievement of game goals is at the same time a means of forming a teacher's professional skills. The conditional

goal of the game is to get the maximum number of points for participating in it. The real goal is to form the professional skills of prospective teachers. The implementation of this principle is closely related to the motivation of the participants in the game. The implementation of the principle of setting the task related to the content of the simulation model, and the discussion of possible options for solving them in the process of playing activities occurs when development a role-playing game.

For the game “Observing Mathematics Lessons” it is necessary to highlight the possible typical problems that a teacher encounters in preparing and conducting a lesson. Game and simulation models were created. The game model consists of game goals, a set of roles indicating the functions of the players, the scenario and the rules of the game. The simulation includes: didactic goals, the subject of the game and the assessment system.

The main game goal of the participant is to fulfil the tasks defined by his role as accurately as possible and to gain the greatest number of points or encouraging comments (depending on the role).

The set of roles includes:

- A “teacher” who, preparing for a lesson, specifies the purpose and type of lesson, develops methods, techniques and means to achieve this goal, and then conducts this lesson;
- “Good pupil” - pupil with a high level of mathematical training, who takes an active part in the lesson, gives the correct answers to the teacher's questions and correctly solves the mathematical problem;
- “Bad pupil” - pupil with a low level of mathematical training, who does not want to take part in the lesson, is often distracted, makes mistakes when solving exercises;
- The "principal" is the one who checks the “teacher”.

In the scenario of the game, the main stages were described: introduction to the game (at this stage the participants were told the rules of the game, the topic of the lesson were determined, the roles were assigned); preparation for the game; playing the game; analyzing the game. The didactic goal of the game is the formation of the prospective teacher's professional skills (lesson planning, organization and management of the pupil's activities in the lesson, assessment of their activities in the lesson, etc.). The subject of the game is the process of preparing, conducting and methodological analysis of the lesson.

The hypothesis of the study.

The following statement is accepted as hypotheses of a study:

- H_a - Taking into account the personality types of the participants in the role-playing game "Observing Mathematics Lessons" allowed to better model the real situation in the lessons.

- H_b - Taking into account the personality types of the participants in the role-playing game "Observing Mathematics Lessons" allowed to better develop professional skills.

Tools are used to test these hypotheses of a study.

- *The Keirsey Temperament Sorter.* Student’s personality types were determined using the Keirsey questionnaire. The first test was conducted six months before the experiment. The second test was performed immediately before the role-playing game. The coincidence of the results of the first and second tests was in the range of 78–82%, which is within the acceptable range (75–90%) in accordance with (Capraro, R. & Capraro, M., 2002).
- *The expert evaluation.* The professor and the assistant were members of the commission that evaluated the lesson by the “teacher”. The "Observation of mathematics lessons" conducted by the “teacher” was evaluated according to 5 criteria. The score for each criterion ranged from 1 to 3 points. The evaluation system is presented in Table 1.

Table 1 "Teacher" Assessment Questionnaire

№	Criteria	Points (1-3)
1	Lesson focus	
2	Effective lesson planning	
3	The mastery level of a teacher on the topical material	
4	Interaction of the teacher with pupils	
5	Using activation methods and techniques	
Total:		

- *The survey.* The survey was conducted twice before practice and after practice in high school. The questions of the questionnaire were answered both by the students who conducted the lesson and by the students who played the roles of teacher, pupils and the principal. Students answered 5 questions "Yes" or "No" about their impressions of the role-playing game results (Table 2).

Table 2 Survey Questionnaire

№	Question	Yes	No
1	Did role-playing game pique your interest?		
2	Did the game arouse interest in the discipline "Methods of teaching mathematics"		
3	Did the game simulates a real situation of observing mathematics lessons		
4	Did this game develop professional skills of the teacher?		
5	Did this game give an opportunity to understand what problems the teacher faces?		

The Results of the Experiment

In order for the situations that arise in the lesson to be closer to reality and all participants to perform their roles well, the selection of students for these roles was carried out in accordance with the personality types of Myers-Briggs (MBTI). MBTI divides personality differences into four opposite pairs, whereby it is possible to allocate sixteen possible personality types. The sixteen types are usually designated by a four-letter abbreviation, the initial letters of each of their four preference types. For example: ENFJ: Extraversion (E), Intuition (N), Feeling (F), Judgment (J); ISTP: Introversion (I), Feeling (S), Thinking (T), Perception (P) (Rushton, Morgan & Richard, 2007). Abbreviations apply to all sixteen types by analogy.

It is believed (Capretz, 2002) that the personality type ISTJ occurs most often, the second most common is ESTJ or INTP and INTJ. In the study (Rushton, Morgan & Richard, 2007), it is showed that personality types: ISTJ (16.46%), ESTJ (12.75%), ENTJ (9.43%), INTJ (9.43%), INTP (8.46%) and ENTP (7.43%), most often found among students studying STEM disciplines. In total, personality types ISTJ, ESTJ, INTJ and INTP make up more than 50% of the students among students of STEM specialties (Williamson, 2003). In the study (Howard, Culley & Dekoninck, 2008) it is concluded that the most widespread personality type is ISTJ (16.9%), and the second is INTJ (12.3%), further ENTP (11.8%); ESTJ (9.2%), ISTP (7.7%) and INTP (7.2%). Thus, only four personality types ISTJs, INTJs, ENTPs and ESTJs make up 50.2% of the total number of students. The data of another survey (Thomas, Benne, Marr, Thomas & Hume, 2000) also found the prevalence of ISTJ (18.1%), and the second place ESTJ (10.3%), other personality types ranked in the following sequence: INTP (9.4%), INTJ (8.5%), ISTP (8.2%). Personality types characteristic of prospective Math teachers are established in the paper (Ivanov, Dimitrov, Ivanova & Olefir, 2019). Students with high academic achievement in mathematics usually have personality types: ISTJ, INTP, ESTJ, INTJ, ENTP, ENTJ и ISTP. The first three constructs, for example ENF or IST, are most significant for characterizing an individual (McCaulley, 2000).

H. J. Eysenck has noted that “child's personality determines to a large extent his or her reaction to specific methods of teaching, and even to the whole ethos and atmosphere of the teaching situation” (Eysenck, 1996). P. Hedges pointed out that “a mismatch between teacher and pupil temperament will exist, with potentially serious consequences” (Hedges, 1997). In view of the above, we believe that students with certain personal types should be selected for the roles of “bad and good pupils”.

An extrovert student of personality types EST и ENT was chosen for the role of a «Good pupils». He had to give instant answers to problem without waiting

for permission to answer and without explaining the course of the solution. The role of another "good pupils" was played by students with personality types IST and INT, who had to give the correct answers in the most detailed and time-consuming manner. There were four "good pupils". Students from ESF, ISF, ENF, and INF were selected for the role of «bad pupils". ESF and ENF students acted as «bad pupils" who interfered with the lesson with cues and noise. ISF, INF students played the role of «bad pupils" who cannot understand explanations and require repeated repetition. The "principal" was selected from students with personality types IST, ISF and INT. His task was to behave incorrectly, to make comments to students and correct the teacher.

An experiment was carried out, the purpose of which is to establish differences in the game in the case when the personality types of participants are not taken into account and when selecting participants in accordance with their personality types.

The experiment was carried out for three years. It was attended by undergraduate students in the framework of the practice. Each year, it held six lessons - three lessons based on personality types and three without taking into account the personality types of participants. The data obtained in the case when the personality types of the participants are not taken into account are placed on a white background. The data received when the participants personality types are taken into account are located on a blue background. The results of the survey obtained before the practice in high school are presented in Table 3 and results of the survey after the practice in Table 4. The arithmetic mean of the survey data before and after the practice is summarized in Table 5.

The greatest number of positive answers was received on the third question. In the instance when students for roles were selected taking into account personality types, the imitation of the lesson was closer to real. It is important that this assessment was not downgraded after the students completed the teaching practice at school.

Table 3 The Result of the Survey before Practice

Time when the survey was conducted	Number of question				
	1	2	3	4	5
2018	72	64	75	68	79
2018	81	67	81	84	87
2019	68	64	84	74	88
2019	84	81	82	80	84
2020	74	69	80	70	88
2020	76	72	84	79	88
total result	71,3	65,7	79,7	70,7	85,0
total result	80,3	73,3	82,3	81,0	86,3

Table 4 The Result of the Survey after Practice

Time when the survey was conducted	Number of question				
	1	2	3	4	5
2018	77	69	72	72	75
2018	77	74	85	79	82
2019	75	71	83	70	80
2019	85	73	90	73	89
2020	76	72	76	69	86
2020	76	72	91	82	84
total result	76,0	70,7	77,0	70,3	80,3
total result	79,3	73,0	88,7	78,0	85,0

Table 5 Arithmetic Mean Result

Personality types are taken into account	Number of question				
	1	2	3	4	5
No	73,7	68,2	78,3	70,5	82,3
Yes	79,8	73,2	85,5	79,5	85,7

As can be seen from the results of the survey, 78.3% of respondents believe that the role-playing game "Observing Mathematics Lessons" allowed to better model the real situation in the lessons. When we organize and conduct the game take into account the personality types of the participants, this value increases to 85.5%. The first hypothesis of the study was confirmed.

The students noted (70.5%) that the experiment helps to develop professional skills. However, after the practice, the score was slightly reduced. If we take into account the personality types of the participants, this value increases to 79.5%. The second hypothesis was also confirmed.

Analysis of the experiment results showed that the game form of the lesson aroused the interest of students. In the instance when students in the role are selected based on personality types, interest in the experiment was greater. The experiment also caused an increase in interest in the studied discipline. The interest in the experiment was more persistent and did not diminish after completing practice at school. The connection between the experiment and the discipline being studied is not so strong. After completing school practice, the percentage of students who noted an increase in interest in the discipline slightly decreased.

The students also noted that the experiment made it possible to understand what tasks the teacher faces. However, after the practice, the score was also

slightly reduced. Moreover, for these two options for organizing the game, it was noted that the proposed variant of modelling a role-playing game is more effective.

As the experience of the experiment shows, accounting for the personality type of "principal" is not so important. Students who played the role of a "good pupils" noted that they realized that this pupil can also be a problem during the lesson. Students noted that they remembered their years of schooling and now understand that being "good pupils", reacting quickly to the teacher's problems, sometimes interferes with learning. Students noted that it is enough easy to portray a "bad pupil" who interferes with the lesson. The students came to the conclusion that the most difficult role is the "bad student", who tries to understand the material but cannot because of the inclination to study the humanities. The selection of students with the appropriate personality types for the role of "bad pupil" and "good pupil" made the "Observing Mathematics Lessons" more realistic and aroused the enthusiasm of the participants in the experiment. The experiment carried out organically fits into the teaching of the discipline "Methods of teaching mathematics». The time allotted for the discipline is barely enough to experiment with six lessons. Three classes were held in the framework of the training course, and the three classes, as agreed with the students, were held optional for those wishing to participate. To increase the relevance of the experiment, it would be desirable for all students in the academic group to act as "teachers". It would also be useful for preparing prospective math teachers. For this purpose, the number of hours for the discipline "Methods of teaching mathematics" should be increased.

Conclusion

Under the role-playing game, some researchers understand the use of school objects to teach counting skills or the use Massive Multiplayer game and Arcade game to increase interest in the studied discipline, as well as teaching computer characters created in the Second Life program. From our point of view, the role-playing game is most effective when the roles are played by students. To organize the game, it is advisable to use the experience accumulated in management theory to take into account the personality characteristics of students in the form of team roles or personality types. The elements of the role-playing game are widely used in the preparation of prospective teachers in the form of a lesson or its fragment. The most successful interpretation of this game is when students play the roles of "bad" and "good" pupils, as well as the principal. This form of lesson simulation has been improved. Students with certain personality types were selected for the roles of "good" and "bad" pupils. The personality types of students are determined in accordance with the Myers Briggs methodology. Students with personality

types ESF and ENF were selected for the role of "bad" pupils who interfered with the lesson, and personal types ISF, INF played the role of pupils who cannot understand the explanations. For the role of "good" pupils, were chosen extroverts EST and ENT, who gave instant answers to the problem, and introverts IST and INT, who gave overly detailed explanations of the solution. It was found that this form of imitation of an "Observing Mathematics Lessons" aroused interest among students; when selecting students with certain personality types, interest was greater. A survey conducted among students showed that the majority of students believe that this game simulates the real situation of an observing lesson – 78.3%. In the case of the selection of students with certain personality types, the percentage of students holding this opinion is more than 85.5%. Students see the advantage of the proposed "Observing Mathematics Lessons" imitation primarily in the formation of professional skills 70.5%, in the case when personality types are taken into account, the percentage rises to 79.5%.

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COMPARATIVE STUDY ON THE UNDERSTANDING OF RESPONSIVENESS IN PRE-SERVICE PRESCHOOL TEACHERS IN THE COVID-19 EMERGENCY SITUATION (2018-2020)

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Abstract. *The global pandemic of Covid-19 has led to significant changes in the transformation of the system of education and teacher training. Regarding the training of prospective preschool teachers at the institutions of higher education, there is a growing need to develop multiple competencies so that a teacher can create an emotionally safe and supervised learning environment. Our study highlights the importance of the responsiveness of preschool teachers in providing supportive responses, responsibility, and guidance regulating children's emotions in the pedagogical activity. The aim of the study is to analyze and compare the perceptions of students, pre-service preschool teachers, on teachers' emotional responsiveness before the global pandemic and during the Covid-19 emergency. The materials and methods used in the study include the theoretical method – the analysis of literature - and the empirical method – a survey of 600 part-time students working in pre-school educational institutions in 2018 and in 2020. The survey was conducted online. The data were processed using the software SPSS. The results of the study demonstrate that, generally, the Covid-19 emergency has increased the willingness of prospective preschool teachers to undertake responsibility and leadership in regulating children's emotions. The students have become more responsible and determined; their understanding of the importance of emotional responsiveness in teacher's work is higher than before the pandemic.*

Keywords: *Covid-19 emergency situation, preschool teachers, responsiveness.*

Introduction

Given the announcement of the World health Organization on March 11, 2020 that the spread of Covid-19 had reached pandemic proportions and the declaration of a state of emergency not only in Latvia and in Europe, but in the world, new demands have been set for the transformation of the system of

education and for teacher preparedness to work effectively under the conditions of the pandemic.

The pandemic has had a profound impact on the world's system of education and has led to restrictions and the closure of educational institutions. Overall, Covid-19 affects more than 1.5 billion learners of all ages (UNESCO, 2020; UNICEF, 2020).

To limit the spread of the Covid-19 virus, the Latvian government also declared the state of emergency, ordering to close all educational institutions, stop the face-to-face study process and to provide remote learning (Cabinet of Ministers of the Republic of Latvia, 2020).

The training of prospective preschool teachers at the institutions of higher education is especially complicated in the situation caused by the pandemic as it implies the need to develop a variety of competences in practice so that a teacher would be able to provide an emotionally safe and supervised learning environment, paying special attention to the specifics of the work of preschool teachers in developing children's skills at an early stage (OECD, 2019).

Therefore, high-quality training of preschool teachers in the conditions of Covid-19 emergency is very important, with a special focus on improving students' social and emotional skills and raising awareness of the importance of teacher's responsiveness in developing child's self-regulation and building positive, supportive relationships with children and parents.

The aim of the article is to analyze and compare the perceptions of part-time teacher-training students working at the institutions of preschool education on teachers' emotional responsiveness before the global pandemic and in the Covid-19 emergency.

Theoretical Basis of the Problem

Several studies have identified unique features related to the implementation of teacher education, especially preschool teacher training programs, in the difficult situation caused by the pandemic of Covid-19. It is well known that the acquisition of practical experience, which develops teacher's professional identity (Donitsa-Schmidt, Smadar, & Ramot, 2020; Velle, Newman, Montgomery, & Hyatt, 2020), and the advancement of teacher's social and emotional competence in connection with the formation of teacher's emotional responsiveness (Hadar, Ergas, Alpert, & Ariav, 2020; Ferreira, Martinsone, & Talič, 2020; Lang, Jeon, Sproat, Brothers, & Buttner, 2020) are very important aspects in the training of prospective teachers.

The need to switch to the mode of online learning raised the topicality of these issues; besides, students' anxiety and stress increased (Sangiter, Stoner, & Flood, 2020). The exceptional circumstances of Covid-19 also highlighted the

attractiveness of the teaching profession in the labor market (Donitsa-Schmidt et al., 2020).

So far, research on the specific nature of the work of preschool teachers has substantiated the findings that, in the process of learning, the teacher needs to provide an emotionally safe and supervised environment in which children's social and emotional learning takes place (Denham, Bassett, & Zinsser, 2012); consequently, social and emotional abilities, including teacher's responsiveness as a reaction to children's negative emotions, are very important in the pedagogical activity of preschool teachers (Buettner, Jeon, Hur, Rachel, & Garcia, 2016; Lang, Mouzourou, Jeon, Buettner, & Hur, 2017) because they have a significant impact on children's general and emotional development and lead to far-reaching consequences related to children's behavioral problems later in life (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). Inappropriate reaction of adults, including punishing the child and minimizing the significance of child's emotions, affects the development of children's emotional competence (Perlman, Camras, & Pelphrey, 2008).

In several studies, teacher's ability to recognize, use and manage child's emotions has been considered in relation to teacher's ability to provide a psychologically safe environment (Morris, Denham, Bassett, & Curby, 2013), and it has been argued that teachers' responsiveness is an indicator of the quality of childcare, which is related to the teacher's ability to use supportive strategies in regulating children's emotions (Thomason & La Paro, 2013; Buettner, Jeon, Hur, Rachel, & Garcia, 2016).

Researchers have also identified factors that affect a preschool teacher's ability to react appropriately to children's negative emotions and complicated mutual relationships, such as depression (Jeon et al., 2014), stress (Zinsser et al., 2013), emotional exhaustion, as well as the knowledge and application of stress management strategies in solving various pedagogical situations in teacher education (Lang et al., 2017; Jeon, Hur, & Buettner, 2016), etc.

The aforementioned emotional responsiveness studies were mostly focused on issues concerning the management of children's behavior, with less emphasis on teacher training and their social and emotional health strategies (Lang, Jeon, Sproat, Brothers, & Buettner, 2020). At present, we can see that the amount of research aimed at the advancement of teachers' social and emotional skills is increasing, including the aspect of teacher's responsiveness and the acquisition of stress management strategies in preschool teacher education. (Poulou, Bassett, & Denham, 2018; Jennings, Jeon, & Roberts, 2020; Jeon & Ardeleanu, 2020).

In connection with our study, it is important that several authors (Jeon et al., 2016) have adapted the methodology to study the responsiveness of preschool teachers.

However, the opinions of pre-service teachers working at the preschool educational institutions on teacher's responsiveness have not been sufficiently

studied so far, and we continue to study this issue (Jurgena, Cēdere, & Keviša, 2020).

It is important to study the opinions of students working at the preschool educational institutions to identify the attitude of prospective preschool teachers to the role of teacher's responsiveness in pedagogical activity.

Methodology

The study was conducted in two phases – in 2018 and in 2020, when the study process of pre-service teachers was organized remotely.

The participants of the study were 600 students, pre-service preschool teachers, at the University of Latvia; 247 students participated in the study in the year 2018 (Group A) and 353 students – in 2020 (Group B). Most of the participants (87%) were 1st year students, but the rest were 2nd year students. All the respondents were women.

In group A, the average age of the participants was 28.0 years, but in group B – 31.8 years. All the respondents were part-time students.

There was used a questionnaire for the study of the responsiveness of pre-school teachers elaborated by L. Jeon, E. Hur, and C. Buettner (Jeon et al., 2016). The questionnaire includes five different situations causing children's negative emotions with potential responses according to a 7-point scale (1 - very unlikely, 7 - very likely). Our research methodology has been tested (Jurgena et al., 2020).

The reliability (inter-item consistency) of the questionnaire according to Cronbach's alpha coefficient was .84.

The Mann-Whitney U test was used to compare two independent groups, and the Kruskal-Wallis Test - to compare several independent groups. The obtained data were processed with the SPSS program.

Results and Discussion

When conducting a comparative data analysis, several significant differences were identified between two phases of the study. The results of the first study were analyzed and published (Jurgena et al., 2020). The Mann-Whitney U test was performed to compare the responses of group A and group B participants. Table 1 shows the summary of teachers' action strategies with the most significant differences between the answers of students in group A and group B.

Table 1 Statistically Significant Differences between the Answers of Group A and Group B Respondents

Items	M		Mann-Whitney U	p
	Group A (n=247)	Group B (n=353)		
1d Encourage the child to express his/her feelings of anger and frustration	2.98	3.44	38380.0	.011
1e Comfort the child and try to make him/her feel better	6.17	6.54	35506.5	.000
2c Help the child figure out how to fix the toy	6.30	6.51	38082.0	.002
2d Tell the child it's OK to cry	4.39	4.97	35564.0	.000
3a Comfort the child and try to make him/her feel better	6.36	6.61	38169.0	.002
3d Encourage the child to talk about his/her feelings	5.44	5.95	36099.5	.000
4b Tell the child it's OK to cry if he/she feels bad	3.63	4.27	35469.0	.000
4c Suggest an activity that would attract his/her attention	6.31	6.54	37581.0	.001
5b Tell the child that it is OK to feel nervous	5.17	5.45	38769.5	.018

According to the mean values M of students' answers (Table 1), the Covid-19 emergency situation has increased the self-efficacy of prospective teachers and the level of confidence in their ability to execute certain actions or to achieve certain results, which corresponds to the opinion expressed in theory (Bandura, 1997). The students believe that they could help a child to solve his or her problems because their personal experience has also been related to dealing with stressful emotional situations.

Self-efficacy is known to be developed through reflection on one's own experiences (including the negative ones). At the time when it is necessary to adapt to the changing conditions of the labor market, people need to be flexible, and the importance of self-management is becoming more important in their career (Alhaddad, 2014). The students involved in the study combine work in preschool educational institutions with studies at the university because preschool educational institutions were not closed in Latvia during the pandemic.

Four age groups were created to identify whether students' opinions were related to their age: a) 17-20 years, b) 21-30 years, c) 31-40 years, d) 41 year and older. Using the Kruskal-Wallis test, it was found that in 2018 (Group A) there were no sharp differences between the opinions of students of different ages, while in the Covid-19 situation the differences in many items are statistically significant (Table 2). It can be concluded that the Covid-19 emergency situation has had an impact on students of all ages, and, in these conditions, there are more pronounced differences between the students of certain age groups (2c, 3a, 4d).

Table 2 Understanding of Responsiveness in Group A and Group B: Comparison by Age Groups

Items	Group A			Group B		
	χ^2	<i>df</i>	<i>p</i>	χ^2	<i>df</i>	<i>p</i>
1b	7.98	3	.047	9.80	3	.020
1c	3.83	3	.281	5.16	3	.161
1e	4.19	3	.242	8.50	3	.037
2a	5.74	3	.125	4.56	3	.207
2c	3.03	3	.387	11.06	3	.011
3a	.47	3	.925	11.03	3	.012
3e	6.14	3	.105	2.63	3	.452
4c	6.12	3	.106	4.80	3	.187
4d	8.63	3	.035	17.13	3	.001
5a	4.66	3	.198	8.84	3	.031
5c	6.66	3	.084	9.43	3	.024

Analyzing the distribution of group A and group B answers in each age group separately, it was found that the Covid-19 emergency has had the strongest impact on the students in the age group of 21-30 years. Two highly valued forms of responsiveness stand out in this group of respondents – encouraging the child to talk about their feelings and encouraging constructive action (Fig. 1 and Fig. 2).

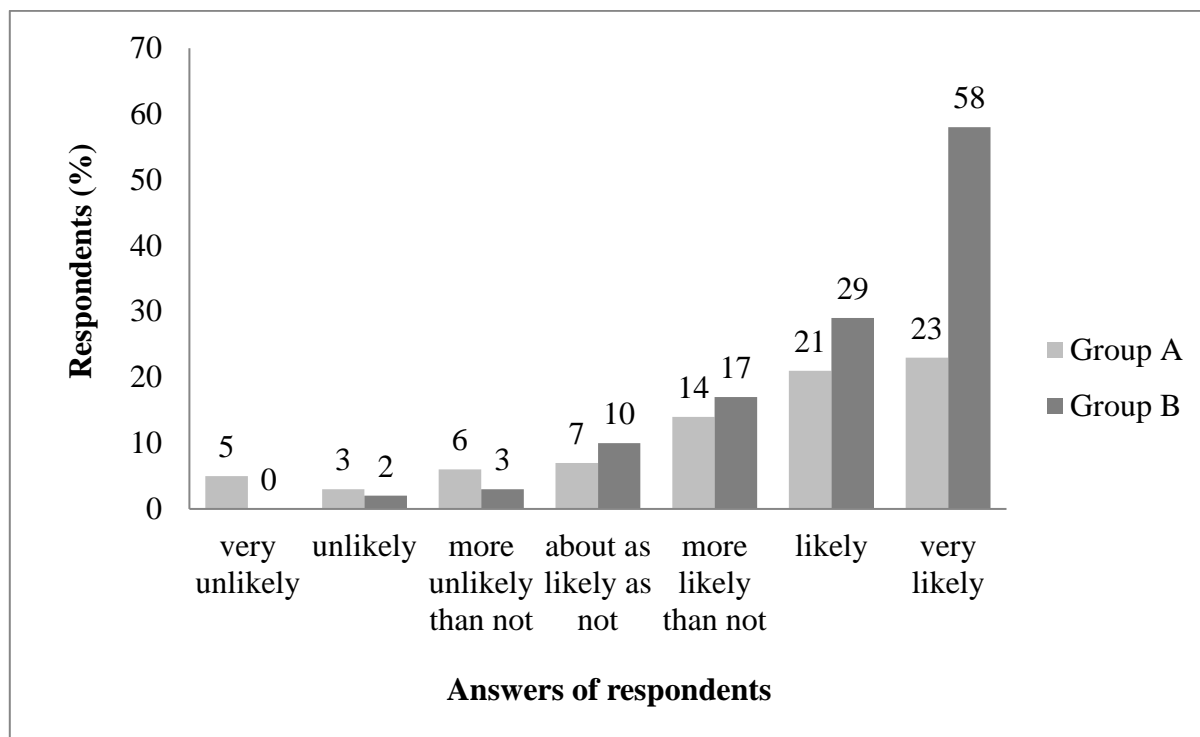


Figure 1 Encouraging the Child to Talk about Their Problem

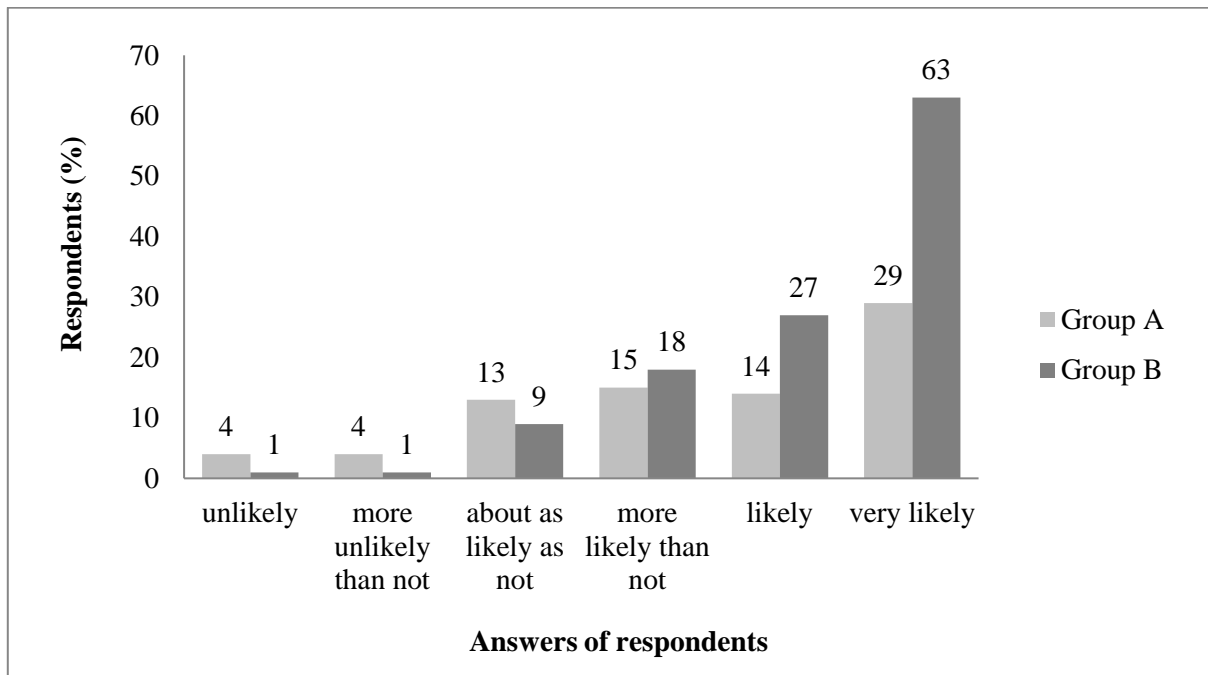


Figure 2 *Helping the Child to Solve the Feelings and Act Constructively*

Both examples (Fig.1 and Fig.2) show that group B students, compared to group A, express their understanding of the need to respond to child’s negative emotions and difficult situations more convincingly. Most of the group B students are more convinced of the need to help the child act more constructively and resolve the problem.

The results of the study show that the Covid-19 pandemic has had certain impact on students’ understanding and attitude to learning, but the relatively short research period does not allow us to draw conclusions on its long-term impact.

Conclusions

The results of the study conducted in 2020 show that, overall, the Covid-19 emergency has increased the responsibility of prospective preschool teachers and their willingness to undertake responsibility and leadership in regulating children’s emotions. It appears that students have become more pragmatic and purposeful, and their understanding of the importance of responsiveness in the work of a teacher is better than before the pandemic.

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AUGSTSKOLU MĀCĪBSPĒKU KONKURĒTSPĒJA AUGSTĀKĀS IZGLĪTĪBAS DAUDZLĪMĒŅU VIDĒ

Competitiveness of University Teachers in the Multilevel Environment of Higher Education

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Abstract. *One of the tasks of modern education is to ensure the sustainability of higher education in the ever-changing environment in the context of globalization and glocalization. Under these conditions, cooperation in higher education is becoming more important as one of the manifestations of competitiveness. Socio-economic changes caused by globalization, internationalization and digitalisation of higher education, as well as the current demographic situation in Europe, including Latvia, raise the issue of the competitiveness of academic staff in a multi-level, multi-context and multifunctional higher education environment. The aim of the study is: based on the interdisciplinary approach, including transfer approach from economics and business sciences to educational sciences, to theoretically substantiate the competitiveness of university teachers in interaction with the multi-context and multi-level higher education environment, as well as the competitiveness of universities. The following research methods were used: study, analysis, and evaluation of scientific literature (theoretical research method); the reflection of own (the article authors') academic and scientific experience (empirical research method). The results of the research show that two tendencies can be distinguished in the substantiation of the competitiveness of university academic staff: 1) economists and business scientists, based on competition theories, use basic knowledge, findings in the development of the substantiation of competitiveness; 2) representatives of educational sciences and psychology develop a philosophical methodological base for research of specialists' competitiveness within their branches of science. In their research, the authors combine both of these approaches in conducting interdisciplinary research. Research results show that the competitiveness of the academic staff can be viewed in several aspects: 1) as a set of different characteristics (qualities) which are considered to be competitive advantages; 2) characteristics of competitive activities manifestations in the higher education environment. Three levels of the higher education environment are important in assessing the competitiveness of university teachers: the level of the local higher education environment (university level), the level of the national higher education environment and the level of the global higher education environment.*

Keywords: *academic staff, competition, competitiveness, higher education, multi-level environment, sustainability of higher education.*

Ievads *Introduction*

20.gs. beigās un 21.gs. sākumā ir izkristalizējusies atziņa, ka cilvēcei ir sācies jauns attīstības posms, jo pārmaiņām dažādās nozarēs, cilvēkdarbības jomās nav vairs epizodisks, bet gan ilgstošs, nepārtraukts raksturs, tāpēc gan organizācijām, gan katram sabiedrības indivīdam, gan visai sabiedrībai kopumā ir jāsadzīvo ar notiekošajām pārmaiņām un jāspēj attīstīties mijiedarbībā ar nepārtraukti mainīgo vidi.

Šajos pārmaiņu apstākļos tiek aktualizēta atziņa, ka augstskolām un to mācībspēkiem izglītības ilgtspējības nodrošināšanai ir ne tikai jābūt gataviem ilgtspējīgām pārmaiņām augstākās izglītības vidē, bet arī pašiem šīs pārmaiņas jāuzsāk un jāievieš (Hubers, 2020).

Tiek pārkonceptualizēta ilgstošu izmaiņu nozīme augstākās izglītības vidē. Tādējādi augstākās izglītības ilgtspējība ir atkarīga no: 1) būtiskām izmaiņām, kas ietekmē augstskolu pedagogu ikdienas praksi; 2) ilgstošu pārmaiņu procesu, kam ir ciklisks raksturs un kas sākas, kad universitāšu skolotājiem rodas inovāciju idejas, un beidzas, kad tiek sasniegti vēlamie rezultāti; 3) individuālo un organizatorisko mācīšanos universitāšu ietvaros, kā arī domāšanas, uzvedības un rīcības izmaiņām; 4) augstākās izglītības satura un tā atbilstības tagadnes un nākotnes laika dimensijām; 5) augstskola mācībspēka personības cilvēciskajām kvalitātēm, kā arī kompetenci sadarboties ar studentu jaunajām paaudzēm, izprotot šo paaudžu specifiku un atšķirības no vecāka gājuma paaudzēm.

Augstskolu ilgtspējība ir atkarīga arī no tā, cik lielā mērā augstskolas iesaistās sabiedrības un globālās ilgtspējības nodrošināšanā un veicināšanā (Sutz & Arocena, 2021).

Šajos pārmaiņu apstākļos augstākās izglītības telpā uzsvāri tiek likti arī uz universitāšu konkurētspējas attīstību, domājot par konkurences priekšrocībām (Abramo, D'Angelo, & Soldatenkova, 2016; Mahdi, Nassar, & Almsafir, 2019; Miotto, Del-Castillo-Feito, & Blanco-Gonzalez, 2020; Salmi, 2009; Valitov, 2014).

Viena no universitāšu konkurētspējas priekšrocībām ir talantīgu, konkurētspējīgu mācībspēku koncentrācija augstskolās (Salmi, 2009; Seginova, Grishina, Zavyalova, & Skorobogatykh, 2015).

Pedagogu, t.sk. augstskolu mācībspēku, konkurētspēja mūsdienu sociālajās zinātnēs, t.sk. izglītības zinātnēs, ir viena no pētījumu aktualitātēm, par ko liecina vairākas zinātniskās publikācijas (Alavredov & Alavredova, 2019; Bibik, 2014; Chen & Cheng, 2019; Donina & Sirova, 2018; Grebennikova & Rybkin, 2017; Sohach & Plugina, 2015).

Pētījuma mērķis: pamatojoties uz starpdisciplināro pieeju, t.sk. transfēra pieeju no ekonomikas un uzņēmējdarbības zinātnēm uz izglītības zinātnēm,

teorētiski pamatot augstskolas mācībspēku konkurētspēju mijiedarbībā ar daudzkontekstu un daudzlīmeņu augstākās izglītības vidi, kā arī ar augstskolu konkurētspēju.

Pētījuma metodes:

- teorētiskās pētījuma metodes: zinātniskās literatūras, statistikas dokumentu satura studēšana, analīze un izvērtēšana;
- empīrisko pētījumu metodes: pieredzes refleksija.

Metodoloģija *Methodology*

20.gs. beigās radās jauna personības un profesionāļa jeb savas jomas speciālista konkurētspējas paradigma, kas nomainīja veco konkurētspējas paradigmu. Pastāv divas pieejas pedagogu konkurētspējas pētniecībā: 1) ekonomikas un uzņēmējdarbības zinātnes nozares zinātnieki konkurētspējas teorijas un definīcijas transfēru veidā pārnes uz izglītības zinātnēm un attiecina uz personības/speciālista konkurētspējas teorētisko pamatojumu, izvērtēšanas un attīstības veicināšanas metodiku; 2) izglītības zinātņu un psiholoģijas pārstāvji savu zinātņu nozaru ietvaros, balstoties uz savu zinātņu teorijām, pieņemtajām pamatvērtībām un pamatprincipiem, sniedz konkurētspējīgas personības un/vai konkurētspējīga speciālista raksturojumu, izceļot viņa konkurētspējas pazīmes jeb indikatorus, cilvēcīgās īpašības, kā arī pamato konkurētspējīgas darbības (t.sk. profesionālās darbības) jomas un dažādās izpausmes. Starpdisciplinārā pieeja pētniecībā ļauj abas šīs pieejas konkurētspējas pamatojumā un izvērtēšanā apvienot. Tāpēc autores augstskolu mācībspēku konkurētspējas pētījumos balstās uz starpdisciplināro jeb starpnozaru pieeju zinātnē/pētniecībā, apvienojot abas šīs augstākminētās pieejas (Katane, 2010; Katane, 2011; Troshkova & Katane, 2020).

Savukārt augstskolas izglītības vides vairāku līmeņu kā augstskolu mācībspēku konkurētspējas attīstības kontekstu izdalīšanā un teorētiskajā pamatojumā autores balstās uz sistēmiski ekoloģisko pieeju sociālās vides vai izglītības vides sistēmu koncepciju un/vai modeļu izstrādē (Bronfenbrenner, 1979; Bronfenbrenner, 1989; Flunger, Trautwein, Nagangast, Lüdke, Niggli, & Schnyder, 2019; Huitt, 2012; Katane, 2007; Katane & Kalniņa, 2010; Mahmudiono, Segalita, & Rosenkranz, 2019). Balstoties uz šo sistēmiski ekoloģisko pieeju, augstskolu mācībspēku konkurētspējas attīstības un izpausmju daudzlīmeņu vides sistēmā, autores ir izdalījušas šādus augstākās izglītības vides līmeņus: 1) *lokāla* mēroga augstākās izglītības vides (augstskolas izglītības vides) līmenis; 2) *valsts* mēroga augstākās izglītības vides līmenis, kurā darbojas vairākas augstskolas; 3) *globāla* jeb pasaules mēroga augstākās izglītības vides līmenis.

Teorētisko pētījumu rezultāti rakstā ir papildināti ar autoru pieredzes refleksiju, kā arī statistikas datu analīzes un izvērtēšanas secinājumiem (dati gūti, veicot dažāda veida dokumentu satura analīzi (CSP, 2014; CSP, 2020; CSP, 2021; IZM, 2019; IZM, 2020).

Pētījuma rezultāti ***Results of Research***

● **Augstākās izglītības vide kā augstskolu mācībspēku konkurētspējas attīstības daudzlīmeņu un daudzkontekstu vide.** Mūsdienās globalizācijas process izraisa dažāda veida pārmaiņas augstākās izglītības vidē, radot jaunus izaicinājumus gan augstskolu mācībspēkiem, gan arī studentiem. Globalizācijas process aktualizē katras valsts, konkrētās sabiedrības un katra tās indivīda, t.sk. augstskolu mācībspēku un arī studentu kā topošo speciālistu, konkurētspēju. Līdz ar to pastāv nepieciešamība pastāvīgi pilnveidot sevi mijiedarbībā ar nepārtraukti mainīgo vidi, pašattīstoties gan kā personībai, gan kā speciālistam (profesionālim) savā nozarē.

Globalizācijas procesa ietekme uz augstākās izglītības vidi ir aktualizēta vairākās zinātniskās publikācijās, kur īpaša vieta tiek ierādīta augstākās izglītības internacionalizācijai (Adam, 2020; Aponte & Jordan, 2020; Hsieh, 2020; Martincova & Lukešová, 2015; Shields, 2019).

Pieredze rāda, ka mūsdienās demogrāfiskā situācija Latvijā, t.sk. skolu absolventu (potenciālo augstskolu reflektantu) un augstskolās studējošo kopējā skaita samazināšanās rada bažas par augstskolu konkurētspēju un ilgtspēju gan lokāla, gan valsts, gan globālā augstākās izglītības vides līmeņu kontekstā. Šīs bažas apstiprina arī Latvijas augstskolās imatrikulēto studentu statistikas dati (CSP, 2014; CSP, 2020; CSP, 2021; IZM, 2020).

Līdz ar to augstskolu vadībai un mācībspēkiem ir jāmaina sava domāšana. Savu ilgtspēju un arī konkurētspēju lielākā daļa augstskolu cenšas nodrošināt, piesaistot ārvalstu studentus, piedāvājot viņiem pievilcīgu studiju saturu un pašu studiju procesu, tādējādi kompensējot pašmāju studentu skaita samazināšanos. Turklāt mūsdienu apstākļos studijas iespējamās attālināti. Kā liecina statistikas dati (CSP, 2014; CSP, 2020; CSP, 2021; IZM, 2020), tas lielā mērā augstskolām izdodas, jo pēdējā laikā Latvijas augstskolās ārvalstu studentu skaits ir būtiski pieaudzis. Tas ietekmē augstskolu konkurētspēju. Augstākās izglītības "eksports" prasa no augstskolu mācībspēkiem augsta līmeņa akadēmisko kompetentumu (t.sk. augstskolas didaktikas kompetenci) un profesionālo kompetentumu savā nozarē.

Turklāt konnektīvisma teorijas kontekstā (Aponte & Jordan, 2020) aktualizējas ne tikai augstskolu mācībspēku digitālā kompetence un tālmācības metodiskā kompetence, jo daudzas studiju programmas tiek piedāvātas tālmācībā,

bet arī mācībspēku mediju kompetence un sociālā kompetence (īpaši saskarsmes kompetence), multikultūras kompetence, t.sk. svešvalodu kompetence. Multikultūras kompetences ietvaros īpaša vieta ir ierādāma arī citu valstu studentu etniskās kultūras un mentalitātes zināšanām un attieksmēm - citādības respektēšanai. Īpaši tam jāpievērš uzmanība sadarbībā ar studentiem klātienēs nodarbībās (Martincova & Lukešová, 2015).

Latvijas izglītības vidē ir aktualizēta pārrobežu izglītība, kas ir jēdziens ar plašu nozīmi. Pārrobežu izglītība augstākajā izglītībā tiek īstenota dažādu projektu ietvaros, kuru pamatā ir dažādu valstu augstskolu sadarbība (Rauhvargers, 2008)

Arī personīgā pieredze liecina, ka mūsdienās augstākās izglītības vidē pamazām pazūd starpvalstu robežas: 1) starpaugstskolu sadarbības rezultātā top starptautiskas studiju programmas; 2) notiek studentu un mācībspēku apmaiņa *Erasmus* + un citu starptautisku sadarbības līgumu ietvaros; 3) arvien vairāk dažādu pasaules valstu studenti izvēlas Latvijas augstākās izglītības iestādēs piedāvātās studiju programmas, jo Latvijas augstākās izglītības vide kļūst arvien atvērtāka starptautiskajām studijām; 4) arvien paplašinās tālmācības/e-studiju iespējas Latvijas augstākajā izglītībā, kas piesaista arī ārvalstu studentus; 5) daudzi ārvalstu studenti vēlas studēt Latvijā, iepazīstoties arī ar Latvijas kultūru, t.sk. valodu, tajā pašā laikā viņiem ir vajadzība komunicēt ar mācībspēkiem svešvalodās, ko viņi pārzina, tāpēc svarīgi ir respektēt Latvijā studējoši ārvalstu studentu kultūru, dažāda veida vajadzības; 6) arvien biežāk ārvalstu augstskolu mācībspēki vēlas strādāt Latvijas augstskolās; 7) tūkstošgades paaudze uzsāk savas studiju gaitas Latvijas augstskolās. Tas izvirza jaunas prasības augstākajai izglītībai.

Tajā pašā laikā līdzās sadarbībai, daudzi pētnieki aktualizē konkurences esamību un tās nozīmi augstākās izglītības vidē, kas augstskolām liek meklēt jaunus ceļus savas konkurētspējas un līdz ar to arī ilgtspējīgas attīstības veicināšanā

Arvien biežāk izskan arī viedoklis, ka, lai nodrošinātu zināmu līdzsvaru, paralēli *globalizācijas* procesam ir jāuztur un jāveicina arī *glokalizācija*, kas globalizācijas procesā nodrošina katras valsts nacionālo interešu respektēšanu gan ekonomikā, gan izglītībā, gan kultūrā, gan sabiedrības kopumā ilgtspējīgas attīstības nodrošināšanā (Hsieh, 2020; Kozlova & Maloshonok, 2016; Lehnberg & Hicks, 2018).

Pirmā galvenā konkurences transformācija augstākajā izglītībā ir saistīta ar pētniecības universitāšu dibināšanu. Konkurences pieaugums nozīmē arī iesaistīto dalībnieku transformāciju, jo augstskolas un augstskolu vadītāji kļūst par arvien ietekmīgākiem dalībniekiem konkurencē par augstākās izglītības kvalitāti un augstskolas statusu. Konkurence starp iestādēm rada daudzlīmeņu konkurences vidi visā pasaulē un pārveido pētniecības universitātes par konkurentiem, kur

viena no augstskolu konkurences priekšrocībām ir veikto zinātnisko pētījumu kvalitāte, zinātnisko atklājumu un izgudrojumu skaits, t.sk. iegūto patentu skaits, un šo pētījumu rezultātu publiskošana pasaules mēroga zinātniskajā vidē. Konkurence augstākās izglītības vidē nav saistīta tikai ar pētniecību un mācībspēku zinātnisko darbību. Augstskolas konkurētspējai ir daudz dažādas izpausmes: prasme piesaistīt studentus, grantus, patentus, jaunus studiju kursus, valsts un privātus resursus, zinātnisko atklājumu atspoguļojums studiju saturā un pašā studiju procesā u.c. Tā kā konkurence starp pētniecības universitātēm arvien pastiprinās, šī konkurences fokuss mainījās no valsts uz internacionālo jeb globālo līmeni (Musselin, 2018). Lielākajai daļai augstākās izglītības iestāžu ir nodrošināt prestižu un augsta līmeņa reitingu daudzu augstskolu vidū, no reģionālā līmeņa augstskolām, kļūstot par valsts līmeņa un starptautiskā līmeņa konkurētspējīgām augstskolām pasaules augstākās izglītības telpā. Mūsdienu augstskolām, kas cenšas nodrošināt izglītības (izglītības satura, procesa, izglītības vides kopumā) kvalitātes augstu līmeni, galvenais mērķis ir nodrošināt daudzveidīgas izglītības vides pieejamību ne tikai valsts pilsoņiem un pastāvīgiem iedzīvotājiem, bet arī un citus valsts iedzīvotājiem, izglītojot "pasaules pilsoņus". Šo augstskolu pētnieku veiktie pētījumi pievēršas starptautiskiem jautājumiem, nevis tikai vietējiem jautājumiem, un tie ir mazāk atkarīgi no valsts finansējuma un iestādēm, jo viņiem ir izdevies nodrošināt citus finansējuma avotus (bieži vien no starptautiskajiem projektiem un ārvalstu studentu studiju maksas).

A.A. Margolis (Margolis, 2019) akcentē pasaules mērogā visefektīvāko, konkurētspējīgāko izglītības sistēmu raksturīgās pazīmes:

- pedagoga, tajā skaitā augstskolu mācībspēka, tēla pievilcības paaugstināšana, kas ļauj piesaistīt skolu un augstskolu izglītības vidēm kompetentus augstskolu absolventus - jaunus speciālistus, iesaistot viņus akadēmiskajā, pedagoģiskajā un zinātniskajā darbībā;
- kvalitatīva pedagoģiskā izglītība, kas ir balstīta uz labākajiem piemēriem, kuri tiek fiksēti pedagoģu profesionālajā darbībā;
- vidusskolu absolventu, topošo pedagoģu, vispārējo un profesionālo kompetenču neatkarīgais vērtējums, kas nodrošina dubulto atlasī: 1) zinošākie un spējīgākie reflektanti (skolu absolventi) izvēlas pedagoga profesiju; 2) profesionāli sagatavotākie, spējīgākie un kompetentākie augstskolu absolventi uzsāk savu pedagoģisko darbību izglītības iestādēs pēc augstskolu beigšanas;
- pirmā darba gada mentoringa ievadprogrammas jaunajiem speciālistiem, kuru ietvaros tiek nodrošināts atbalsts, dalīšanās pieredzē un supervīzija no kompetentu, pieredzes bagātu pedagoģu un vienlaicīgi arī kolēģu puses, kas veic mentoru pienākumus;
- atbalsts profesionālo problēmu risināšanā;

- efektīva profesionālās attīstības sistēma, kas ļauj likvidēt profesionāļu deficītu, un problēmu risināšana ar nepārtraukto metodiskā atbalsta palīdzību, sadarbojoties ar citiem pedagogiem individuālās profesionālās pilnveides procesā;
- karjeras izaugsmes iespējas un darba apmaksas nodrošināšana, kas nodrošina virzību uz kvalitatīvu pedagoģisko darbību, tās atbalstu un augsta līmeņa speciālistu saglabāšanu izglītības jomā;
- aktīva pedagogu iesaiste inovāciju un reformu īstenošanā, paredzot daudzveidīgu pedagoģisko darbību.

Valsts mēroga izglītības, t.sk. augstākās izglītības, ilgtspējība ir viens no svarīgiem mūsu sabiedrības ilgtspējīgas attīstības priekšnosacījumiem. Savukārt viens no augstākās izglītības mērķiem ir veicināt konkurētspējīgas zināšanu sabiedrības, attīstību, nodrošinot jauno speciālistu konkurētspējas attīstības veicināšanu, kur gatavība patstāvīgai, radošai un atbildīgai profesionālajai darbībai ir viens no konkurētspējas rādītājiem (Katane & Īriste, 2013; Sohach & Plugina, 2015), kas aktualizē augstskolu mācībspēku konkurētspējas nozīmi.

Konkurence notiek ne tikai starp augstskolām, bet arī starp augstskolu mācībspēkiem. Jo konkurētspējīgāks augstskolas mācībspēks, pētnieks, jo konkurētspējīgāka ir augstskola kopumā, un otrādi. Iepriekš izteiktā atziņa, ir pamats tam, ka daudzas augstskolas izvirza augstas prasības mācībspēkiem, tādējādi veicinot viņu konkurētspējas attīstību.

Autoru pieredze liecina, ka mācībspēku konkurētspēja, t.sk. atpazīstamība, pieprasītība un bieži vien arī nodarbinātība, var izpausties vairākos augstākās izglītības vides līmeņos: vienas augstskolas izglītības vides līmenī, valsts mēroga augstākās izglītības vides līmenī un globāla mēroga jeb pasaules līmeņa augstākās izglītības vidē.

Konkurenci starp augstskolu mācībspēkiem ietekmē vairāki faktori. Viens no tiem ir mācībspēku skaits un viņu nodarbinātība augstskolā.

Apkopojot informāciju, kas atrodama Latvijas Republikas Izglītības un zinātnes ministrijas publicētajos pārskatos par Latvijas augstāko izglītību (IZM, 2019; IZM, 2020), var secināt, ka Latvijā 6 gadu laikā (2013/2014 - 2018/2019) ir ievērojami pieaudzis augstskolu mācībspēku skaits.

Ja 2013./2014. akadēmiskajā gadā kopējais mācībspēku skaits gan valsts izglītības iestādēs, gan juridisko personu dibinātās augstskolās bija 5541, tad 2018./2019. akadēmiskajā gadā šis skaits pieauga līdz 6274, kas ir aptuveni par 12% vairāk. Viens no šīs tendences cēloņiem ir tas, ka katra augstskolas cenšas piesaistīt un savā izglītības vidē iekļaut mācībspēkus ar augstu akadēmiskā, pētnieciskā un organizatoriskā kompetentuma līmeni, kam ir arī pieredze konkrētajā profesionālās darbības nozarē, piedāvājot nepilnu mācībspēka darba slodzi ar diezgan šauru akadēmiskās darbības specializāciju.

Par izglītības iestādes darbības efektivitāti lielā mērā liecina matemātiskā attiecība starp studentu un mācībspēku skaitu. Studentu skaita samazināšanās, bet vienlaicīgi mācībspēku skaita palielināšanās lielā mērā apdraud augstskolu konkurētspēju un ilgtspēju, darbības efektivitātes skatījumā, kas var novest pie netālredzīgiem, pat stratēģiski nekorektiem, nepieņemamiem lēmumiem izglītības vadības un politikas skatījumā.

Visi iepriekš minētie faktori būtiski aktualizē mācībspēku konkurētspēju augstākās izglītības vidē.

• **Mācībspēku konkurētspējas teorētiskais pamatojums.** Lai varētu veicināt mācībspēku konkurētspējas attīstību, ir jāvar to izvērtēt. Savukārt, lai varētu izstrādāt augstskolu mācībspēku konkurētspējas izvērtēšanas metodiku, ir nepieciešams izstrādāt *augstskolas mācībspēka konkurētspējas* pētniecības teorētisko un metodoloģisko bāzi sociālo zinātņu, t.sk. izglītības zinātņu, skatījumā.

Par pedagogu, t.sk. augstskolu mācībspēku, konkurētspējas pētniecības aktualitāti 21. gadsimta izglītības vidē liecina vairākas zinātniskās publikācijas (Baranova, 2012; Bogoyavlenskaya & Kliueva, 2013; Chupkova, 2004; Donina & Sirova, 2018; Grebennikova & Rybkin, 2017; Harchenko, 2014; Katane, 2011; Plugina, 2016; Sklyar, 2018; Sohach & Plugina, 2015)

Vairākās zinātniskajās publikācijās konkurētspēja bieži vien tiek aizstāta ar jēdzieniem *pieprasītība* un *nodarbināmība* (Īriste, 2018; Katane, 2011; Katane & Īriste, 2013; Katane, Baltusite, & Katans, 2017), jo gan pieprasītība, gan nodarbinātība ir nozīmīgi konkurētspējas rādītāji un izpausmes veidi. Mūsdienīgā dinamiska vidē, kas vairāk nepiedāvā ilgtermiņa nodarbinātību, galvenais speciālista mērķis ir saglabāt un uzlabot savu pievilcību darba tirgū (Parker, 2008). Tas savukārt nodrošina speciālista kā profesionāļa pieprasītību. Pedagoga, t.sk. augstskolas mācībspēku, pieprasītību izglītības vidē nosaka vairāki faktori: pedagoga profesionalitāte, t.sk. kompetentums; cilvēcīgās īpašības, ieskaitot harizmu; elastīgums domāšanā, darbībā un saskarsmē ar citiem cilvēkiem, t.sk. studentiem, kolēģiem; spēja saskaņot savus personīgos izaugsmes mērķus ar izglītības vides, kurā strādā, attīstības un ilgtspējas nodrošinājuma mērķiem (līdzsvars starp *ego-centrēto* un *eko-centrēto* domāšanu un darbību), izglītības "*klientu*": izglītojamo apmierinātība ar pedagoga "*sniegtajiem pakalpojumiem*" u.c. (Katane, 2011).

Par pieprasītību kā vienu no pedagogu konkurētspējas izpausmēm ir rakstījuši arī Krievijas zinātnieki (Mitina, 2003; Shirobokov, 2000). Piemēram, L. Mitina (Mitina, 2003) uzsver domu, ka mūsdienu pedagogs ir konkurētspējīga personība tad, ja viņš ir *pieprasīts speciālists* darba tirgū, kas spējīgs pašrealizēties savas profesijas jomā mainīgās sociālās vides, nozares vides apstākļos. Arī S. Širobokovs (Shirobokov, 2000), pētot pedagoģijas studentu kā topošo skolotāju konkurētspēju, akcentē domu, ka skolotāja konkurētspēja, pirmām kārtām, ir

saistāma ar pieprasītību darba tirgū un pieprasītību sabiedrībā. No pieprasītības ir atkarīgs, cik ātri un viegli preces var tikt pārdotas. To pašu var attiecināt uz speciālista pieprasītību, proti, vai viņš spēj nodrošināt savu nodarbinātību un cik ātri nepieciešamības gadījumā viņš var atrast jaunu darbu (Parker, 2008). Tādējādi jēdziens pieprasītība ir cieši saistīts ar jēdzienu nodarbināmība.

Speciālista pieprasītību kā viņa konkurētspējas rādītāju var analizēt un izvērtēt no diviem aspektiem: 1) *iekšējā aspekta*: no paša speciālista kā personības, savas jomas profesionāla izrietošās pieprasītības, ko nosaka profesionālās darbības jomā augstu novērtētais speciālista kvalitāšu kopums - viņa profesionalitāte, t.sk. dažāda veida kompetences, un viņa dažāda veida konkurētspējīgā profesionālā darbība, kas ir ar atbildīguma, lemtspējas, radošuma un inovāciju izpausmēm; 2) *ārējā aspekta*: no darba tirgus vides izrietošās pieprasītības, ko nosaka reālais stāvoklis darba tirgū, proti, ja ir vakances darba tirgū, tad katram šīs profesijas pārstāvim rodas vides determinētā pieprasītība, savukārt, mainoties ārējās vides faktoriem, t.i., samazinoties darba vietām, pazeminās arī konkrētās profesijas speciālista pieprasītība, tātad arī konkurētspēja viņa nodarbinātības iespēju kontekstā (Katane & Īriste, 2013). Šīs atziņas var attiecināt arī uz tieši augstskolu mācībspēku pieprasītību kā konkurētspējas izpausmi.

Arī nodarbināmību un nodarbinātību (tieši tāpat kā pieprasītību) var pamatot un interpretēt kā vienotu konstrukciju, kura sastāv no divām sastāvdaļām: iekšējās un ārējās. Nodarbināmība iekļauj sevī zināšanas, prasmes un kompetences, t.sk. dažādas spējas, kas piemīt indivīdam un kas palīdz sevi pieteikt darba tirgū un nodrošināt savu nodarbinātību. Savukārt nodarbinātība ir atkarīga ne tikai no nodarbināmības, bet arī no apkārtējās vides, t.sk. darba tirgus apstākļiem: darba piedāvājuma un darba pieprasījuma rādītājiem. Nodarbināmība tiek pamatota kā iekšējā potenciāla, iekšējo resursu, t.sk. dažāda veida spēju manisfestācija, nodrošinot savu nodarbinātību darba tirgū (Grebennikova & Rybkin, 2017). Te svarīgi ir uzsvērt, ka nodarbināmības spējas sevī ietver vairākas spējas: 1) spēju atrast pirmo darbu pēc augstskolas absolvēšanas; 2) spēju saglabāt darbu; 3) spēju pāriet no vienas darba amata uz otru vienas organizācijas ietvaros, pildot jaunus pienākumus, 4) spēju iegūt jauno darbu citā organizācijā, ja tas ir nepieciešams, nodrošinot savas karjeras izaugsmi. Tajā pašā laikā nodarbināmība ir ne tikai speciālistu spēja atrast darbu pie zema konkrēto speciālistu pieprasītības līmeņa darba tirgū, bet arī iegūt darbu, kad darba vakanču skaits ir daudzreiz mazāks par pretendentu skaitu, šajos apstākļos parādot savas profesionālās priekšrocības konkurencē un tā rezultātā ar darba devēju noslēdzot darba līgumu, kurā atrunāta darba samaksa jaunā darba vietā atbilstoši speciālista profesionalitātes, kā arī vajadzību līmenim, darba samaksā saņemot tik, cik pats to vēlas, turklāt darba samaksa nav zemāka nekā vidēji nozarē. Ja tas tā nav, tad šī speciālista atrastā darba vieta tiek uzskatīta par viņa profesionālajai attīstībai nevēlamu vai

neilgtspējīgu darba vietu. Citiem vārdiem sakot, nodarbināmība ir spēja atrast un saglabāt *peļņu* jeb savām kompetencēm un profesionalitātes līmenim atbilstošu darbu konkrētajos nodarbinātības apstākļos nozarē kopumā, kas tiek adekvāti novērtēts un arī apmaksāts no darba devēja puses, pamatojoties uz abpusēju vienošanos (darba līgumu).

Par nodarbināmības spēju var uzskatīt arī *mobilitāti* jeb spēju būt mobilam, kas ļauj elastīgi iekļauties darba tirgū, nodrošinot savu nodarbinātību. Piemēram, zinātnieks U. Taihlers (Teichler, 2007) speciālistu nodarbināmību sasaista ar viņu profesionālo mobilitāti un nodarbinātību ilgtermiņā.

Nodarbināmība kā konkurētspējas izvērtēšanas kritērijs tiešā veidā tiek saistīts ar orientēšanos uz izmaiņām darba tirgū, kā arī plaša spektra pamatprasmju un pamatkompetenču iegūvi, kas nodrošina speciālista elastīgumu domāšanā un profesionālajā darbībā. Nedrīkst orientēties uz īslaicīgām darba tirgus prasībām (Īriste, 2018; Katans, 2019). Šo atziņu var attiecināt arī uz augstskolu mācībspēku konkurētspēju, jo profesionālās zināšanas šaurā specializācijas jomā pārāk ātri "noveco" jeb kļūst neaktuālas.

Pie nodarbināmības prasmēm (*employability skills*) tiek minētas arī sekojošas spējas: spēja strādāt komandā, turklāt apgūstot komandu darba dažādās sociālās lomas, kā arī spēja atbildīgi un atbilstoši situācijai risināt problēmas (Lowden, Hall, Elliot & Lewin, 2011).

Vēl nodarbināmības sakarā tiek uzsvērta spēja pielāgoties darbavietas kā organizācijas kultūrai, pašvadot savu profesionālo attīstību un karjeras izaugsmi organizācijā, tajā pašā laikā respektējot organizācijas attīstības mērķus, saskaņojot savus mērķus ar organizācijas kopējiem mērķiem. Konkurētspējīgiem speciālistiem ir jābūt proaktīviem, radošiem, iniciatīvas bagātiem, ar attīstītu analītisku prātu un kritisko domāšanu (Katane & Katans, 2016; Katans, 2019).

Zinātnieki (Sarfraz, Rajendran, Hewege, & Mohan, 2018) konkurētspējas pamatojumā uzskaita un raksturo nodarbināmību kā dažādu kvalitāšu kopumu, īpaši izceļot tās konkurētspējīga speciālista īpašības/pazīmes, prasmes un spējas, ko visvairāk novērtē darba devēji un ko var uzskatīt par konkurētspējas priekšrocībām. Piemēram, spēja strādāt komandā, t.sk. sadarbības prasmes, komunikabilitāte; spēja patstāvīgi un situatīvi risināt problēmas; datorprasmes; analītiska domāšana; līderība; laika plānošana; organizēšanas prasmes u.c. no darba devēju puses tiek vērtētas ļoti augstu. Šīs īpašības, prasmes, spējas speciālistiem ir nepieciešamas darbam visās nozarēs un organizāciju hierarhijas visos līmeņos.

Augstāk teiktais ļauj nonākt pie būtiska secinājuma: *lai studenti, augstskolu absolventi kā speciālisti, savas nozares profesionāli būtu konkurētspējīgi, t.sk. pieprasīti un nodarbināti, darba tirgū, konkurētspējīgiem, t.sk. pieprasītiem un ļoti kompetentiem savā akadēmiskajā darbībā un profesionālās specializācijas*

jomā jābūt augstskolu mācībspēkiem. Pie šāda secinājuma ir nonākuši arī citi pētnieki (Bibik, 2014; Sohach & Plugina, 2015).

Augstskolu mācībspēku konkurētspējas pētniecībā svarīga ir atziņa (Alavredov & Alavredova, 2019), ka konkurētspējas līmeni nosaka konkurēšanas priekšrocību pārākuma pakāpe attiecībā pret mācībspēka trūkumiem.

Augstskolas mācībspēku konkurētspējas pamatojumā ir izceltas vairākas kvalitātes, kas ir konkurētspējas pazīmes: elastīgums, mobilitāte, spēja pielāgoties, psiholoģiskā gatavība saņemt un pielietot jaunu informāciju, apgūt jaunās tehnoloģijas, augsta līmeņa patstāvīgums un atbildīgums, augsta stresa noturība, vajadzība pēc panākumiem profesionālajā darbībā, humānas personības personiskās īpašības, dažāda veida spējas un kompetences (Chuprova, 2004; Plugina, 2016).

Konkurētspējīgs speciālists ir tas specialists, kurš strādā vienlīdz kvalitatīvi un produktīvi neatkarīgi no tā, vai viņu vēro kāds no vadības komandas pārstāvjiem, vai nē. Tas liecina par augsta līmeņa profesionalitāti, kas ir būtiska konkurētspējas sastāvdaļa (Katans, 2019). Ļoti svarīgi atzīmēt, ka konkurētspējīgs ir tas speciālists, kurš spēj (Katane, Baltusite, & Katans, 2017; Katans, 2019; Mitina, 2003): 1) savus karjeras izaugsmes mērķus saskaņot ar uzņēmuma/organizācijas, kurā strādā, attīstības un darbības mērķiem; 2) ne tikai sasniegt panākumu virsotnes, bet arī spēj pārdzīvot kritumus attīstības procesā, t.sk. neveiksmes, rodot sevī spēkus jaunam attīstības cēlienam; 3) iekšējā vajadzība pēc pašrealizācijas. Šīs atziņas lielā mērā balstās uz *sinerģētisko pieeju* psiholoģijā un izglītības zinātnēs, jo cilvēka attīstība ir multicikliska, nelineārs process. Turklāt vajadzība pēc pašrealizācijas kļūst par spēcīgu motīvu profesionālajai pašattīstībai, par ko jau 20.g.s. vidū rakstīja A. Maslovs (Maslow, 1954).

Arī R. Millers un V. Frankls uzskatīja, ka konkurētspējīgas darbības pamatā ir attīstīta vajadzība pēc panākumu sasniegšanas. Cilvēka veselība arī ir svarīgs konkurētspējas rādītājs, jo tas ir svarīgs faktors, kas būtiski ietekmē pašrealizācijas procesu (Holodceva, 2006).

Augstskolas mācībspēku būtiskas konkurētspējīgas darbības raksturojošās pazīmes ir:

- nepārtraukta reflektēšana par savu pedagoģisko darbību un profesionalitāti, gatavība un spēja pastāvīgi izglītoties un pašizglītoties visos profesionālās attīstības mūža garumā (Chuprova, 2004);
- kompetenta studiju procesa organizēšana, katra studenta personības kā nākotnes speciālista veidošanās un attīstības veicināšana, sekmējot viņu morāli tikumiskās un intelektuālās pašattīstības motivācijas vadības sistēmas veidošanos (Sohach & Plugina, 2015);
- aktīvu mācībspēku pozīciju un gatavība paaugstināt savas prasmes darbā ar zinātnisko, metodisko un mācību bāzēm; profesionālā un

personīgā pašattīstība, gatavība apgūt inovatīvas metodes; radošuma iesaistīšana darbā ar studējošajiem; holistiskā un sistēmiskā pieeja zinātniski metodiskās bāzes nodrošināšanā; zinātniski metodiskās orientācijas izveide; mācībspēku metodiskais kompetentums un iesaistīšanās studiju zinātniskās un metodiskās bāzes izveidē (Harchenko, 2014).

S. Baranova (Baranova, 2012) savā promocijas darbā uzsver, ka konkurētspējīgs augstskolas mācībspēks apzinās savus resursus, attīstības un profesionālās pilnveides potenciālu, pašizziņa un pašnovērtēšana kļūst par pamatu tālākizglītībai.

Būtiski ir veicināt katra speciālista kompetentuma, t.sk. profesionālās kompetences, attīstību un tās līmeņa paaugstināšanu, jo tas būtiski ietekmēs arī konkurētspējas attīstību kopumā. V. Grebņikova un A. Ribkina (Grebņikova & Rybkin, 2017) izstrādātajā modeli konkurētspēja sastāv no trīs pamatlīmeņiem: 1) vispārējs līmenis - konkurētspēja kā zinātniskā kategorija plašajā nozīmē, kas sevī ietver gan sabiedrības, gan ekonomikas, gan organizācijas, gan cilvēka konkurētspēju; 2) īpašais jeb specifiskais līmenis: tiek precizēts konkurētspējas objekts vai subjekts, fokusējoties jau uz konkrēto pētījuma priekšmetu, piemēram, kompānijas vai personības konkurētspēju; 3) individuālais jeb indivīda līmenis: konkrētās nozares speciālista konkurētspēja, piemēram, pedagoga konkurētspēja, kuru ietekmē visi iepriekš minētie konkurētspējas līmeņi, un otrādi - pedagoga konkurētspēja nodrošina izglītības institūcijas, kurā viņš strādā, un arī visas sabiedrības konkurētspēju konkrētajos sociālekonomiskajos apstākļos. Pedagoga konkurētspējas līmenī tiek aprakstīta *spēja izturēt un pieņemt izaicinājumus*.

Pedagoga konkurētspēja var būt skatīta un pamatota kā sarežģīta struktūra, kas sastāv no šādām piecām konkurētspējas sastāvdaļām jeb komponentiem: 1) personības virzība, ieskaitot profesionālo virzību; 2) paškonceptijas jeb Es-konceptijas; 3) pašregulācijas un pašvadības komponents, ieskaitot gribu, emocionālo inteliģenci un personības elastību; 4) kompetentuma komponents, ieskaitot profesionālās kompetences; 5) specifisko individuālo personības īpašību sastāvdaļa (piemēram, inteliģence, harizma, humora izjūta, radošums, dažādas raksturīgās iezīmes, veselība utt.). Pedagoga konkurētspējas attīstības pamats ir pieredze (Katane, 2011).

Tādējādi var secināt, ka augstskolas mācībspēku konkurētspējas pētniecībā ir nozīmīga teorētiskā un metodoloģiskā bāze.

Secinājumi Conclusions

Globalizācijas izraisītās sociāli ekonomiskās pārmaiņas, augstākās izglītības internacionalizācija un digitālizācija, kā arī mūsdienās demogrāfiskā situācija Eiropā, t.sk. arī Latvijā, aktualizē augstskolu konkurētspēju valsts un pasaules mēroga augstākās izglītības vidē. Universitāšu centieni nodrošināt savu dzīvotspēju, t.sk. konkurētspēju, mūsdienu mainīgos apstākļos, kā arī ilgtspēju nākotnes perspektīvā, lielā mērā motivē universitāšu mācībspēkus nepārtraukti profesionāli pilnveidoties, tādējādi attīstot savu konkurētspēju. Pastāv savstarpējā sakarība starp universitātes un tās mācībspēku konkurētspēju: jo konkurētspējīgāka universitāte, jo konkurētspējīgāki ir tās mācībspēki, un otrādi, - jo konkurētspējīgāki ir universitātes mācībspēki, jo konkurētspējīgāka ir universitāte kopumā. Tāpēc mūsdienās augstskolu mācībspēku konkurētspēja ir kļuvusi par vienu no pētniecības aktualitātēm. Pastāv dažādi konkurētspējas izpausmes veidi augstskolu darbībā, kas ir vērā ņemami konteksti augstskolu mācībspēku konkurētspējas pētniecībā.

Augstskolu mācībspēku konkurētspējas izvērtēšanā ir svarīgi respektēt mācībspēku mijiedarbību ar augstākās izglītības vidi kā daudzlīmeņu vides sistēmu, kurā var izdalīt šādus vides līmeņus: lokāla jeb augstskolas mēroga augstākās izglītības vides līmenis; valsts mēroga augstākās izglītības vides līmenis; pasaules mēroga augstākās izglītības vides līmenis.

Pētījumu rezultāti liecina, ka par pedagogu, t.sk. augstskolu mācībspēku, konkurētspēju liecina vairāki indikatori. Daži no tiem ir: 1) augstskolu mācībspēku pieprasītība, t.sk. atpazīstamība, viņu kompetentuma atzīšana augstskolas, valsts un starptautiska mēroga augstākās izglītības vidē, kā arī 2) nodarbināmība un nodarbinātība daudzlīmeņu un daudzkontekstu augstākās izglītības vidē. Augstskolu mācībspēku konkurētspēju ietekmējošs faktors ir vēlēto, neievēlēto, kā arī kopējais mācībspēku skaits augstskolās.

Augstskolu mācībspēku konkurētspējas līmenis ir atkarīgs no konkurences priekšrocību pārākuma pakāpes attiecībā pret mācībspēka trūkumiem.

Par augstskolas mācībspēka konkurences priekšrocībām tiek atzītas vairākas viņu kvalitātes, piemēram: elastīgums, mobilitāte, spēja pielāgoties, psiholoģiskā gatavība saņemt un pielietot jaunu informāciju, apgūt jaunās tehnoloģijas, augsta līmeņa patstāvīgums un atbildīgums, augsta stresa noturība, vajadzība pēc panākumiem profesionālajā darbībā, humānas personības personiskās īpašības, dažāda veida spējas un kompetences (t.sk. multikultūras (arī svešvalodu) kompetence, mediju kompetence (arī digitālā kompetence), sociālā kompetence (t.sk. komunikācijas kompetence), kompetence augstskolu didaktikas un tālmācības metodikas jomā u.c.). Par augstskolas mācībspēka konkurētspēju liecina arī: pašrefleksijas kompetence, t.sk. savu iekšējo resursu, attīstības

potenciāla apzināšanās, kā arī trūkumu atzišana, kā arī augstskolas didaktikas kompetence.

Pastāv vairākas konkurētspējīgas darbības izpausmes, kas atzīstamas arī par konkurences priekšrocībām, piemēram: patstāvīga, atbildīga un radoša profesionālā darbība; spēja saskaņot savas karjeras izaugsmes mērķus ar augstskolas darbības un ilgtspējīgas attīstības mērķiem; iekšējā nepieciešamība un spēja pašrealizēties nepārtraukti mainīgās vides apstākļos; spēja ne tikai sasniegt panākumu virsotnes, bet arī spēja pārdzīvot kritumus, t.sk. neveiksmes, attīstības procesā, rodot sevī spēkus jaunam attīstības cēlienam.

Teorētisko pētījumu rezultātā izkristalizējās vēl viena svarīga atziņa: jo konkurētspējīgāki būs augstskolu mācībspēki, jo konkurētspējīgāki būs viņu studenti kā topošie speciālisti.

Summary

At the end of the 20th century and the beginning of the 21st century, the understanding crystallized that the humanity has entered a new stage of development when changes in various industries and spheres of human activity are not episodic but obtain lasting and continuous nature, so organizations, each individual of the society and the whole society as a whole must live with constant changes and be able to develop themselves in interaction with the constantly changing environment. The socio-economic changes caused by globalization, internationalization and digitalization of higher education and demographic situation in Europe today, including also Latvia, update and make changes on the competitiveness of higher education institutions in the national and international higher education environment. One of the tasks of modern education is to ensure the sustainability, including balance, of higher education in the ever-changing context of both globalization and glocalization.

There are various manifestation forms of competitiveness in the activities of higher education institutions. The competitiveness of higher education institutions is largely manifested in their interaction with each other, including cooperation in the higher education environment on national and international levels. One of the manifestations of cooperation between higher education institutions is cross-border education. Competitiveness is also demonstrated by the development of the higher education institution as a research university, in the scientific research activities of its academic staff and researchers, including international publicity of the conducted study results. The aspiration of regional higher education institutions to become nationwide higher education institutions, whereas national higher education institutions to become internationally recognized higher education institutions is another indicator of the competitiveness of higher education institutions.

There is a number of factors that influence the sustainable development and competitiveness of higher education institutions in the higher education environment. Some of them are a number of students in a higher education institution which largely depends on the demographic situation in the country, and a number of foreign students in the higher education institution. These indicators largely demonstrate the competitiveness of study programs in higher education institutions, as they are in demand by local and foreign students. Therefore, today an important prerequisite for the competitiveness of higher education institutions is the competency of their academic staff.

Aspirations of higher education institutions to ensure their viability, including competitiveness in the current changing conditions, as well as sustainability in the future perspective, greatly motivates academic staff to constantly improve professionally, thereby developing their competitiveness. There is a correlation between the competitiveness of the higher education institution and its academic staff: the more competitive the higher education institution, the more competitive its academic staff, and vice versa, the more competitive the academic staff, the more competitive the higher education institution as a whole. There are various expression forms of competitiveness in the activities of higher education institutions that are significant in the study of competitiveness of academic staff.

In order to assess the competitiveness of academic staff, it is important to consider the academic staff's interaction with the higher education environment as a multi-level environmental system in which the following environmental levels can be distinguished: local or higher education institution's level; the national level; the global level.

There are two approaches to the study of competitiveness of educators: 1) scientists in the field of economics and business science transfer the theory and definition of competitiveness to educational sciences in the form of transfers and apply to the theoretical justification of competitiveness of personality/specialist, a methodology for evaluation and promotion of development; 2) representatives of educational sciences and psychology within the framework of their branches of science, on the basis of theories of their sciences, accepted basic values and basic principles, provide characteristic features of a competitive personality and/or a competitive specialist, highlighting the characteristics or indicators of his competitiveness, including human qualities, as well as justify competitive areas of activity and various manifestations. The interdisciplinary approach to research makes it possible to combine both of these approaches.

The results of the studies show that several indicators evidence about the competitiveness of educators, including academic staff, in higher education institutions. Some of them are: marketability of academic staff, including recognition, recognition of their competence on the level of higher education institution, national and international levels, as well as employability and employment. A factor influencing the competitiveness of academic staff is the number of elected, non-elected, as well as the total number of academic staff members in higher education institutions.

The level of competitiveness of academic staff in higher educational institutions depends on the degree of superiority of competitive advantages over the shortcomings of the academic staff. Several of their qualities are recognized as competitive advantages of academic staff, such as flexibility, mobility, adaptability, psychological readiness to receive and apply new information, to learn new technologies, a high level of independence and responsibility, high-stress resistance, the need for success in professional activities, personal qualities of a humane person, various types of abilities and competencies (including multicultural (also foreign languages) competence, media competence (including digital competence), social competence (including communication competence), competence in the field of didactics in higher education and distance learning methodologies, etc.). Such qualities as self-reflection competence, including awareness of one's own internal resources, development potential, as well as recognition of shortcomings also indicate the competitiveness of academic staff.

There are several manifestations of academic staff's competitive activity which are also recognized as competitive advantages, such as an independent, responsible and creative professional activity; ability to match the goals of their career growth with the goals of the higher education institution's activities and sustainable development; internal need and ability to self-realize in conditions of constantly changing environment; ability not only to achieve

heights of success, but also get through failures, in the process of development, finding strength in oneself for a new development stage.

The educator's competitiveness can be viewed and scientifically substantiated as a complex structure consisting of several components or components of competitiveness, for example: 1) personality direction, including professional direction; 2) self-conception; 3) self-management component, including desire, emotional intelligence, and flexibility; 4) a competency component; 5) a component of specific individual personality characteristics (for example, intelligence, charisma, humour sense, creativity, health, etc.). The basis for the development of competitiveness of the educator is experience.

As a result of theoretical studies, another important finding was crystallized: the more competitive academic staff will be, the more competitive their students will be as future specialists.

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METHODOLOGICAL ASPECTS OF TEACHER TRAINING FOR THEATRICAL ACTIVITIES WITH PUPILS

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Abstract. *The research was conducted as part of the project of Erasmus + (Module Jean Monnet) “EU experience of soft skills development of preschool and primary school age children by theatre activities in teacher training”.*

The purpose of the article is to find out the educational value of theatrical activities, to reveal the methodological aspects of preparing teachers for theatrical activities with pupils.

The study used theoretical methods: analysis of psychological and pedagogical literature, synthesis, comparison, method of modeling and generalization of research results; diagnostic methods: interview, survey, observation, interview: methods of processing experimental data for quantitative and qualitative analysis of the results of diagnostic tests.

The concept of “theatrical activity” is specified, the educational and developmental potential of theatrical activity is revealed, the technique of introduction of theatrical activity in practice of modern school is developed, methodical bases of preparation of teachers for theatrical activity with schoolchildren are opened.

The results of empirical research have shown that most teachers do not use theatrical activities in their own pedagogical practice. Only certain elements are introduced in art and language lessons: staging of literary works or songs. We are convinced that theatrical activities are a powerful effective means of moral, aesthetic, promotes the development of social skills (soft skills), because it allows to involve students in various types of artistic creativity: literary, musical, visual, stage, choreographic. Through participation in theatrical performances, creative potential is revealed, high moral values are formed, sufficient communication skills are needed to model social behavior in the children's team, in the family and society as a whole. The study allowed to confirm the importance and practical feasibility of using theatrical activities as a means of education and development of youth.

Keywords: *theatrical art, theatrical activity, teacher training, schoolchildren, methods.*

Introduction

The success of the development of modern society largely depends on the creativity and activity of people and the conditions that are created for the development of each individual. That is why the «National Doctrine of Education Development of Ukraine in the XXI Century» emphasizes the need to develop the ability to creative self-expression, the formation of skills to perform creative tasks. A special role in this process belongs to the primary level of education, where the child's abilities are purposefully identified and developed, skills and desire to learn are formed, conditions are created for his self-expression in various activities.

Modern children prefer video, cartoons, computer games. They love the art of film, animation, children are one of the largest audiences of video content on the Internet, and they are trying to create their own video. At the same time, the theater, unfortunately, remains on the sidelines. Through theatrical art children get direct experience of compassion, empathy and communication, explore the expression of the audience and their own expression as an actor, which is extremely relevant today and is embodied in the reforms of the New Ukrainian School.

Reforming the education system, in turn, necessitates changes in the training of future teachers, who must be ready to implement all the innovations of the New Ukrainian school.

The purpose of the article is to find out the educational value of theatrical activities, to reveal the methodological aspects of preparing teachers for theatrical activities with students.

The study used theoretical methods: analysis of psychological and pedagogical literature, synthesis, comparison, method of modeling and generalization of research results; diagnostic methods: conversation, survey, observation, interview; statistical: methods of processing experimental data for quantitative and qualitative analysis of the results of diagnostic tests.

Literature Review

Theatrical art is the first kind of art that a child encounters. At the present stage of development of education by means of theatrical activity a number of pedagogical problems are solved: development of creative activity (Kostiushko, 1999), creative development of personality (Demchenko, 2002), formation of value orientations (Yeskina, 2001), moral and aesthetic education of preschoolers and schoolchildren (Baranovska, 2019), aesthetic development (Holinska, 2005), formation of emotional sphere (Shevchuk, 2000), formation of aesthetic culture (Sierykh, 2008), formation of spiritual culture of personality (Boryshevskiy,

Pylypenko, & Penkova, 2013), education of teenagers by means school puppet theater (Churylina, 1995), preparation of future primary school teachers for the organization of theatrical activities of junior students (Solomakha, 1995), the formation of junior students' interest in learning through theater pedagogy (Chervinska, 2014).

Modern scientists (Baranovska, Mozghalova, & Kazmirchuk, 2020) in their research focus on the educational and developmental value of theatrical activities, in particular: «at the stage of revival and acquaintance with the puppet the child develops the mechanism of self-regulation, show their feelings. Because of emotional decentralization, children easily begin to communicate».

At the same time (Zhovnych, Kazmirchuk, & Stakhova, 2020) in their research claim that «theatrical activities, in particular, nature theater, promote the development of soft skills of primary school children, manifested in the skills of listening and hearing each other, collaborating, seeking information and carrying responsibility for its authenticity, to present one's work, to be creative in solving the set tasks, to use one's own time rationally, and so on».

In research (Demchenko & Zaitseva, 2017) were identified a number of categories of problem gifted primary school students, among which there is a category of socially gifted students with acting talent, which are characterized by such personal qualities as: demonstrativeness, failure; developed acting, public speaking, management skills. These students have a high sociometric status and a wide range of communication, they are leaders in the team, but at the same time constantly in conflict with teachers, initiate a collective violation of discipline; experiencing a state of frustration and unrealisation. Such children, unfortunately, will remain unrealized without getting into the theatrical environment. Therefore, one of the tasks of teachers is the need to involve children in theatrical activities.

Analyzing the modern psychological, pedagogical and methodological literature on the stated research problem, we can say that the use of theatrical activities in education has long troubled scientists, but the vast majority of theatrical activities were considered a form of extracurricular activities for children. Scientists of the twentieth century have a lot of achievements on this issue. Because at that time the society formed respect and interest in theater, amateur theater studios and clubs functioned at schools, which periodically demonstrated the results of their work. In modern society, unfortunately, the theater has remained on the sidelines. Children and adults live in a technical virtual world, while theater can teach children "live" communication and help them integrate into public life. Today, in the methodological literature there are many author's developments of ways to involve preschool children in theatrical activities, while almost no modern literature is aimed at introducing theatrical activities in school practice and training future teachers to implement it.

Theatrical art occupies an important place among the means of influencing the formation of the personality of junior schoolchildren. This special integrated art form organically combines artistic word, dramatic action, poetics, painting, music and choreography. It helps the child to know himself more deeply, his inner world, encourages him to self-improvement, evoking in the course of theatrical action aesthetic feelings and emotions, forming attitudes to moral actions, cultivating moral qualities.

Most educators and psychologists today agree that theatrical activities are one of the effective way of mastering basic competencies by students. In the process of comprehending the moral and emotional subtext of a literary work, participation in theatrical activities, favorable conditions are created for artistic and aesthetic education of holistic development and education of students. Students develop independent creativity and self-expression, self-knowledge and looseness, correct and improve communication skills, cultivate the will, develop memory, imagination, initiative. In the process of theatrical activity, a positive mood is created, tension is relieved, conflict situations are resolved through play, and feelings of a «success situation» are realized.

By participating in the play, the child masters the role-playing game, learns social roles, learns to solve life problems and gains a positive experience in communicating with peers and adults. The whole life of children is full of play. Every child wants to play a role, and theater helps students not to be afraid to try on roles and embody them. Perseverance in theatrical activities encourages students to study and discover their own «I».

The dialogue of the heroes of the play contains instructive content, important information and social norms. The main feature of any theatrical action is the ability to entertain the audience, as well as encourage them to think. Therefore, children, regardless of whether they are actors or spectators, are unconsciously exposed to educational influence, acquire useful knowledge and learn to draw the right conclusions. In addition, the speech of the characters is enriched with literary words, because it is based on works of art, which has a positive effect on the expansion and enrichment of the child's vocabulary. Bright images of puppets and dynamic actions with them help to concentrate and hold the attention of students. The content of the play is clear to children, so it is perceived quite easily. They love to communicate with the characters, answer questions, help solve problems for the character.

Theater occupies an important place in society and performs artistic and aesthetic, entertainment, communicative, socializing, compensatory, game, regulatory, developmental, educational and other functions. However, one of the most important functions of the theater is cognitive. It provides the transfer of social experience from the older generation to the younger, from one country and nation to another.

In the pedagogical literature we find different interpretations of the concept of «theatrical activity». In our opinion, theatrical activity is an artistic and playful activity related to the perception of works of theatrical art, creation of artistic images, disclosure of their characters, by modeling behavior, reproducing the relationship between the characters through special verbal and nonverbal means. This is a type of creative and playful activity of a child, which allows to satisfy his needs in self-expression, communication, self-knowledge through the reproduction of various artistic images.

Results of the Research

In order to study the real state of use of theatrical activities in the practice of primary school, we conducted a statement experiment, which was attended by 88 third-graders, 12 primary school teachers and 62 3rd year students majoring in «Primary Education» in Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (further - Pedagogical University). The experiment consisted of four stages.

The purpose of the first stage of the experiment was to analyze the existing curricula for primary school and teaching aids. We can state that in the Typical educational program for primary school (Shyian, 2019) one of the semantic lines of language and literature education is «Theatricalization», which involves primary school students in theatrical activities. In addition, within the integrated course «I explore the world», namely in the textbook of the author's team (Voloshchenko et al., 2018) for 1st grade students to get acquainted with theatrical art in the thematic week «Theater».

The aim of the second stage was to study the attitude of students to the theater, the level of their interest in theatrical activities and the level of awareness of theatrical art. At this stage, the method of questionnaires and pedagogical observation was used. Summarizing the results of the survey give the right to draw the following conclusions:

- students are interested in theatrical activities, because they are very enthusiastic about theatrical performances, about 50% of respondents are happy to participate in mini-performances, staging and dramatization of literary works;
- 100% of third graders were in the puppet theater, but only half of the students attended the play in the theater itself. Most students attended theater performances organized at a preschool or school, and only 20% of students were with their parents in a «real» theater;

- 35% of 3rd grade students do not know the rules of conduct in the theater, and about 80% do not know what the attributes of the theater are called;
- 45% of the subjects correctly named the types of puppets.

The aim of the third stage of the experiment was to survey primary school teachers about the use of theatrical activities in their own practice. The interview method was used at this stage. Summarizing the results, we can draw the following conclusions:

- primary school teachers spontaneously and sporadically use elements of theatrical activities, involve students in theatrical activities mainly during the organization of extracurricular educational activities, various holidays,
- teachers are convinced that the organization of theatrical activities takes a lot of time, and the intensity of the presentation of educational material according to the curriculum makes this process impossible;
- teachers prefer the intellectual development of students;
- assessing their own level of readiness to organize theatrical activities with students, 55% of teachers rated it as «insufficient» because they rarely visit the theater, are unfamiliar with new theatrical art, do not have the skills to create scripts and rehearsal process, do not always know how to select musical accompaniment, making costumes and scenery, feel insecure in the role of the actor, do not know their level of acting skills, namely do not know how to evaluate their plasticity, facial expressions and gestures;
- 72% of respondents are interested in professional development on this issue, as they see the need for it.

The purpose of the fourth stage of the observational experiment was to determine the level of readiness of future teachers to organize theatrical activities in primary school. The experiment involved 62 third-year students of the Pedagogical University. As a result, we identified three groups of skills:

- the first group of skills is associated with mastering the position of «spectator» (the ability to be a friendly spectator, mastery of the rules of conduct in the theater, awareness of famous actors, directors of their locality);
- the second group of skills provides the formation of the position of «artist» (the ability to use means of expression (facial expressions, gestures, posture, movements, strength and timbre of voice) to convey the image of the hero, his emotions and experiences, to be able to make a puppet «alive»);

- the third group – is the ability to perform the role of «director», as the teacher is responsible for creating the script, the correct distribution of roles, organization of the rehearsal process, selection of costumes, scenery, musical accompaniment, etc.

To develop and improve the identified skills, we used the method of creating mini-performances by students. The following criteria and indicators were used to determine the levels of readiness of students to organize theatrical activities with students:

- motivational (interest in theatrical activities (puppet theater), desire to participate in various games, play with puppets, desire to listen to fairy tales and view illustrations, interest in the new);
- cognitive (knowledge of elementary theatrical terminology, the ability to observe, imitate and transmit animal behavior, use some means of expression (facial expressions, gestures, posture, movements, strength and timbre of voice, tempo of speech) to convey the image of the hero, his emotions and experiences, correctly «to lead» a puppet or a figure of the hero in the director's theatrical play, thank to artists);
- activity (the ability to be a friendly spectator, watch and listen to the end, the ability to interact with other participants in the game, play together, do not quarrel, perform attractive roles in turn, the ability to voice your character).

Based on these criteria, the levels of readiness of students to organize theatrical activities with students were determined:

- low level, students with this level - no interest in theatrical activities, passivity when listening to works of art, no desire to participate in theatrical activities, no creative satisfaction from this type of activity, the need for help in creating a script, the use of ready-made scripts; uncertainty in the selection of scenery, attributes, music, low level of acting skills;
- medium level - such students are active in the game and tasks, show a marked interest in theatrical performances with puppets, they are somewhat difficult to perform with the transformation into another image; show dexterity, independence, flexibility, originality in performing sketches-tasks, sometimes need help from classmates; have certain difficulties in organizing theatrical performances, in particular difficulties in adapting the work of art to the stage realization, selection of all necessary attributes, have certain problems with the manifestation of their own acting skills;
- high level, such students - active and proactive in the classroom, show initiative, quickly and with interest and without assistance perform

sketches-tasks, show the ability to interpret works of art, create scripts, cope with the role of director, know how to organize the rehearsal process, quickly and qualitatively select scenery, costumes and musical accompaniment to the play or action, perfectly master the elements of acting skills.

Of the 62 respondents (3rd year students of the inpatient department of the specialty 013 Primary Education), the generalized indicators of readiness of future primary school teachers to organize theatrical activities with students in the school were as follows: high level - 8 people (13%), medium level - 16 people (26%), low level - 38 people (61%).

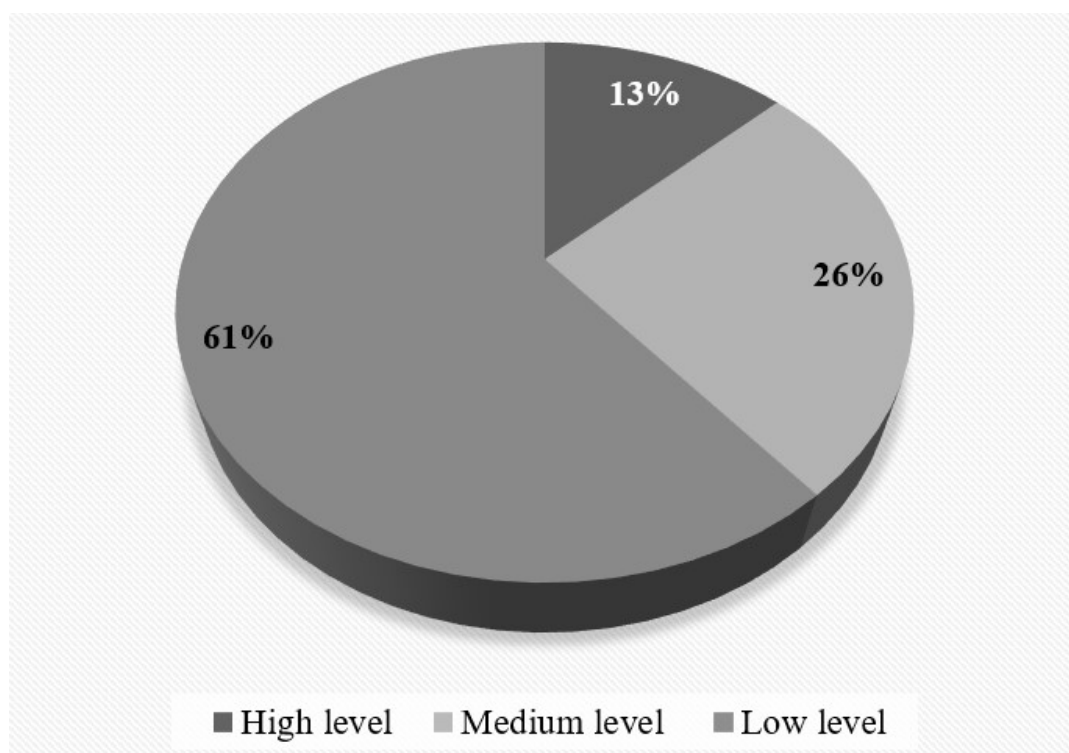


Figure 1 Levels of Readiness of Teachers to Organize Theatrical Activities with Students

From the above it can be concluded that more than half of future teachers are not ready to implement theatrical activities in the practice of primary school, and such activities are already in the typical educational programs. Such results confirm the imperfection of the current curricula of higher pedagogical education institutions, traditional methods and forms of training future teachers. We are convinced of the need to update the curricula of the institutions of higher education, to include disciplines aimed at improving various types of teacher skills, including expanding knowledge about the history of theatrical art, methodological aspects of organizing theatrical activities with students.

This prompted us to develop and implement the educational project ERASMUS + (JEAN MONNET MODULE) 620252-EPP-1-2020-1-UA-EPPJMO-MODULE «EU experience of soft skills development of preschool and primary school age children by theater activities in teacher training» on the basis of Vinnytsia State Pedagogical University named after Mykhailo Kotsyubynsky (erasmusplus.org.ua., 2020).

The project aims to provide theoretical and practical training of future preschool teachers and primary school teachers to use theatrical activities to develop soft skills of different categories of children and meaningful organization of their leisure activities based on the experience of pedagogical concepts of Western Europe. In November 2020, after the signing of the Grant Agreement, comprehensive and fruitful work began on the implementation of the project in accordance with the developed program. The target group consists of 30 students, obtaining a degree of «bachelor» in the field of knowledge 01 Education/Pedagogy specialty 012 Preschool Education, 013 Primary Education, who expressed a desire to participate in the project. Students take an optional module consisting of several interdisciplinary courses.

One of them is a training course «Fundamentals of directing and artistic and musical design of theatrical action: the European context». The purpose of this course is to acquaint students with the basics of directing and artistic and musical design of theatrical action. During the classes, students will be introduced to the European traditions of modern drama for children. This course will promote progressive pedagogical concepts and experiences of cultural and educational institutions of the European Union.

In the course of teaching we conducted lectures and practical classes with the participation of directors, actors and artists of the Vinnytsia Academic Regional Puppet Theater «Golden Key» (Vinnytsia), students attended theater performances as part of the annual International Festival of Puppet Theaters «Podilska Lyalka» (Vinnytsia) and performances of the Vinnytsia Regional Academic Ukrainian Music and Drama Theater named after M. Sadovsky (Vinnytsia). In addition, during the implementation of this project, we used such forms of organizing student learning activities as:

- 1) Pedagogical training. The training involves not only the acquisition of knowledge, skills and abilities in a specially created pedagogical environment, but also the practical reflection of their own experience, taking into account psychological problems. That is, trainings contribute to the development of attention, improvement of figurative memory and mastering the mechanisms of thinking and speaking, perception of the world around, creating a holistic picture of person, his place in society and in nature. As the main methods of training we recommend using language-plastic training exercises aimed at the

development of stage speech and stage plasticity. Each student created his own individual map, which characterized his own speech, plasticity, facial expressions and gestures. This provided an opportunity to analyze one's own problems, discuss them in small groups or pairs, and identify ways to overcome them.

- 2) Master class. This form of teaching is a generalization and dissemination of the best pedagogical experience. We involved in master classes of primary school teachers and educators of preschool institutions who had a good experience of theatrical activities with children. Master classes were held both on the basis of the Pedagogical University and in the usual conditions of schools and preschools. Master classes, as a rule, helped to increase the motivation of students to implement theatrical activities with students during teaching practice.
- 3) Socio-game workshop. Within the socio-game workshop, joint activities were combined with motor activity. The main methods we used were: improvisation; playing pedagogical and life situations in a microgroup, as well as creating one story between several microgroups, when one group begins and the other and the following continue the plot; creation of own plots of instructive character; showing mini-performances.

Conclusions

Educational and developmental opportunities for theatrical activities are wide. This is an opportunity to reveal the creative potential of the child, the development of associative thinking, the ability to see the unusual in everyday life, the development of speech (monologue and dialogue), improving sound culture, vocabulary enrichment. Theatrical activities are a source of development of feelings, deep experiences of the child, it develops socio-emotional sphere of the child through empathy for the characters and empathy when playing the event. The shortest way to the emotional looseness of the child, the removal of isolation, feeling and artistic imagination - is the way through play, fantasizing, writing.

Despite the significant scientific and methodological material accumulated by theatrical pedagogy in the field of education, there are still many methodological problems associated with the preparation of future teachers to organize theatrical activities with students, as evidenced by the results of the cost experiment. We found that more than half of future primary school teachers are not ready to organize theatrical activities with students. Since theatrical activities are already included in the standard program of primary education, it is necessary to change approaches to the training of future primary school teachers in pedagogical educational institutions as soon as possible.

We see this in the introduction into the educational process of higher education institutions of practice-oriented training courses that will provide quality theoretical and methodological training of future teachers, their own development and self-realization in theatrical activities. One of the options to solve this problem is the implementation of the educational project ERASMUS + (MODULE JEAN MONNET) 620252-EPP-1-2020-1-UA-EPPJMO-MODULE «EU experience of soft skills development of preschool and primary school age children by theater activities in teacher training» (erasmus.vspu.edu.ua., 2020).

The purpose of this educational project is to prepare future teachers for the use of the pedagogical potential of theatrical art, the experience of European countries in implementing forms, methods, elements of theatrical art in the educational process of primary school. This approach will contribute to the humanization of education through the innovative use of theatrical technologies focused on the values of national and European culture, which are inherent in modern democratic societies.

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REMOTE PRACTICAL ANATOMY CLASSES: NEW CHALLENGES AND DIRECTIONS FOR TUTORS

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Abstract. *Human Anatomy tutors had to adapt to Covid-19 reality by restructuring their methods by teaching in spring – autumn in 2020 at the Department of Morphology. The aims of this study were to identify and understand the variety of solutions being utilized by tutors and to clarify new challenges and directions. The open-ended interviews were used to collect data from 15 Anatomy tutors. Thematic analysis, used to analyze the qualitative data, emphasized the tutors' perceptions of remote practical anatomy classes' efficiency. Tutors developed their action plans for online teaching and highlighted the preparation of new materials, adoption of new technologies and skills. Based on the results of the transition from face-to-face to online anatomy teaching, there were detected five thematic items that were related to tutors' challenges. It was concluded that challenges that need to become a priority for tutors in online education concern mainly the special training courses, design of new models, video and/or online lectures, demonstration labs, practical classes, collegial contacts, technicians, IT-staff and colleagues support, consultation hours and communication. Future directions for tutors must be effective not only for increasing the quality of the Human Anatomy study process but also for the evolution of anatomy education.*

Keywords: *challenges, Covid-19, directions, online teaching, tutors.*

Introduction

Digital Era has played a prominent role with informative and communication technologies in the COVID-19 pandemic period (Mukhtar, Javed, Arooj, & Sethi, 2020). There were a lot of changes in different social, economical areas and fields, including medical studies (Saiyad, Virk, Mahajan, & Singh, 2020). It created a new period in the anatomical education at the Department of Morphology of Rīga Stradiņš University (RSU).

This situation limited and excluded for medical students several traditional anatomical practices not only for models and specimens but also for access to cadavers. This situation was not easy for tutors and students during their teaching and learning process. It has increased the speed of transformation of roles of tutors

and students under the massive influence of digitalization (Guangul, Suhail, Khalit, & Khidhir, 2020).

The relationship between the educational process and the following changes is not completely straightforward (Pei & Wu, 2019). Traditional and routine work is changed with the need to adapt to online teaching (König, Jäger-Biela, & Glutsch, 2020). Based on this, the creation of the new types of learning environments that are adaptable, flexible and suitable for multiple users has started to modify the physical space in teaching and learning (Shetty, Shilpa, Dey, & Kavya, 2020).

In our department, new educational materials, the uploading of useful content, collected experiences, developed skills and the use of technologies in Human Anatomy practical classes stimulated changes in the roles of human tutors.

This article focuses on the tutors' transition from face-to-face to online anatomy teaching and their new strategies in the remote study process.

Thus, the aims of our study were to identify how tutors perceived the Covid-19 crisis with their personal experiences and solutions, and clarify their new challenges and directions.

Material and Methods

In spring-autumn 2020 tutors had to adapt to Covid-19 reality by restructuring their methods by teaching at the Department of Morphology. For this study, 15 tutors were interviewed and this method was used for data collection. The selection of tutors was based on an open and voluntary invitation. Importantly, their topics of practical classes related to all the major content offered in the Human Anatomy program from the first until third semesters.

Tutors were trained to teach study course using two available video communication platforms "Zoom" and "Panopto".

The study was designed to get answers to the following questions:

- 1) What are the new challenges of tutors in the remote study process of Human Anatomy?
- 2) What are the directions of tutors in the Human Anatomy course influenced by the Covid-19 situation?

An open-ended interview was the instrument used to collect data for the study. It was conducted in a one-on-one event and this process took approximately 10 to 15 minutes. The interviews were transcribed, and all answers of the tutors to open-ended questions were analyzed qualitatively, recoded depending on the thematic item and analyzed concerning the other answers.

The structure of the interview was developed concerning to the questions formulated for the study. The contents were made up of the experience characteristics of the Human Anatomy tutors based on remote practical classes,

challenges and directions due to Covid-19. Factors that determined or affected challenges of the tutors were considered when formulating the questions in five thematic items: training in the use of digital platforms, tools; interactive course keeping; stressful situations decreasing; technical problems solving; help and support students. According to the number of answers, every item was divided into five categories ranging from 1 (the lowest) to 5 (the highest).

Directions of the tutors assessed during the study were related to self-concept and formation of the strategies.

Results

New challenges and directions of tutors found from the interviews were divided into five thematic items. Distribution of the categories in these items, according to the answers of the tutors, is shown in Table 1.

Table 1 Challenges and Directions of the Tutors in Remote Human Anatomy Study Course

	Item				
Category	Training in the use of digital platforms, tools	Interactive course keeping	Stressful situations decreasing	Technical problems solving	Help and support students
1	basic knowledge and skills	anatomical atlases, 3D models, digital images, different online resources	understanding of unexpected situations	technical knowledge and skills	records of the video lectures
2	learning of the platforms work	“Complete Anatomy” software	controlling of emotions	equipped working space	active learning tools, different exercises and online activities
3	“Panopto” tools and options	Powerpoint presentations	contacts with IT-support	platforms problems	“Complete Anatomy” integration
4	“Zoom” tools and options	sharing of prepared electronic materials	contacts with students	network connection problems	individual and groups` work
5	special training courses	design of new models, video and/or online lectures, demonstration labs, practical classes	collegial contacts	technicians, IT-staff and colleagues support	consultation hours and communication

As presented in Table 1, the answers to the questions in the thematic item “Training to have an understanding of using digital platforms and tools” were codified into five categories.

In the beginning, we asked tutors about their understanding of using digital platforms and tools teaching online practical classes. The answers of the 1st category represent that realization of remote practical classes required tutors to have a basic knowledge and skills in using digital platforms of teaching. Several tutors indicated a limited experience of this type of teaching, including very basic knowledge and skills in the understanding of computers and their possibilities for using different digital platforms.

The 2nd category refers to the learning of the platform’s work. Trying out new platforms, digital tools and methods were appreciated only by some tutors.

The 3rd and 4th categories represent the answers about tutors’ used type of digital platform in the study process during the lockdown. Tutors used two platforms that the best suited to longer, practical classes teaching or the best suited to shorter, lectures teaching. “Panopto” and “Zoom” platforms were used in different ways, depending on tutors’ knowledge, skills, needs of their students and prepared materials. At the beginning of the pandemic situation, tutors had a poor experience in the use of these platforms.

In the lower number of the tutors’ answers, the use of “Panopto” was indicated only for lectures and video lectures.

Slowly and step by step tutors’ attention has been transferred to “Zoom” teaching functionalities. Tutors’ answers showed that due to its relative stability, delivering of the practical classes in real-time, more easiest operation with available tools and simple interface, “Zoom” was more intensive used for practical classes during the pandemic period.

The 5th category with the most answers included the participation of tutors in special training courses that were offered by specialists of the Information Technologies (IT) Department and the Pedagogical Development Center at RSU. Tutors studied the latest updates of different platforms and received digital competencies for the conduction of the remote study process.

The big challenge for tutors was to hold an active Human Anatomy teaching and learning where students didn’t show their faces in practical class and/or lecture. As contained in Table 1, the second item, including five categories, was focused on “Keeping online anatomy classes more interactive”.

The use of anatomical atlases, 3D models, digital images and different online resources is a category that refers to the 1st category with actions for more interactive practical classes, including more intensive participation of students during that time. Their availability was considered as an advantage only by one-half of the tutors’ answers. There existed variations between methods and types

of remote activities organized, from pre-recorded materials to online digital exercises.

Following the analysis of the answers, the 2nd and 3rd categories represent that “Complete Anatomy” software and Powerpoint presentations were also used by tutors through live streaming, group works, homework and discussions.

Another important or 4th category, according to obtained answers, underlines that tutors started to share with students all prepared electronic materials via the same platform. These materials were prepared by the tutor alone or together with others, and there were shared a lot of new or updated previously existed materials. Some tutors’ answers indicated that they were not satisfied with their materials sharing for others.

The category with the most answers represents that tutors started to develop the design of new models and video lectures, online lectures, demonstration labs (DemoLabs) and practical classes in Human Anatomy.

The third item with five categories was to discover how tutors define “Stressful situations decreasing” (Table 1).

The group of tutors regarding the understanding of unexpected situations comprised the answers about the behavior of students during practical classes, including noisiness, hyperactivity, lack of interest, unpreparedness for practical class and different expressions of their emotions.

The 2nd category of the answers, chosen by tutors, represented the controlling of emotions. In interviews, tutors described some factors that increased stress, including their health, worries about technical equipment, teaching resources and tools. It was important to control speakers’ (tutor and/or student) roles, to use different available digital possibilities of the platforms, backgrounds, whiteboard, set up break out groups and the ability to have several hosts.

More specifically, tutors noted that contacts with IT and its support were important in remote practical classes. At the beginning of the pandemic situation a high level of stress was detected by tutors due to feeling that they were unsupported by technical specialists. After several days of training, support from technicians and finished special digital platforms using courses tutors indicated that some situations were less stressful than in the previous period time.

The categories with the most answers included stressful situations decreasing related to contacts. Tutors started to cooperate more closely together with students and each other, forming teamwork via virtual contacts and/or calls. Feedback and collaboration stimulated the development of adaption and control of different situations and it allowed tutors to manage their practical classes more effectively and less stressful.

The fourth item included aspects related to the tutor's "Technical problems solving".

As shown in Table 1, in the 1st category, there were included answers about technical knowledge and skills. In the beginning, reality was made clearer and tutors struggled with part of the new problems. During some weeks and/or months they developed an understanding of their level of knowledge and skills in this pandemic situation and time of crisis and started to think about how to solve part of upcoming problems in planning, the realization of their work with computers and work with students. Slowly and step by step tutors started managed their activities and performances, discovered new methods and possibilities in the remote study process of Human Anatomy.

After careful analysis of answers, another important category was related to equipped working space. Missing some equipment (updated and powerful computer, camera, microphone) and not working properly current technologies didn't allow the tutors to use technologies to their full capacities and to provide teaching in high quality.

In the 3rd category, there were included answers about platforms problems. Better quality for larger capacity teaching sessions was found for the "Zoom" platform, comparing with larger capacity teaching sessions for "Panopto". More disrupted sessions and some technical barriers were detected directly for using of "Panopto" platform. In both cases, these platforms provided strong support in the remote study process and reformed several existed teaching methods during the pandemic period.

Problems that were related to the network connection included access to the Internet, unstable connection, signal loss, interruptions or disconnections. Like the primary options, anatomy tutors were used more often in live lectures and practical classes. These problems made a lot of technical difficulties for tutors in their work. Besides this, several students indicated that in their environments they had no adequate computer or other digital device, problems with internet access and signal loss.

Most answers were included in the fifth category, and all of them were related to the support of the tutors from technicians, IT-staff and colleagues at RSU. There were provided special consultations, events, resources and courses for tutors in assisting with their creating and implementing technical knowledge, skills and solutions of the problems in the remote study process. Technicians and colleagues from IT-staff shared their skills with tutors, supported and helped to find them the best solutions in teaching during the Covid-19. Help and/or support by courses and programs coordinators, mentors and students or leaders of groups and semesters were helpful as well.

Again as presented in Table 1, the fifth item discovered how tutors were involved in “Helping students and supporting them”.

The lowest number of answers received for records of the video lectures. Tutors used the recording feature in “Panopto” and created video lectures that were uploaded for their students and for later watching in the e-studies. Students were free to replay the videos, pause or slow them down to help them understand and study the content of the material better.

The 2nd category, chosen by a group of tutors, represented answers about the use of active learning tools, different exercises and online activities and their use for digital collaboration. In the regular class time on “Zoom” tutors used plastic anatomical models, online resources and/or three-dimensional (3D) printed models. According to this, students were guided by their tutors in different anatomical topics, structures and regions of the human body.

In the Covid-19 pandemic situation tutors and students lost access to dissections and optimal educational tools: real materials, specimens, plastic models and cadavers. Based on this, a very beneficial tool or software “Complete Anatomy” was integrated by tutors into the Human Anatomy course design and used for students through the study process. A few tutors still underline that human cadaveric dissection can not be replaced by any virtual software or another style of learning.

The next category was related to tutors’ individual and groups’ work. Focusing on answers, tutors used live “Zoom” practical classes to answer questions about learned materials, to detect needs, knowledge of students or to explain more complicated anatomical structures and topics.

Most answers were received for consultation hours and communication. The lack of interaction or direct communication with students developed the restructuring of tutors’ regular work. In the period of remote practical classes, all tutors were scheduling regular “consultation hours” that allowed students to ask questions in voice or chat with tutors and classmates in groups.

Discussion

The current study reported Human Anatomy tutors’ personal experiences and solutions remote practical classes in the Covid-19 crisis, and interpreted their new challenges and directions.

In the time of Covid-19, many educators around the countries and the world started to look at how to integrate “new normal” in basic medical studies (Ferrel & Ryan, 2020). It has been reported that the pandemic situation affected anatomy teaching and learning differently, and it provided an opportunity for self-study (Mahdy, 2020). Results of our study showed that all tutors changed various methods and styles in their Human Anatomy study process, remodeled the design

of practical classes and adapted to the current situation, and this was in agreement with other medical study done by Rose (2020).

Remote education, especially without the right technologies and tools for it, can be difficult and complicated for tutors (Muilenburg & Berge, 2001). In our study tutors who were interested in developing themselves studied to get new knowledge and improve their teaching skills. The majority of the tutors started to study how to work with different platforms and visited distant training courses, seminars, webinars and meetings with IT specialists. These findings were confirmed also in the work of O'Doherty et al. (2018). The authors noted that there was also a strong need for inter-faculty cooperation and institutional support.

To better understand the disputes from the sources, it is necessary to analyze the changes in tutors' concerns on digital platforms during the pandemic period (Dhawan, 2020). Two platforms "Zoom" and "Panopto" were used by our tutors for support of video communications. At the beginning of the use of these platforms tutors indicated several technical problems (access, updates, etc.) or limits in the adequate ability to access the platform. These problems chose the main platform for practical classes and lectures. Most popular for our tutors was "Zoom" with several benefits. The use of "Zoom" was not surprising, because it has been the standard platform at RSU for organizing contents of study courses and communicating between students and tutors. One part of the selection criteria for tutors was the quality of audio and video, but the other part of the choice of platform was the quality of recording of practical classes and lectures. Besides, recordings of lectures and DemoLabs allow students to revise teaching materials and content of the anatomical topics.

Our study is also in line with another study that the interactive course keeping and design of practical classes depend on individual tutor's creativity (Pozo-Rico, Gilar-Corbí, Izquierdo, & Castejón, 2020). At the beginning of the pandemic period, the majority of tutors experimented and transformed the practical classes, according to their design of teaching. Tutors started to plan practical classes that were filled with information from presentations, videos and supported by visualization of plastic anatomical models. Some of them chose the style and tools for the better and more interactive explanation of materials and more longer focusing of students attention. Tutors' input comprised work of weeks and months. Besides this, some tutors started to feel that the students didn't understand practical details and didn't detect anatomical structures without touching and dimensional observation.

Online classes and adaption to virtual education give new experiences and discover positive and negative tendencies (Simamora, 2020). Due to this crisis, our tutors also become in front of stressful situations decreasing. We found out that collegial contacts and contacts with students were the most often answers of tutors about how to decrease stressful situations. Meetings in different distant

platforms, video calls, phone contacts and regular e-mails comprised one part of the day or changed the regular rhythm of life, and these findings are supported by the results of another study (Kim, 2020).

For the teaching and learning process, for the explanation and understanding of the anatomical topics with their content, tutors and students must have qualitative equipment and online connectivity (Agarwal & Kaushik, 2020). In the beginning transformation of the content of the Human Anatomy study course to the virtual environment, including technical difficulties, tutors made more questions than answers. According to our results, the majority of the tutors underlined that support of technicians, IT-staff and colleagues are essential for the success of remote teaching and learning. These results are in line with the view of Al-Balas et al. (2020).

Tutors should be interested in students as young and future specialists with medical skills and medical knowledge (Gaur et al., 2020). In our study tutor's communication, development of this type of skills and contacts with students in a virtual environment comprised much more time than it was in a traditional environment. Shim and Lee (2020) affirmed that tutors were involved to switch to a teaching type that was more student-centered. According to this, it was very important for our tutors to guide their students in learning and understanding of the anatomy of the human body and its details not only in remote practical classes but also afterward. In a study by Dumford and Miller (2018), there was found out that the communication and interaction between dominant tutors and supplemented participation of students don't show all needs of teaching.

We understand that lack of dissections and different anatomic specimens excluded the possibility to get practical skills and, according to this, there will be new and post-Covid 19 problems for tutors and current students in the future. Thereby, different mixed and combined methods are needed for the educational process (Almaiah, Al-Khasawneh, & Althunibat, 2020).

In our department, remote practical classes have relatively new concepts. Therefore, there is a need for new and updated format medical educators, and with regular analysis of their challenges and directions.

Conclusions

Remote practical classes of the Human Anatomy at the Department of Morphology were found to exhibit several tutors' challenges which are related to the continuation and realization of the study process in the Covid-19 situation. In this regard, tutors must develop various skills to manage their use of digital platforms, tools and to keep the interactive courses, decrease stressful situations, solve technical problems, help and support students.

Challenges that need to become a priority for tutors in online education concern mainly the special training courses, design of new models, video and/or online lectures, demonstration labs, practical classes, collegial contacts, technicians, IT-staff and colleagues support, consultation hours and communication.

Therefore, it is important that tutors can develop their strategic directions in the future that are effective not only for increasing the quality of the Human Anatomy study process and its' special format without cadaveric dissections in the online, digital environment, assessments, time investment and combination of traditional and remote methods but also for the evolution of anatomy education, including the development of tutors' digital competencies, managing of current equipment, integration and adoption of technologies for the teaching of anatomical knowledge and practical skills, cooperation between departments, re-designing or new curriculum development for current or next years periods.

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USE OF ART PEDAGOGY IN THE PROCESS OF ADAPTATION OF IMMIGRANT STUDENT TO THE UNIVERSITY

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Abstract. *The document contains materials on working with first-year students, who have changed their place of residence in connection with the military action in their homeland. The focus of the paper is on the issue of adaptation of immigrant student to the conditions of the university.*

We carried out a psychological and pedagogical research using diagnostics of the socio-psychological adaptation of a group of immigrant students (self-acceptance, acceptance of others, emotional comfort, integrity, desire to dominate). We used: Test of Personal Adjustment (C. Rogers, R. Dymond), Eysenck Personality Inventory (H. Eysenck), UCLA Loneliness Scale (D. Russell), Taylor Manifest Anxiety Scale, TMAS (J. Taylor), method of «Three Trees» E. Klessmani to study the characteristics of inter-group and family relations.

The article also analyzed and presented art pedagogy means to help this group of students to overcome difficulties in adapting to the new conditions of life. Namely: elements of a four-component author's program for working with personal orientations and values using the means of art pedagogy in the process of studying basic disciplines

Keywords: *High school, immigrant students, first year students, adaptation, art pedagogy.*

Introduction

In today's world, migration issues are quite pronounced in all areas of human life. Research on immigration processes covers a wide range of issues. For example, according to the Elsevier research portal, in the scientific community the issues of immigration have been raised in 73,394 publications from 1997 to 2021. A significant number of them relate to Medicine and Dentistry (32,783), Social Sciences (23,315), Psychology (11,221), Agricultural and Biological Sciences (6,430), Economics, Econometrics and Finance (5,673), Arts and

Humanities (5,614), Environmental Science (4,725), Immunology and Microbiology (4,465), Business, Management and Accounting (4,394) and Nursing and Health Professions (4,067). But for our research, the most important are Social Sciences (23,315), Psychology (11,221) and partially Arts and Humanities. So, by refining the sample to «immigrant students» we found a total of 23,438 results, of which only 1,841 results are in the public access or open archives.

Among the issues that have been raised internationally and are more relevant to our research, we can mention the following:

- medical issues for example access to healthcare;
- social and management / state issues like documentation, culture and financial literacy;
- psychosocial and pedagogical aspects.

For instance, among the latter we were most interested to learn about the issues considered by academics and experts in terms of psychology and pedagogy: «The Role of Intercultural Pedagogy in the Integration of Immigrant Students in Europe» (Sani, 2014), «Interculturality and Social Bonds Formation: A Case Study on Immigrant and Native Preadolescents in Italy» (Contini, 2014), «The Curricular and Social Integration of Immigrant Students: Parallel Roads» (Bocero, Fernández Larragueta, Fernández Sierra, 2014), «The Academic Inclusion of Immigrant Students» (Sani, 2015), «Influence of Immigrant Students' Communication Skills on their Teaching and Learning Process» (Martín-Pastor, González-Gil, Río, Robaina, & Castro, 2013) and others.

Additionally, it is worth noting that migration issues in Ukraine correlate with the start of the anti-terrorist operation in the non-government-controlled territories, which started in 2014. It was the last eight years that the issue of displaced persons became quite critical and required finding solutions for the social, cultural adaptation and educational inclusion of students from the internally displaced population. Currently, at Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, the annual enrolment of this category of students' remains stable at least 20-35 persons. That is what accompanied the beginning of our research in terms of socio-psychological adaptation of first-year students from among internally displaced persons. This in turn includes questions of the level of personal adaptability to life in society, the ability to meet the requirements of society and at the same time not to forget about their own needs, motives and interests.

The aim of research – to characterize the main components influencing the adaptation of migrant students to university conditions and define systematic art pedagogical work for quality support of students' personality and professional development based on the proposed components.

Based on what we have identified the following objectives for our survey:

- to analyze psychological and pedagogical aspects of the process of migrant students' adaptation in the first year of higher education;
- to select the most relevant art pedagogical tools for the process of student adaptation and establish «safe» ways of integrating art-therapy techniques into the higher education process.

Methodology of Research

In order to study the level of adaptation of the migrant students to the conditions of the higher education institution, we conducted a psycho-pedagogical research, during which we diagnosed 40 students of the Faculty of Preschool, Primary Education and Art named after Valentina Voloshina of the Vinnitsa State University named after Mykhailo Kotsyubinskiy. The Research was realized in September-October 2020 (Sarancha, Khilya, 2020). We formed two groups of research participants. The basic features of them are described in Table 1.

Table 1 The Main Characteristics of the Research Groups

Participants	Number	Gender	Age	Course
Resident students	20	Female	17-18	First
Immigrant students	20	Female	17-18	First

Our research consisted of several stages.

At the *first stage*, we used the following diagnostic techniques in order to explore the question of the adaptation of immigrant students:

- adjusted Socio-psychological Adaptation Scale (SPA scale) developed by C. Rogers and R. Rogers and R. Diamond, consisting of 101 items, of which 37 items correspond to the criteria of personal socio-psychological adaptability, the next 37 items correspond to the criteria of disadaptation (rejection of self and others, the presence of «protective barriers», the seeming unable to «solve» the problems, rigidity inflexibility of mental processes), 9 statements make the control scale («Lie scale»), the rest are neutral (Lemak, Petryshche, 2012), and also the subsequent establishment of statistical validity according to the t-Student criteria between the indicators of socio-psychological adaptability among immigrant students and residents of the territory;
- adapted Hans Eysenck personality questionnaire (EPI) was used to identify students' temperament type, taking into account introversion and extraversion of their personality, and emotional resilience. Students

had to answer 57 question which aimed to identify their usual way of behavior (Kyrshева, Riabchikova, 1995);

- to survey the level of students' perception of their loneliness we used an adaptation of D. Russell and M. Ferguson's method (Podoliak, Hlavnyk, 2006), which allowed us to identify the state of loneliness and possible correlation of this state with anxiousness, social exclusion, depression and ennui (Raihorodskyi, 2001).

At the *second stage*, we used E. Klessmann's «Three Trees method» (Klessmann, 1990; Klessmann, Eibach, 1993) to study characteristics of intergroup, family relationships, followed by interviews with participants in a psycho-pedagogical survey (Shapar, 2006).

At the *third stage*, we developed a program of art-therapy sessions that was based upon the adapted author's art-therapy method «The Journey of the Country of Lydia» (Khilya, 2017), and also uses training forms of work, taking into account their sequence, reflexive and other exercises (Demchenko, Koval, Vatso, Lymar, & Turchyna, 2020).

Results of the Research

Results of the first stage of the psychological-pedagogical survey

The first-year students had to correlate the statements contained in the questionnaire about a personality, about his/her way of life, experiences, mentions, habits, and behavior style with their lifestyle; rate the statements, by choosing one of the seven options numbered from «0» to «6»: from «does not apply to me» to «this is exactly about me». We calculated the number of scores the examined students got according to the key on the following scales: adaptability - unsuitability; lie scale; acceptance - non-acceptance of oneself; acceptance - non-acceptance of others; emotional comfort - discomfort; internal - external control; domination - controllability; escapism (escape from problems). A survey of the level of adaptability of both groups is illustrated in Figure 1.

The analysis of the research results allows us to establish that the indicators for all scales are in the range from 54% to 73%. The scale «self-acceptance» (71%) is the most pronounced among the migrant students and «emotional comfort» – 73%, which indicates that the students have an internal calm. In addition, such qualities as «adaptation», «acceptance of others», «integrity», are at an average level. The least expressed scale in the two groups is «the desire for dominance» (54%).

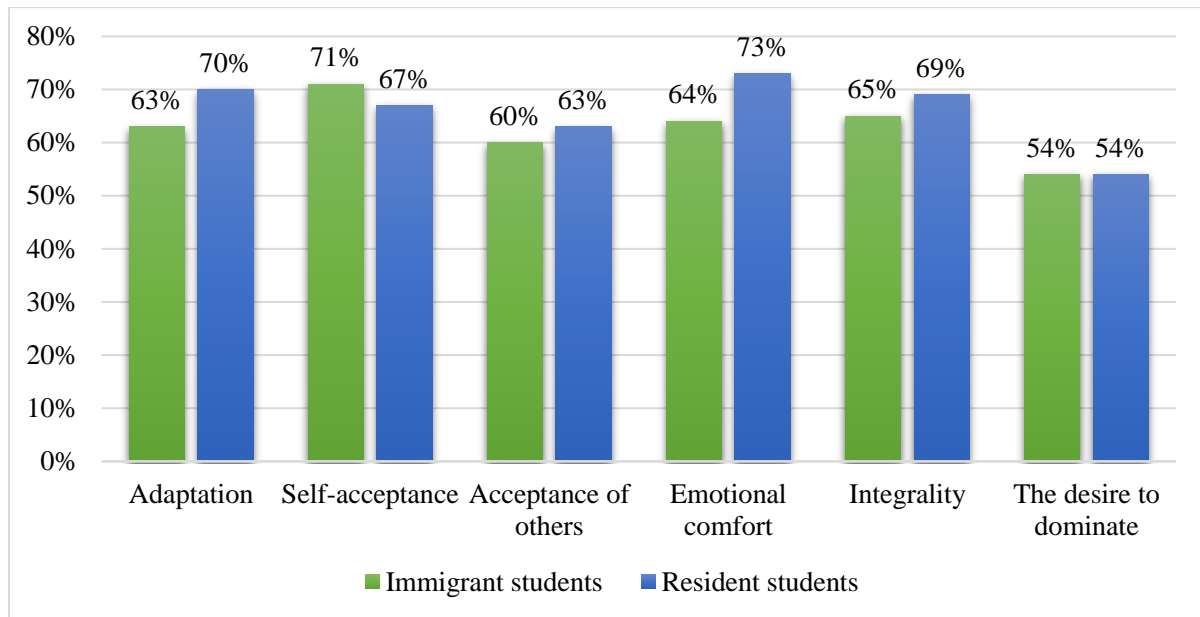


Figure 1 Results of the Survey of Immigrant and Resident Students

As a result of the analysis of the research data, it was found that the students of both groups had high and normal adaptability according to the integral indicator «adaptation». On the scale of «emotional comfort», the indicators were located at a high level, and the difference was 9%. The resident students have a higher level of emotional comfort compared to the migrant students.

On the self-acceptance scale, the percentage difference is 4% (the immigrant students are higher than the resident students). In two groups, the level of «self-acceptance» is relatively high. On the scale of «acceptance of others» the difference in percentage was 3% (resident students have this scale higher in comparison to immigrant students). The indicators are located at the average level closer to the high level.

The percentage difference on the «integrity» scale was 4% (resident students have a higher percentage difference than immigrant students). The indicators are located at the average level closer to the high level.

On the scale of «desire for dominance», we did not detect any difference in the percentages. The indicators are located at the average level. Therefore, the study of socio-psychological adaptability according to the methodology: C. Rogers and R. Diamond in the two groups of subjects showed that the migrant students have a lower level of socio-psychological adaptability compared to the resident students.

The next stage of the study was to use the EPI to determine the type of temperament, the emotional background and the introversion/extraversion of the student's personality. So, among the respondents, only 11 students scored 12 or more on the first scale and are extroverts, of them 7 resident students and 4

migrant students. They are characterized by an outward orientation, flexibility of behavior, communicative and social adapting, they are direct, active, open in their emotional expressions, and impulsive. 29 students scored less than 12 and are introverts who are most interested in their own inner world. They are unsociable, withdrawn, have difficulties in social adaptation and are often socially passive. The results of the second scale diagnostics revealed that 24 students are emotionally stable. Among them, 9 students are immigrants. Another part – 16 students were emotionally unstable.

These results of the survey analysis allow us to suggest difficulties that may arise in working with students to improve their level of socio-psychological adaptation. Because introverts are not inclined to share their inner feelings, live their problems within themselves are less communicative, and emotional instability leads to deviant behaviors’.

The follow-up study was based on the adapted methodology of D. Russell and M. Ferguson and allowed us to determine the indicators of feelings of loneliness among resident students correspond to a low level and among migrant students to an average level. Thus, resident students were characterized by feelings of social anxiety, higher levels of shyness, higher levels of isolation and lower levels of self-esteem. They were also less friendly towards others, as they assessed themselves and others more negatively and, are proponents of short-lived social interactions.

We confirmed the results of this survey in the process of using the method of measuring the level of anxiety on the J. Taylor scale. The analysis of the answers to the questionnaire allowed us to establish that 5 migrants and 3 resident students have a high level of anxiety. They are characterized by low self-esteem and high emotionality. They are not communicative, do not express their opinions or feelings, and are very receptive. The average level of anxiety, tending to high, was diagnosed in 10 migrants and 9 resident students. Although they are calm, sociable and have moderate self-esteem, they may experience some unreasonable anxiety. Average, aspiring to low anxiety levels are found in 5 migrants and 6 students residing in the territory. This group of students is characterized by the ability to defend their point of view, has an independent outlook and high self-esteem, and is receptive to criticism. Anxiety visits these people infrequently and only after the fact. Low level of anxiety was diagnosed in 2 resident students who were lazy and irresponsible, but when it came to personal interests, they got mobilized and achieved the desired result. The feeling of fear or anxiety arises only in a typical situation. It is also worth noting that during the research, a very high level of anxiety was not detected among the respondents.

Information collected as a result was used in choosing art-therapy as the most effective adaptation technique. Because it is art-therapy that can relieve anxiety, soften emotional «outbursts» and prevent «alienation» of the student group

participants. As it is directed creativity with a therapeutic orientation that improves both self-determination, self-awareness of the individual and the group.

Results of the second phase of the psycho-pedagogical survey

Family has a significant influence on the development of socio-psychological adaptation. In order to identify the peculiarities of intra-familial relations, we used the «Three Trees» method by E. Klessmani. We suggested that the students draw three trees on one horizontally arranged list, and then compare them with the members of the student's family (Figure 2). After completing the work, we had an individual interview with the students for the following questions:

- What are the names of the trees?
- Which one do you like best?
- Why do you like it best?
- Which tree is younger (older) than the others?
- Which one do you think is the cutest?
- Which one is ugly and why?
- Why is the tree crooked?
- etc.



Figure 2 Some Examples of Student Work on the «Three Trees» Methodology

Then we suggested that the students imagine themselves as a gardener and take care of the trees («You are the gardener, what will you do with each tree?»). The final step was to ask the test taker to compare each tree to a family member.

During the interpretation, we considered: whether the drawing was made with all the details (location and size of trees, details, colors); answers to the surveyor's questions; association of trees with relatives; the student's suggested actions with the plants; the test taker's behavior, emotional and bodily reactions.

Interpretation of the drawings made it possible to establish that the largest and most visible tree the students drew was the one they associated with the main person in the family - the father. As a rule, they put this tree in the first place, as he has all the responsibility on his shoulders.

In the center, the students portrayed the most important character to them - their mother or themselves. It could be argued that the portrayal of the self between the two parents is indicative of the role of the «guide», communication between the adults is only through the daughter, and between themselves is kept to a minimum.

Most of the plants were drawn on a common ground – a good indicator that shows the stability and strength of the family relationship. Trees that are depicted on divided ground are more likely to have different interests, views, which disrupts their relationship. Trees that lack the grounded terrain, the roots, are indicative of separation, detachment from the home area. Such drawings were characteristic of the settler students. Also, some students placed trees close to each other or at a considerable distance, which signaled the importance of relationships with people close to them.

As the size of the object shows the importance of this or that family member in the student's life, we can state mostly equal treatment of loved ones. It is worth noting the curvature of trunks in the students' drawings, the curvature of branches, the presence of a hollow, which indicate injury, illness, and disadvantage to parents or themselves. Trees with fruit, and there were a few of these, indicate loved ones who «serve the good», in most cases these were mothers. We also analyzed students' color preferences, taking into account that each spectrum has both positive and negative indicators, as well as color saturation of the drawing. Which allowed us to establish the emotional state of the students, their involvement in family relationships.

When students chose the role of gardener, seeking to change the condition of the trees in some way, this symbolized a desire to make certain changes in the relationship with the family, as well as a possible lack of communication with close relatives or people significant in the subject's life.

Therefore, we found that most students have a close emotional bond with their parents, the dominant position in the family – is held by their fathers and the closest and most important person for them is their mother. There are also families in which there is disconnection, psychological trauma triggered by forced relocation from the home area, which has had a negative impact on intra-family relationships; and for the level of socio-psychological adaptation of first-year students. In our opinion, it is important that the students are willing to rectify the situation and influence their family relationships.

Discussion

The third stage of our psycho-pedagogical survey continues. Following the analysis of the survey data, we found that the level of socio-psychological adaptation among resettlement students is lower than among resident students. As a result, teachers developed a number of art-therapeutic inclusions based on the author's method «Journey by the Country of Lydia». These materials were used during the mentoring hour to increase the level of adaptation and formation of positive social connections in the process of creative activity followed by a group discussion without focusing on personal issues of internal self-perception and experiences. It is also important that the students had the opportunity to get acquainted with the proposed methodology as future professionals to work with children and remain in the «safe zone» of their personal comfort.

The main topics of the art pedagogical training sessions, for example, should include the following areas of work:

- *Introductory session.* Introducing the country of «Lydia» and its inhabitants, which will establish a microclimate and create a new «first contact» between the students, facilitator (in our case, the supervisor). At this stage, we can use group or individual work of the students on a creative task. The choice of technology depends on the group, but we most often use different types of drawing;
- *Main session,* which can include several activities and training activities on topics «One place in the country of Man»; «Society and I»; «About social roles»; «Where do I live with my family?»; «All of us are different. Exercises for revision and mutual cooperation»; «Our joint laws for the country of Man»; «The Stone of Choice»; «Professions in Our Lives»; «The Place of Your Dreams» and other practical activities. These activities allow you to form a light and creative environment to support the personality of each student, teach them to understand themselves and their emotions, to accept the emotions of others and develop a good, comfortable relationship, even in a stressful situation.
- *Summary session.* A wish list, which can combine group and individual work on the wishes of all groups that will be remembered by each participant, or it can be the start for the next session about technologies for achieving success and the goals set.

Procedures and the internal content of the training exercises should be flexible enough to respond in a timely manner to the internal state situations of the immigrant students and the communication processes in the group. And art-therapy techniques can be adapted to the students' preferences and include any kind of art - from drawing to sculpting or knitting.

Conclusions

Therefore, in accordance with the tasks of our research we have considered the issues of adaptation of students of immigrants as a complex problem. Covering both the information field and the actual components of the psychological concept of adaptation to the conditions of the university, such as self-acceptance, acceptance of others, emotional comfort, integrality, the desire for dominance and temperament type, and as important components – the level of anxiety, subjective sense of loneliness, extraversion and emotional stability. All these indicators together with the features of the family environment and communication in society allow us to determine the presence of a stressful situation in connection with a change of residence, a change of social role and possible problems of self-realization and socialization of migrant students.

Based on such a complex diagnosis, teachers and specialists of higher education can use the unobtrusive, comfortable means of art-pedagogy to relieve psychological stress, establish communication and interaction with others in a positive way. So, it is consecutive and systematic use of specially developed methods of art-pedagogy will allow the migrant students «softer» to enter a new society and a new role - a first year student of the university.

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ПРИЕМЫ ФОРМИРОВАНИЯ МАТЕМАТИЧЕСКОЙ МОБИЛЬНОСТИ БУДУЩИХ ИНЖЕНЕРОВ НА ЗАНЯТИЯХ ПО ВЫСШЕЙ МАТЕМАТИКЕ

Methods of Forming Mathematical Mobility of Future Engineers in Higher Mathematics Classes

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Abstract. *Continuous education today is a major feature of modern society. In order to ensure the competitiveness of future professionals who obtain higher education within the walls of the Institutions of Higher Education, the education process should be aimed at ensuring a high level of professional knowledge as well as the formation of graduates' adaptability to changeable modern production. Since for a future engineer knowledge of higher mathematics is the basis for solving complex problems of a production nature, it can be argued that they are part of professional mobility. The implementation of technologies for the formation of professional mobility in higher mathematics has made it possible to note that the readiness to change activities can be considered not only in the context of changing professional activity, but also in the process of students' educational activity. And this, in turn, made it possible to determine the «mathematical mobility».*

The purpose of the article is to theoretically substantiate and practically test the methods of forming mathematical mobility of future engineers in higher mathematics classes. The experiment used competency-oriented tasks, test tasks in higher mathematics, built on the basis of Bloom's taxonomy, developed interactive methods for conducting practical classes in the process of studying higher mathematics. The results of the experiment showed the effectiveness of the proposed innovative technologies in the process of fundamental training of future engineers.

Keywords: *higher mathematics, competence-oriented tasks, future engineer, mathematical mobility, professional mobility.*

Введение ***Introduction***

Непрерывное образование сегодня является основным признаком современного общества. Для обеспечения конкурентоспособности будущих специалистов, получающих высшее образование в стенах вузов, образовательный процесс должен быть направлен как на обеспечение высокого уровня профессиональных знаний, так и на формирование адаптированности выпускников к современному производству, которое постоянно меняется. Будущие специалисты должны чётко осознавать, что полученных знаний в университете не хватит на построение успешной профессиональной карьеры, то есть нужно постоянно пополнять и обновлять свои профессиональные знания и умения. Именно развитие мобильности и адаптированности личности являются основными требованиями профессионального образования, обусловленные вхождением Украины в Болонский процесс. Поскольку для будущего инженера знания по высшей математике составляют основу для решения сложных задач производственного характера, то можно утверждать, что они являются составляющей профессиональной мобильности.

Цель статьи – теоретически обосновать математическую мобильность и предложить приемы ее формирования, изучить готовность студентов реализовывать математическую деятельность как составляющую математической мобильности на занятиях по высшей математике.

Для достижения цели были реализованы следующие задачи: 1) раскрыта сущность математической мобильности; 2) охарактеризованы компоненты математической мобильности; 3) апробированы приемы формирования математической мобильности будущих инженеров на занятиях по высшей математике.

Методы исследования: *теоретические* – изучение, обобщение и анализ научной литературы по профессиональной мобильности;

эмпирические – диагностические методы (наблюдение, анкетирование, тестирование) с целью получить представление о готовности студентов успешно реализовывать математическую деятельность как составляющую математической мобильности;

статистические – методы статистического анализа для преобразования эмпирических данных в количественные показатели.

Теоретическая основа темы ***The Theoretical Background***

Теоретический анализ научных источников показывает, что основой для решения проблемы развития профессиональной мобильности служат исследования, связанные с идеей формирования нового поколения специалистов и научного осмысления проблемы мобильности.

Некоторые аспекты феномена профессиональной мобильности освещены в педагогических исследованиях Zymniaia Y. A. по проблеме формирования профессиональной компетентности специалистов различных направлений подготовки, и именно профессиональная мобильность рассматривается как одна из важных составляющих профессиональной компетентности (Zymniaia, 2004).

Piletska L.S. на основе обобщения мнений авторов педагогики и психологии отмечает подход к профессиональной мобильности как уровню психологической готовности специалистов к деятельности в условиях динамичного общества (Piletska, 2015).

Идея рассматривать профессиональную мобильность как интегрированное качество личности принадлежит Ivanchenko Ye. A. (Ivanchenko, 2004).

Ссылаясь на точки зрения других ученых Sushentseva L. L. осуществила исследования профессионального самовыражения и самосовершенствования личности, готовности к профессиональной деятельности (Sushentseva, 2011).

Согласимся с Yhoshev B. относительно того, что профессиональная мобильность – это сложное интегрированное качество личности, которое проявляется на двух уровнях: как конкретная форма или вид деятельности, что позволяет характеризовать человека как профессионально мобильного («внешняя» мобильность) и как совокупность определенных личностных качеств человека («внутренняя» мобильность) (Yhoshev, 2008).

Как отмечает Kaplina S. (Kaplina, 2008), профессиональная мобильность, которая является синтезом базовых компонентов (ключевые компетенции и квалификации) профессиональной культуры и профессиональной компетентности (креативные способности, профессионализм) – интегративная характеристика готовности инженера к успешной адаптации в условиях производства.

Процесс формирования профессиональной мобильности будущего инженера берет свое начало именно на первых курсах обучения в вузах. Следовательно, именно преподаватели фундаментальных дисциплин должны заложить ее первое звено – основу, которая будет базовым уровнем для дальнейшего развития.

На основе научных разработок (Khomyuk, 2017) можно сделать вывод, что ключевым в понятии профессиональная мобильность является способность личности быстро переключаться на смежный вид деятельности в пределах своей специальности, что в свою очередь, требует: постоянно повышать свое образование и квалификацию; быстро осваивать технические средства, технические процессы; умение быстро ориентироваться в ситуации; способность быстро реагировать на социально-экономические изменения благодаря профессиональной компетентности.

Внедрение технологий формирования профессиональной мобильности на занятиях по высшей математике позволило отметить, что готовность к изменению деятельности можно рассматривать не только в контексте изменения профессиональной деятельности, но и в образовательном процессе. Это позволило определить «математическую мобильность» как: 1) способность быстро актуализировать и воспроизводить нужную математическую информацию, устанавливать связи между новыми и усвоенными знаниями и переключаться или изменять вид математической деятельности в процессе решения математических задач; 2) готовность оперативно выбрать и реализовать оптимальные способы (методы, приемы) выполнения соответствующего класса математических задач; 3) владение высоким уровнем математических знаний, опытом их совершенствования и самостоятельного получения; 4) умение эффективно использовать систему обобщенных математических приёмов для решения любых математических задач, и в том числе прикладных; 5) сравнительно легко переходить от одного вида математической деятельности к другому, соответственно анализу математической задачи (Khomyuk, 2015).

Методы, организация и результаты исследования ***Methodology, Organization and Results of the Research***

Анализ исследований проблемы математического образования в техническом университете и собственный педагогический опыт позволил определить противоречие между объективной необходимостью внедрения и применения математических методов в процессе обучения специальных и технических дисциплин и недостаточной разработкой методик, технологий реализации этих методов в образовательном процессе. Возникает необходимость перестройки и переосмысления целей, содержания, методов и организационных форм обучения математическим дисциплинам в техническом университете, что позволит адаптировать будущих инженеров к современным требованиям общества и позволит использовать им математический аппарат в процессе своей научной и профессиональной

деятельности.

Это определило цель нашего экспериментального исследования – изучение готовности студентов реализовывать математическую деятельность как составляющую математической мобильности.

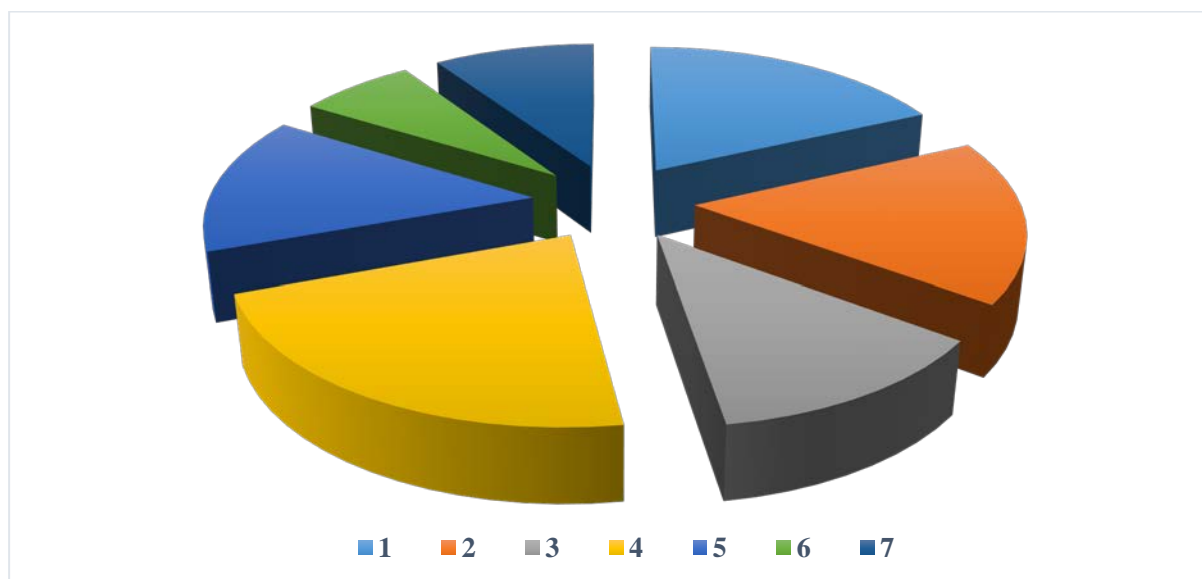
Мы считаем, что готовность студентов успешно реализовывать математическую деятельность как составляющую математической мобильности состоит из: психологической готовности, теоретической готовности (интеллектуальные, когнитивные компоненты), практической готовности, готовности к дальнейшему математическому самосовершенствованию (Khomyuk, 2017).

Экспериментом было охвачено 205 студентов 2 курса специальности 121 «Инженерия программного обеспечения» и специальности 122 «Компьютерные науки» бакалавриата Винницкого национального технического университета факультета информационных технологий и компьютерной инженерии.

С целью получить более четкое представление о готовности студентов успешно реализовывать математическую деятельность как составляющую математической мобильности, нами было проведено анкетирование респондентов после изучения темы «Кратные интегралы». Получены такие результаты:

1. Могу быстро переключаться от вычисления интегралов к построению области интегрирования, которая требует построения кривых (границ интегрирования) – 48%.
2. Готов оперативно выбрать и реализовать оптимальные методы интегрирования, необходимые для вычисления данного интеграла – 45%.
3. Готов проанализировать полученную область интегрирования и сделать вывод относительно разбиения ее на части, в случае необходимости – 33%.
4. Готов найти координаты точки пересечения прямых, ограничивающих область интегрирования, решив систему соответствующих уравнений, то есть проявить умение эффективно использовать систему сложившихся математических приемов к решению соответствующего класса задач – 58%.
5. Обладаю высоким уровнем знаний по теме функции многих переменных и методов интегрирования и сравнительно легко перехожу от одного вида деятельности к другому – 38%.
6. Готов продолжить углубленное изучение данного раздела – 18%.
7. Готов сделать правильный вывод относительно полученного решения (прикладная задача) – 25%.

Для наглядности полученных результатов построим соответствующую диаграмму.



*Рисунок 1. Диаграмма результатов опрашивания студентов
Figure 1 Diagram of the «Zero Control» Work Results*

Результаты диагностики позволяют констатировать тот факт, что только 18% опрошенных студентов, готовы продолжить углублённое изучение данного раздела, они не видят целесообразности, не осознают практического применения в будущей профессиональной деятельности.

Таким образом, считаем, что результаты проведенного исследования позволяют утверждать, что математическая мобильность, которая является составляющей профессиональной мобильности будущего специалиста информационных технологий и компьютерной инженерии требует дальнейшего формирования.

Приведем некоторые приёмы формирования математической мобильности будущих инженеров на занятиях по высшей математике.

1. Использование компетентностно ориентированных задач является одним из приемов формирования математической мобильности будущих инженеров. Такие задачи включают в себя содержание и технологии обучения высшей математике, преподавание и оценку качества математической подготовки студентов в процессе обучения в вузах.

Проанализировав Standart vishhoї osviti Ukraїni (2019), а именно образовательно-профессиональные программы (ОПП) I (бакалаврского) уровня высшего образования, отрасль знаний «Информационные технологии» специальности 122 «Компьютерные науки» выделим те компетентности, которые касаются нашего исследования. То есть те, что

развиваются путем применения понятия «математическая мобильность».

Интегральная компетентность ОПП: способность решать сложные специализированные задачи и практические проблемы в области компьютерных наук или в процессе обучения.

Общие компетентности (ОК): ОК01. Способность абстрактно мыслить, анализировать и синтезировать. ОК02. Способность применять знания в практических ситуациях. ОК08. Способность генерировать новые идеи (креативность).

Специальные (профессиональные) компетентности (СК): СК01. Способность математически формулировать и исследовать непрерывные и дискретные математические модели, обосновывать выбор методов и подходов решения теоретических и прикладных задач в области компьютерных наук, анализа и интерпретации. СК03. Способность логически мыслить, строить логические выводы. СК04. Способность использовать современные методы математического моделирования объектов, процессов и явлений, разрабатывать модели и алгоритмы численного решения задач математического моделирования, учитывать погрешности приближенного численного решения профессиональных задач. СК15. Способность анализировать и функционально моделировать бизнес-процессы, строить и практически применять функциональные модели организационно-экономических и производственно-технических систем, методов оценки рисков их проектирования.

Например, для обеспечения ОК01 мы предлагаем использовать задания типа: Найдите дифференциал функции $y = 2x^3 - x^2 + 5x - 1$ двумя способами: а) как главную линейную часть прироста функции; б) с помощью производной. Сравните полученные результаты. Могут ли они оказаться разными? (Klochko, Bondarenko & Kyrylashchuk, 2019) .

Для обеспечения СК15 рассмотрим пример.

В процессе изучения раздела «Аналитическая геометрия» целесообразно рассмотреть примеры анализа убыточности и прибыльности производства, рентабельности транспортных перевозок, соотношения между затратами труда и производственных фондов, которые выражаются линиями первого и второго порядков. В частности, если общие расходы $TC(X)$ и общий доход $TR(X)$ линейно зависят от объема x изготовленной продукции: $TC(X) = k_1x + b_1$, $TR(X) = k_2x$, то точка перехода от убыточности к прибыльности определяется решением уравнения $TC(X) = TR(X)$ и есть точкой пересечения прямых, которые отображают зависимость расходов и доходов от объема продукции (Bondarenko & Kyrylashchuk, 2017).

В процессе обучения высшей математике компетентно-ориентированные задачи выступают в роли технологического инструмента реализации компетентностного подхода, обеспечивают положительную установку на математическую деятельность. В основе разработанных авторами (Khomyuk, V. & Khomyuk, I., 2017) компетентно-ориентированных задач лежат элементами таксономии Блума. Например:

1. Имеет ли смысл выражение $\left[(\vec{a} + (\vec{b}, \vec{c}), \vec{d}), (\vec{a} - \vec{b}) \right]$? Обосновать.

2. Самостоятельно выберите исходные данные в указанной задаче векторной алгебры и решите её двумя способами. Выберите оптимальное решение и оцените значимость (целесообразность, недостатки методов).

Дано: $\vec{x} \perp \vec{a} = \{1; 2; 1\}$, $\vec{x} \perp \vec{b} = \{-1; 3; 2\}$, $\angle(\vec{x}, oy)$ – тупой, $\Rightarrow x_2 < 0$, $|\vec{x}| = 2$. Найти: $\vec{x} = \{x_1; x_2; x_3\}$.

2. Использование тестовых заданий по высшей математике, которые построены на основе таксономии Блума, ключевые элементы которой: знания, понимание, применение, анализ, синтез, оценка.

Например:

Выбрать истинные утверждения:

- 1) если последовательность монотонная, тогда она сходящаяся;
- 2) если последовательность сходящаяся, тогда она ограниченная;
- 3) если последовательность ограниченная, тогда она сходящаяся;
- 4) если последовательность монотонная и ограниченная, тогда она сходящаяся.

а) 2 и 4; б) 1 и 3; в) только 4; г) только 2; д) только 3.

3. Использование интерактивных технологий на занятиях по высшей математике. На таких занятиях проявляется способность студентов проявлять творческую инициативу, они отходят от шаблонов, генерируют оригинальные идеи, принимают самостоятельные решения, осуществляют собственный выбор того или иного решения задачи и доказывают его оптимальность.

После использования предложенных приемов формирования математической мобильности будущих инженеров на занятиях по высшей математике нами была проведена комплексная контрольная работа для студентов двух групп второго курса специальности 121 «Инженерия программного обеспечения» и 122 «Компьютерные науки» факультета информационных технологий и компьютерной инженерии, причем в одном потоке на занятиях использовались указанные методы. Контрольная работа содержала 5 компетентно-ориентированных и 5 тестовых заданий. Результаты представлены в табл.1.

Таблиця 1. Результати написання комплексної контрольної роботи
Table 1 Complex Test Results

група	кількість завдань (N)	правильно розв'язані завдання (n ₁)	неправильно розв'язані завдання (n ₂)	p _k	p _э	d	S _{p_k}	S _{p_э}	S _d	t _α
ЕГ (25)	250	200	50		0,8			0,025		
КГ (25)	250	115	135	0,46		0,34	0,031		0,039	9

Совокупность ответов можно охарактеризовать такими статистическими характеристиками:

- 1) математическим ожиданием \bar{X} (средним арифметическим числа ответов), которое характеризует вероятность (частоту) появления того или иного признака, то есть $\bar{X} = p$;
- 2) дисперсией σ^2 (Brandt, 1970), которая вычисляется по формуле 1:

$$\sigma^2 = pq \quad (1)$$

- 3) средним квадратическим отклонением s (Brandt, 1970), которое вычисляется по формуле 2:

$$s = \sqrt{\sigma^2} = \sqrt{pq} = \sqrt{p(1-p)} \quad (2)$$

Обозначим через d разницу математических ожиданий ответов экспериментальной и контрольной групп:

$$d = \bar{X}_э - \bar{X}_k, \quad (3)$$

где $\bar{X}_э$ – математическое ожидание ответов экспериментальной группы;

\bar{X}_k – математическое ожидание ответов контрольной группы.

Так как $\bar{X} = p$, то разность математических ожиданий определи по формуле 4:

$$d = p_э - p_k, \quad (4)$$

где $p_э = \frac{n_{1э}}{N_{э}}$ и $p_k = \frac{n_{1k}}{N_k}$ – частоты правильных решений экспериментальной и контрольной групп соответственно;

$n_{1э}, n_{1к}$ – количество правильных решений в экспериментальной и контрольной группах;

$N_э, N_к$ – общее количество предложенных заданий соответственно в экспериментальной и контрольной группах.

В нашем случае, разность математических ожиданий ответов $d = 0,8 - 0,46 = 0,34 > 0$, что позволяет констатировать эффективность предложенных приёмов обучения.

Средняя погрешность разницы d (Brandt, 1970) вычисляется по формуле 5:

$$S_d = \sqrt{S_{pэ}^2 + S_{pk}^2}, \quad (5)$$

где $S_{pэ}, S_{pk}$ – средняя погрешность определения математического ожидания распределения ответов соответственно для экспериментальной и контрольной групп.

При этом средняя погрешность S_p (Brandt, 1970) определения математического ожидания распределения ответов определяется по формуле 6:

$$S_p = \sqrt{\frac{p(1-p)}{N}}, \quad (6)$$

где p – частота появления правильных решений;

N – общее количество заданий.

Для оценки достоверности полученной разности (Brandt, 1970) используем формулу 7:

$$t_\alpha = \frac{P_э - P_к}{S_d}. \quad (7)$$

По таблице Стьюдента (Brandt, 1970) находим, что при числе степеней свободы $k = 25 - 1 = 24$ найденное значение коэффициента $t_\alpha = 9$ будет случайно превышать табличное значение $t_\alpha^* = 3,8$ с вероятностью 0,01. Это значит, что вероятность достоверности α полученной разности d математических ожиданий ответов экспериментальной и контрольной групп будет равна 0,999.

Можно констатировать, что предложенные нами приемы формирования математической мобильности эффективны, а именно, показатель успеваемости выполнения комплексной контрольной работы в экспериментальной группе на 34% выше, чем контрольной.

Обобщение Conclusions

Таким образом, будущий инженер, обладающий сформированной математической мобильностью, отличается умением быстро выбирать оптимальное решение из многих, проявлять критичность по отношению к неэффективным действиям, постоянно обновлять свой опыт, быть способным к рефлексии. Профессиональное становление будущего инженера предполагает сложный процесс развития и саморазвития его личности: умственной активности, способности анализировать, стремление получать знания, что необходимы для качественного выполнения профессиональной деятельности. В процессе решения компетентно ориентированных задач формируется компетентность специалиста, способного работать в непростых современных условиях. Использование предложенных нами приёмов формирования математической мобильности в ходе педагогического эксперимента, показали свою эффективность в процессе фундаментальной подготовки будущих инженеров, привели к повышению уровня усвоения знаний, что было подтверждено статистическими методами.

Summary

The implementation of technologies for the formation of professional mobility in higher mathematics has made it possible to note that the readiness to change activities can be considered not only in the context of changing professional activity, but also in the process of students' educational activity. And this, in turn, made it possible to define «mathematical mobility». It is determined that the readiness of students for the successful implementation of mathematical activity has the following components: psychological readiness, theoretical readiness (intellectual, cognitive components), practical readiness, readiness for further mathematical self-improvement. An experiment to determine the influence of the use of methods for the formation of mathematical mobility of future engineers in the study of higher mathematics is described. The experiment involved 205 second-year undergraduate students of Vinnytsia National Technical University, Faculty of Information Technology and Computer Engineering. The experiment used competency-oriented tasks, test tasks in higher mathematics, built on the basis of Bloom's taxonomy, developed interactive methods for conducting practical classes in the process of studying higher mathematics. These methods were compared with traditional ones. After studying the course «Higher Mathematics» the diagnosis was repeated.

The use of the proposed methods of forming mathematical mobility during the pedagogical experiment demonstrated its effectiveness in the process of fundamental training of future engineers, which led to an increase in the level of knowledge acquisition and was confirmed by methods of statistical processing of observation data.

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CAPITALISATION ERRORS IN WRITTEN WORKS OF LEARNERS OF LATVIAN AS A FOREIGN LANGUAGE

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Abstract. Capitalisation in writing is usually determined by tradition. Different written languages can have their own grammatical, conceptual or stylistic capitalisation rules. Orthographies exist which do not have the division into capital and small letters.

The aim of the article is to find out what problems with capitalisation foreign students in Latvian higher education institutions have during the acquisition of writing skills in Latvian as a foreign language. The research source are the essays written by learners of the Latvian language (foreign students studying in Latvian higher education institutions): the data of the Latvian language learner text corpus being created in the Institute of Mathematics and Computer Science of the University of Latvia were used. The requirements for the acquisition of capitalisation in the context of language learner competences are analysed in the study; the most typical capitalisation errors and possible reasons for them are analysed; and the author's practical experience teaching the Latvian language to foreign students is revealed.

Keywords: Latvian as a foreign language, learner corpus, capitalisation, error analysis.

Introduction

Latvian as a foreign language can be studied at higher education institutions and language teaching centres both in Latvia and in more than 20 higher education institutions abroad (in Europe, the United States, China, etc.). Since Latvia joined the EU in 2004, the interest in learning Latvian in Latvia as a foreign language has increased; interest primarily comes from foreigners who have arrived to study or work. Latvian higher education institutions have full-time students as well as exchange students from almost every place of the world (Laizāne, 2019).

It is only natural that students make different mistakes while learning a foreign language. In applied linguistics, a distinction is made between the terms “mistake” and “error”. For example, Ellis (1997, 17) states that mistakes are caused by carelessness and cannot be considered an erroneous interpretation of the grammatical rules of the second language. Mistakes can be self-corrected when attention is called. Whereas errors occur due to lack of knowledge, and thus the learner cannot self-correct them. In this article, the term “errors” is used to describe the analysis of the errors made by the language learners in tests (essays).

“The aims of the studies regarding error analysis can be summarized as follows: Error analysis identifies the strategies that language learners use. It looks for the answer of the question ‘why do learners make errors?’ It determines the common difficulties in learning and helps teachers to develop materials for remedial teaching” (Erdoğan, 2005, 269).

More and more new digital resources are created nowadays, which are useful for foreign language teachers and specialists in applied linguistics. One such resource is error-tagged learner corpora. Considering the popularity of the English language as an intermediary language, the most attention has been given to the creation of English language learner corpora; however, in the recent decades, learner corpora have been created for other languages as well (Granger, 2008). Sylviane Granger names core components for learner corpus research: corpus linguistics, linguistic theory, second language acquisition, and foreign language teaching (Granger, 2009).

To enable the study of the specific nature of learning Latvian as a second language and as a foreign language, as well as the analysis of errors made by Latvian language learners and the development of corpus-based teaching materials, Latvian language learner corpora have also been created: a corpus of texts collected from successfully passed State Language Proficiency Testing, which is used to evaluate a person’s state language proficiency level (VVP, 2018); and the Learner Corpus of the Second Baltic Language (ESAM, 2014). The Institute of Mathematics and Computer Science at the University of Latvia is creating a corpus of school student essays, which includes more than 400 essays from 12th grade Latvian language exams. These are the works of students from secondary schools, national minority schools and state grammar schools with the Latvian language of instruction (Pārsriedumi, 2018-2021) and the Latvian language learner corpus (LaVA, 2018-2021). The LaVA corpus includes the works of foreign students in the Latvian higher education institutions who have been learning Latvian as a foreign language for the first or second semester. The texts are subjected to automated morphological analysis with learner errors marked manually. The completion of the project is planned for August 2021; the planned corpus size is 1000 student works (essays); the length of each text is approximately 100 words (approximately 100 thousand words in total). The planned amount of data has already been collected, and automated error tagging and manual reviewing is in progress.

When teaching Latvian to foreign students, the author of the article has noticed several typical errors students make when learning the Latvian language. One of the spelling errors is incorrect capitalisation. The aim of this article is to find out what problems with capitalisation foreign students in Latvian higher education institutions have when acquiring the writing skills in Latvian as a foreign language. The research source are the essays written by learners of the

Latvian language (foreign students studying in Latvian higher education institutions) – the data of the Latvian language learner text corpus (LaVA), as well as some works of foreign students (level A1, 21 essay, length of each essay ~100 words, academic year 2018/2019). The data collection methods used were corpus linguistics methods as well as manual collection of text excerpts; quantitative and qualitative analysis of capitalisation errors was performed in the study.

The problem questions raised in the study:

1. What is the ratio of capitalisation errors and other types of errors made by the language learners?
2. What are the requirements for the acquisition of capitalisation in the context of learners of Latvian as a foreign language?
3. What are the most typical capitalisation errors in the written works of learners of Latvian as a foreign language?
4. What are the causes of capitalisation errors?

Capitalisation Errors vs. Other Types of Errors

Capitalisation in writing is usually determined by tradition. Different written languages can have their own grammatical, conceptual or stylistic capitalisation rules. Orthographies exist that do not have the division into capital and small letters (for example, the Chinese script, Devanagari script); whereas, for example, in German orthography, capitalisation is used as a marker for all nouns.

In the Latvian language, capitalisation has grammatical meaning when the word is used at the beginning of a sentence and at the beginning of a direct quotation. Whereas capitalisation of proper nouns and compound proper names has a conceptual semantic sense. As for compound names used in the sense of a proper noun, which are expressed using several words, either every word in the name is capitalised or only the first one (Porīte, 1970; Strautiņa & Šulce, 2009). Moreover, some nouns that are considered proper nouns and capitalised in English and other languages are not capitalised in Latvian, i.e., ethnonyms, such as *latvietis* ‘Latvian’ and linguonyms, such as *latviešu valoda* ‘Latvian language’, *runāt latviski* ‘to speak Latvian’.

During the creation of text corpora and error tagging, a taxonomy of the errors found in the written works of Latvian language learners with the classification of error types and subtypes was created: 1) spelling errors (upper / lower case letter, diacritics, words spelled separately / together, missing letters, redundant letters, other spelling errors); 2) punctuation errors (missing punctuation, redundant punctuation, incorrect punctuation); 3) grammatical errors (incorrect word form (such as inflection, gender, number, definite/indefinite ending, tense, person), derivation, morphophonemic consonant alternation); 4) syntactic errors (word order, redundant word, missing word); 5) lexical errors

(meaning, compliance, readability, collocation); 6) unclear text (Dargis, Auzina, & Levane-Petrova, 2018, 4111-4112).

Since the LaVA corpus and the error tagging process is still incomplete, it is impossible to perform a comprehensive quantitative error analysis in order to determine the frequency of capitalisation errors versus other types of errors. However, for example, in the study on the results of the state language proficiency test (Auziņa et al., 2019), a quantitative and qualitative analysis of language errors was performed using the state language proficiency (VVP) corpus data (146 806 text units from written state language proficiency tests). It was concluded that the most prevalent errors are spelling errors (37 %) followed by punctuation (18 %), inflection and word formation errors (18 %), combined errors (spelling and inflection, lexical un spelling, etc.) (12 %), syntactic errors (8 %), lexical errors (4 %), and unclear text (4 %) (Auziņa et al., 2019, p. 82). The most prevalent spelling errors are missing or redundant diacritics, distinction between vowels and diphthongs, rendering of proper names. Analysis of capitalisation in the study shows that such errors are not many. This could possibly be explained by the fact that the native language of the test takers was usually Russian or another language where the spelling rules regarding capitalisation and proper nouns are quite similar to the principles of the Latvian language. Most frequently, the language learners made errors in the letter (one of the tasks in the test) by not capitalising the pronoun forms *Tu*, *Jūs*, and *Tavs*. Sometimes the first letter of the sentence was written with a small letter, although this is probably a careless mistake rather than a true error (Auziņa et al., 2019, 90).

Capitalisation errors are one of the most frequent types of errors in the Latvian Language and Literature centralised examination works (the exam is taken by students who speak Latvian as a native language as well as a second language (Špūle et al., 2007, 38)), and one of the most frequent linguistic faults in everyday practice is that the main problems with capitalisation are observed in the names of different organisations. Although normative materials describe the general capitalisation principles, many problem cases still exist because language users often have no understanding of symbolic and direct names, as well as whether the word is used as a proper noun (Project “Izplatītākās valodas nepilnības un ieteikumi to novēršanai” (‘Common language gaps and recommendations for their prevention’) by the University of Latvia). Thus, capitalisation errors are characteristic not only of learners of Latvian as a foreign or second language but also learners and speakers of Latvian as a native language.

Capitalisation in the Context of Competencies of a Language Learner

The description of Latvian language learner competencies shows that the requirements for capitalisation differ depending on the level of language proficiency. At level A1, the language learners are expected to spell familiar words and write them down using capital and small letters in cursive and in print. The description of the intermediate level of language proficiency (B1, B2) states that the language learners have to follow specific rules in business writing, including capitalisation (Šalme & Auziņa, 2016a).

Whereas the improvement of orthography skills at the highest level (C1 and C2) presupposes correct spelling of proper nouns, focusing on capitalisation of proper nouns. The description also specifies that at the highest level of language proficiency, focus is given to the rules of capitalisation (Šalme & Auziņa, 2016b).

Thus, the description of the Latvian language proficiency levels provides that at the basic level (A1 and A2) and at the intermediate level (B1, B2) no special attention is given to capitalisation in the learning process; this topic is acquired in detail only at the highest level (C1, C2). However, considering that the basic and advanced level still include topics which require the use of capitalisation (for example, countries and cities, business writing, etc.), attention should be given to this aspect of spelling, especially in the cases specific for the Latvian language.

Most Typical Capitalisation Errors

Capitalisation errors are generally described as underuse and overuse of capital letters (Söderlind, 2008). In this study, capitalisation errors have been grouped into grammatical and semantic context, i.e., incorrect spelling of appellatives and proper nouns. The following errors have been found concerning the expression of grammatical meaning in the written works of Latvian language learners: missing capitalisation at the beginning of a sentence and unnecessary capitalisation (in the middle of a sentence) – see Table 1. In the table, the first number in the parentheses shows the number of instances in the Latvian language learner corpus, but the second number shows the number of essays containing such an error; these examples also include other orthographic errors made by students; however, these are not analysed.

Table 1 Most Frequent Capitalisation Errors in Appellatives (LaVa corpus data, 2019)

Missing capitalisation at the beginning of a sentence	Unnecessary capitalisation (in the middle of a sentence)
<ul style="list-style-type: none"> • <i>es</i> ‘I’ (13/12) • <i>man</i> ‘to/for me’ (14/10) • <i>un</i> ‘and’ (6/6) • <i>mana</i> ‘my’ (4/3) • <i>mani</i> ‘me’ (3/3) • <i>viņa</i> ‘she’ (4/3) 	<ul style="list-style-type: none"> • <i>Patik</i> ‘like’ (17/7) • <i>Universitātē</i> ‘at university’ (16/15) • <i>Patīk</i> ‘like’ (15/5) • <i>Sauc</i> ‘call [they call me = my name is]’ (11/11) • <i>Es</i> ‘I’ (10/9) • <i>Mana</i> ‘my’ (4/4) • <i>Piens</i> ‘milk’ (4/4) • <i>Alus</i> ‘beer’ (4/4) • <i>Pusdienās</i> ‘for lunch’ (4/4)

Capitalisation errors in the semantic sense (in proper nouns) can also be divided into two groups: 1) missing capitalisation in toponyms, for example, (*no*) *vacijas* (correct: *no Vācijas* ‘from Germany’), ergonyms, for example, *stockpot* (correct: *Stockpot*), in compound names, for example, *Rīgas stradiņa universitāte* (correct: *Rīgas Stradiņa universitāte* ‘Rīga Stradiņš University’), street names, for example, *stabu ielā* (correct: *Stabu ielā* ‘in Stabu street’); 2) unnecessary capitalisation in ethnonyms, for example, *Amerikanis* (correct: *amerikānis* ‘American’) and linguonyms, for example, *Angliski* (correct: *angliski* ‘in English’) – see Table 2.

Table 2 Most Frequent Capitalisation Errors in Proper Nouns (LaVa corpus data, 2019)

Missing capitalisation in proper nouns	Unnecessary capitalisation in proper nouns
<ul style="list-style-type: none"> - <i>Rīgas stradiņa universitāte</i> ‘Rīga Stradiņš University’ (6/6) - (<i>no</i>) <i>vacijas</i> ‘(from) Germany’ (5/5) - <i>stockpot</i> (4/4) - (<i>no</i>) <i>latvijas</i> ‘(from) Latvia’ (3/3) - <i>vacijā</i> ‘in Germany’ (3/3) - <i>stabu (ielā)</i> ‘(in) Stabu (street)’ (2/2) 	<ul style="list-style-type: none"> - <i>Angliski</i> ‘in English’ (6/5) - <i>Latviski</i> ‘in Latvian’ (5/4) - <i>Amerikanis</i> ‘American’ (1/1) - <i>Eiropieši</i> ‘Europeans’ (1/1) - <i>Francūziete</i> ‘French’ (1/1)

The following is the analysis of capitalisation in the works of specific students (21 essay, topic – “My studies”), which were written in academic year 2018/2019 by A1 level students at the end of the semester. Student profile: These are regular students acquiring a full education programme in Latvia and Erasmus+ exchange students. The authors of the essays have stated the following native

languages: Turkish (7), French (4), Ukrainian and Russian (3), Ukrainian (2), Hindi (2), Punjabi (2), Chichewa (1); knowledge of foreign languages: English (21), Polish (3), German (2), Russian (2), Spanish (2), Hindi (2), Turkish (1).

First, a quantitative analysis of the errors was performed – see Table 3.

Table 3 Number of Capitalisation Errors in the Same Essay

Number of errors in the same essay	Number of essays
No errors	6
One error	5
Two errors	3
Three errors	1
Four errors	2
Five errors	2
11 errors	1
21 error	1

The works of the students demonstrate very different levels of performance. Six essays contain no capitalisation errors (the authors are students with different native languages – Turkish, French, Russian, Ukrainian); whereas one essay shows chaotic capitalisation (21 error; the author's native language is Punjabi; knowledge of foreign languages – Hindi, English): *Es runaju angliski, Punjabiski, Hindiski un Latviski Mazliet. Man Patik macīties Rēzekne Jo Visi Skolotāji ir ļoti noderīgi un jauki. Man Patik rēzeknes Pilsēta jo man ļoti Patik Kultura daba un Cilvēki.* (Correct: *Es runāju angliski, pendžabiski / pendžabiešu valodā, hindiski un mazliet latviski. Man patīk mācīties Rēzeknē, jo visi skolotāji ir ļoti noderīgi un jauki. Man patīk Rēzeknes pilsēta, jo man ļoti patīk kultūra, daba un cilvēki.* 'I speak English, Punjabi language, Hindi and a little Latvian. I like studying in Rezekne because all the teachers are very useful and nice. I like the city of Rezekne because I like the culture, nature and the people very much.')

Qualitative error analysis shows the same errors as found in the LaVa corpus. Missing capitalisation is found most frequently in toponyms (names of countries and cities) – 5 errors in total, e.g., *Vins ir no latvijas* (correct: *Viņš ir no Latvijas* 'He is from Latvia'). There are fewer errors at the beginning of a sentence (2 errors), e.g., *es esmu no Indijas* (correct: *Es esmu no Indijas.* 'I am from India. '), and in compound ergonyms (2 errors), e.g., *Es esmu students en Rezekne tehnologiju akademija* (correct: *Es esmu students Rēzeknes Tehnoloģiju akadēmijā.* 'I am a student at Rezekne Academy of Technologies').

A more common problem is unnecessary capitalisation: in linguonyms (14 errors), e.g., *Es runaju Turčiski, Angliski un Latviski mazliet* (correct: *Es runāju turciski, angliski un mazliet latviski.* 'I speak Turkish, English and a little Latvian'); in the middle of a sentence (in nouns, verbs, adjectives (13 errors)),

e.g., *Latviešu valoda ir Sarezgita* (correct: *Latviešu valoda ir sarežģīta*. ‘Latvian language is difficult.’); in ethnonyms (3 errors), e.g., *Vinš ir Korejietis* (correct: *Viņš ir korejietis* ‘He is Korean’).

Possible Causes of Errors

The causes of errors are categorised into interlingual transfer and intralingual transfer. Interlingual transfer can be either positive or negative, which is characterised by the use of native language structures during the acquisition of a foreign language. Interlingual errors are the result of negative interlingual transfer (Ellis, 1997, 19). Intralingual errors are classified into four categories including overgeneralization, ignorance of rule restrictions, incomplete application of the rules, and false concepts hypothesised or semantic errors (Richards, 1974, 120).

Capitalisation traditions are similar in many European languages, which is why in the acquisition of Latvian spelling it can generally be seen as positive interlingual transfer. However, there are several exceptions – error analysis has also discovered cases of negative transfer, i.e., ethnonyms and linguonyms, which, contrary to the Latvian language spelling, are considered proper nouns and capitalised in many languages.

As the author’s observations show, regardless of the previous knowledge of the English language, which is used as an intermediary language in Latvian language classes, students from India and Pakistan have the most difficulty with capitalisation because their first languages use Devanagari script, which has no division into capital and small first letters.

Capitalisation errors in compound proper names can be interpreted as a result of intralingual transfer because the different rules pose problems even for native language learners. Moreover, considering that in online communication even native speakers do not use capital letters or use them in a chaotic manner (Urbanoviča, n. d.), ignoring capitalisation rules could gradually become a universal spelling simplification phenomenon.

It is possible that some of the capitalisation errors found were really just mistakes, for example, missing capitalisation at the beginning of a sentence or capitalisation of appellatives mid-sentence. Sometimes it was difficult to tell from the handwriting whether the student meant to write a capital or a small letter.

To ensure more successful acquisition of capitalisation rules when teaching Latvian to foreign students, attention needs to be given gradually, starting from the beginner’s level, to the experience and habits of the language learners (to prevent errors caused by interlingual transfer) as well as the specific rules of the Latvian language (to prevent errors caused by intralingual transfer).

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FORMATION OF SOCIAL RESPONSIBILITY OF YOUNG PEOPLE IN THE PROCESS OF OBTAINING HIGHER EDUCATION

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Abstract. *In the article the problem of the formation of social responsibility of young people in the process of obtaining higher education is actualized at the theoretical, normative-legal and empirical level. On the basis of diagnostics and a focus group survey, the importance and lack of implementation of the problem of the formation youth social responsibility in the modern realities of the activities of higher educational institutions was proved. It was found that the work of higher educational institutions on the formation of social responsibility is considered by applicants for higher education not to be systemic, oversaturated with education. It was stated that, in the opinion of applicants for higher education, the process of forming social responsibility will be more effective if they are included in socially responsible activities, familiarize themselves with the opportunity to work alongside socially active citizens, get involved in various projects, gain experience in socially responsible behaviour, and spend meaningful leisure. The foreign and domestic experience of the formation of the social responsibility of youth is analyzed. A description of the author's program of the formation of social responsibility of young people in the process of obtaining higher education is proposed, the testing of which has led to positive dynamics in the state of social responsibility of young people.*

Keywords: *activity principles, institutions of higher education, social responsibility formation program, social responsibility, student youth, young people.*

Introduction

Modern legal acts in the field of social policy, social youth policy, education (Declaration "On the general principles of state youth policy in Ukraine"; Law of Ukraine "On social work with families, children and youth"; Law of Ukraine "On promoting social Law of Ukraine "On Education", "Regulations on Psychological Service in the Education System of Ukraine", etc.) fix the necessity and expediency of paying special attention of the Ukrainian state to the issues of

stimulating and supporting social youth activity, formation of conscious civic position and socially responsible behaviour of the younger generation. These priorities are recognized as challenges of the time due to intensive socio-political and socio-economic transformations, European integration and globalization processes.

The problem of forming social responsibility during student youth study in higher education becomes especially relevant in modern conditions, because the key to success of personal and professional development of future professionals is not only high professional competence, but also a responsible attitude to their professional duties, personal and social maturity. Therefore, the task is to develop effective ways of forming social responsibility of young men and women, to implement the latest pedagogical technologies and programs into the educational activities of higher education institutions, thanks to which it will be possible to strengthen the development of this quality.

The purpose of the article is to substantiate the theoretical and methodological principles and present the results of testing the program of formation of social responsibility of young people in the process of obtaining higher education.

150 young people from among the student youth (average age – 21 years and 1 month), 7 teachers and 3 practical psychologists of higher education institutions took part in the research and experimental work. During the study were used such methods: theoretical (analysis of scientific sources, generalizations, modelling), empirical (testing, focus group survey, experiment), data processing (percentage and comparative analysis; statistical generalizations were performed using Student's t-test).

The Theoretical Background

In scientific research, the social responsibility of young people is interpreted mainly from the standpoint of a conscious attitude to the requirements of social reality, civic duty, solving social problems, compliance with norms, rules and values, awareness of the consequences for certain social groups and social progress achieving self-actualization, personal and social maturity, professional success. In the context of scientific research, O. Bezrukova (2015), L. Dementiy (2005), K. Muzdyibaev (2010), M. Savchyn (2008) and others analyzed the content, features, and factors of social responsibility. M. Viievska (2016), O. Kovalenko (2018), O. Kovalchuk, O. Kantsirenko (2018), O. Kocherga (2012), T. Lunkin (2015, 2018), V. Savelieva (2013), O. Shevchuk, S. Shevchuk (2013) and others studied problems of social responsibility, person's social maturity of different ages, including youth.

The formation of personal qualities of young men and women, the experience of their responsible behaviour depend on the social space (micro-society, mesosociety and macro-society) in which they are. Striving for self-identification, young men and women continue to reflect, immerse themselves, reconsider their essential and worldviews about the environment and their own "I", build a subjective sense of the world, life perspective, develop a vision of their own life path. Such worldview changes encourage the emergence of important age-related neoplasms, among which social responsibility occupies an important place. Social responsibility should be understood as an integral personal quality that reveals the interdetermination of relations between the social subject and the social surrounding, a quality which is characterized by the requirement of observance of rights and responsibilities, compliance with social norms and relies on conscious mechanisms of socialization, social identification, social reflection, value-motivational and cognitive resources of the individual, the quality that is reflected in person's behaviour, activities and communication.

In accordance with the formulated goal, we need to analyze the technologies, conditions, methods, tools, forms of work proposed and tested by other researchers in terms of the formation of youth social responsibility.

Scientists from developed countries (S. Kvasničková (2014), L. Wray-Lake & A. Syvertsen (2011), L. Jucá, F. Bayma de Oliveira, M. Pires & A. Sant'Anna (2017)) consider that the formation of students' social responsibility will be facilitated by participation in socially responsible activities, projects, if it is significant, useful for students; modelling of pro-social behaviour in the classroom, the practice of socially responsible behaviour; work in student organizations that engage in social practice.

O. Shylova's (2009) research is about the resource of educational work, in which teachers' efforts should be aimed at developing a number of personal qualities, formations (awareness, acceptance and observance of norms and rules of social responsibility, acceptance of responsibilities; stimulation of motivation of socially responsible behaviour; stimulating the manifestations of emotional and volitional attitude, self-control, correction of one's own socially responsible behaviour, etc.).

O. Shylova offered for future managers of the tourism sector a special course "Socially responsible personality: psychological and pedagogical aspect" in the format of which was supposed to implement: conversations and debates about the components of morality, conscience, tolerant behaviour; the method of positive example and discussion of public opinion on certain issues; method of execution of orders; role-playing games and educational situations; competition method; method of encouragement; sociogram; methods of self-reflection, etc. As expedient forms of work with students O. Shylova offered psychological and pedagogical training, use of opportunities of self-government, participation in

socially useful, subject-transforming and research activity (for example, volunteering, nature protection work, participation in various actions of historical and cultural direction, etc.).

O. Doneva's (2014) modelled approach to the formation of components of socially responsible behaviour of students of technological institutions of higher education turned out to be interesting. At the level of organizational and pedagogical conditions, in her opinion, it is advisable to introduce special additional training courses for students, diagnosis of the initial level of their responsibility, forecasting the strategy of social responsibility, implementation of changes in educational policy. At the level of didactic conditions, it is advisable to design a model of interaction between teachers and students to facilitate social responsibility. At the level of individual psychological conditions it is necessary to develop motivation for responsible behaviour, provide students with the necessary support in the process of personal and professional development and improve the instrumental and motivational basis for taking responsibility for their actions. At the level of correctional and developmental conditions, prevention of personal and professional deformations in the field of social responsibility development, formation of experience of social responsibility during training are appropriate.

The formation of social responsibility in students, as noted by O. Doneva, should begin with the acquisition of knowledge about social responsibility, the main categories, norms and rules of socially responsible behaviour. The main efforts of the institution should be aimed at forming motives and aspirations to implement socially responsible behaviour; at development of conscious self-regulation of actions and deeds, decision-making and assessment of their consequences. Emphasis should also be placed on gaining experience of socially responsible behaviour in extracurricular activities (research, cultural, educational, sports and health), in the work of student government, in involvement in the development and management of educational activities of the institution.

The author's approach to the areas of formation of student responsibility is presented in the publication of T. Lunkina & T. Karatai (2015). It consists in the active involvement of young men and women in socially useful activities – charity events, volunteer projects, training programs and volunteer schools, the activities of special centres, festivals, away concerts and more. Demonstration by a higher education institution of examples of socially responsible behaviour and active involvement of students in their implementation is considered a guarantee of the formation of qualities of responsibility in each individual member of the youth. T. Lunkina, T. Karatai justified the feasibility of developing a "Regulation on social responsibility" for higher education institutions, which would direct the work on the development of social responsibility of agricultural students in 3 areas: organizational and methodological (creation of a coordinating unit at the

institution level); practical (creation at the level of faculties of committees on environmental issues, cooperation with public organizations, executive bodies, etc.); propaganda (implementation of projects at the level of student government).

M. Viievsk'a's (2016) publication presents the technology of forming a value attitude to social responsibility of students of economic institutions of higher education. The process of formation of social responsibility, according to M. Viievsk'a, should be aimed at gaining knowledge, gaining experience, stimulating emotional and value experience of attitude to socially responsible behaviour. The scientist emphasized the need for a clear integration of the process of formation of social responsibility and training of future economists, in which social responsibility should develop as a professionally significant quality. M. Viievsk'a considers interactive methods (moderation, mutual learning, group discussion, dialogue, intelligence maps, Balint sessions, etc.) to be effective methods in the implementation of the technology of forming a value attitude to social responsibility.

Researcher O. Kovalenko (2018) developed and tested the pedagogical conditions for the development of social responsibility of residents. The formative experiment was based on the developed special course "Socio-psychological foundations of professional activity", the approbation of which led to an increase in professional and psychological culture, the formation of social responsibility in the system "doctor - patient" (Kovalenko, 2018). One of the effective methods of developing social responsibility of residents, as shown by the experiment O. Kovalenko, was the method of social design of health care programs at the community level in the format of educational, preventive, health projects on healthy living and disease prevention. According to O. Kovalenko, students' formation of social responsibility (future physicians' responsibility) is facilitated by their specific activities, in which the components of socially responsible behaviour are developed during their studies.

Thus, as can be seen from the analysis of publications on the development of youth social responsibility in higher education institutions, scientists propose to introduce additional thematic special courses and training courses, use interactive methods of work, to involve student government resources. Particular emphasis is placed on modelling the conditions in which students would have the opportunity to show social responsibility by joining specific events, actions, volunteering.

Methodology, Organization and Results of the Research

The practical part of the study of the problem of formation of social responsibility of young people in the process of obtaining higher education took

place from October 2019 to June 2020 during several stages – ascertaining and formative.

At the first (ascertaining) stage, testing of the study sample (n = 150) was performed using the method of "Social Responsibility Scale" by L. Berkowitz and K. Lutterman (according to K. Muzdybaev). Processing of test data showed the level of formation of social responsibility of boys and girls, who served as an important diagnostic indicator for the organization of experimental work at the formative stage.

Since the purpose of the research was to develop effective principles that would contribute to the formation of youth social responsibility, we thought it would appropriate to find out exactly how from students' point of view such work should be organized in a higher education institution. To this end, at the ascertaining stage of the study, a focus group survey was conducted with 3 groups of applicants for higher education (12 students of 3-4 courses of higher education institutions of different profiles of educational activity).

Processing of test data by the method of "Social Responsibility Scale" by L. Berkowitz and K. Lutterman (according to K. Muzdybaev) showed the presence of half of the studied boys and girls (students of higher education) signs of situational social responsibility (48%), indicating social infantilism of their personality, lack of independence, impulsiveness and lack of effort to predict the consequences of their own social actions, lack of self-criticism and propensity for self-justification in different life situations depending on the circumstances, the presence of value conflict, etc. That is, it is likely that depending on life circumstances, the complexity of the situation, the need and extent of social responsibility in boys and girls will decrease.

25% of respondents have a high level of social responsibility, which is a feature of their personality. Such representatives of youth are internal, aware of the need for social responsibility, correlate their decisions with the internal structure of social values, norms and rules, moral guidelines, accept the norms and values of the social group, consider themselves responsible for the actions taken and their consequences both for their own lives and for the lives of others.

Empirical data showed that 27% of the sample showed signs of socially irresponsible behaviour, externality in terms of social responsibility. Such young men and women do not realize and are not convinced that socially responsible behaviour is the key to social stability; they do not have an internal system of social norms and values, or they do not consider themselves able to make decisions, to take responsibility for their possible consequences.

At the same time, the focus group survey allowed to make the following generalizations:

- 1) social responsibility is recognized as an important quality in modern society on which depends social (economic, political) stability, social progress, professional realization;
- 2) social responsibility is correlated with knowledge and observance of social norms, rules, laws, requirements, fulfillment of duty to the family and other social groups (student group, professional community, sorority) and society in general, tolerant behaviour;
- 3) it is indicated that the efforts of the educational institution are more focused on training, organization of extracurricular activities in the specialty (conferences, meetings with specialists, excursions to institutions and organizations where employment is possible, etc.), formation of professional competence during theoretical training and practice;
- 4) the need for the formation of social responsibility during higher education is evidenced, it is noted that it is satisfied in part, not systematically, sporadically. Students mention the content of some academic disciplines (for example, jurisprudence, political science, sociology, etc.), thematic educational classes, patriotic events, activities to improve the legal culture, the formation of the need for a healthy lifestyle; they also mention participation in charitable actions to help soldiers, orphans and children deprived of parental care; participation in ecological actions on cleaning of the territory of institution and the city as samples of educational activity of higher education institutions on formation of social responsibility;
- 5) specifies the need to be involved in work that would promote civic competence, develop social responsibility; the majority of students recognize the readiness to work systematically and systematically in this direction; it is considered insufficient to inform exclusively about social responsibility, it is uninteresting to listen to lectures on various aspects of social responsibility;
- 6) emphasizes the appropriateness of organizing systematic work on the development of social responsibility, the creation of a higher education institution unit that unites teachers, students, other initiative persons, institutions and organizations outside the educational institution, whose joint efforts will be aimed at forming socially responsible behaviour young people through direct involvement in various activities.

From the results of the focus group survey it can be concluded that student youth needs the development of social responsibility, recognizes the need to pay attention to this in the process of obtaining higher education. Focus group

participants point out the expediency of overemphasis from passive in nature information on the principles of social responsibility of the individual in civil society to provide conditions for direct activities of higher education students to implement socially responsible behaviour, specific actions, actions that reinforce the need and ability to prosocial activity in different life situations.

The study of scientific sources, the study of the state of social responsibility of young people, clarifying the views of young men and women on the need and ways to develop social responsibility convinced the feasibility of developing and testing a program of social responsibility of young people in higher education, which was tested at the second (formative) stage of the study within one year.

The program was attended by young students from higher education institutions, who were included in the experimental groups (EG1 and EG2) and at the ascertaining stage of the study demonstrated situational and low levels of social responsibility. The total number of EG was 37 people. In addition, a control group (CG) of 20 people was established. Before the start of the approbation of the program, the correlation between EG1, EG2 and CG was almost the same in terms of the level of social responsibility (see Table 1).

Table 1 Correlation of EG and CG on the Level of Social Responsibility at the Contact Stage of the Study

Levels of social responsibility	EG1	EG 2	CG
	number of persons in%		
situational	56	53	50
low	44	47	50

The program of formation of social responsibility of young people in the process of obtaining higher education was developed taking into account the following key principles and approaches: ensuring the activity approach (creating a productive environment for manifestations of social responsibility); maintenance of subject-subjective interaction (all participants of the program are collaborators, initiators of activity); stimulating the integration of contacts (students cooperation with professional practitioners, public activists from various fields of public practice); production of multidirectional activity (student youth participation in events with ecological, historical, legal, psychological, social, etc. context); integration into the subjective personal and professional experience (building interaction with student youth in the framework of the program, taking into account individual characteristics and the specifics of the chosen specialty); initiating cooperation on the principle of "from equal – to – equal" (student youth representatives acted for their peers as coaches, shared experiences, organized activities, etc.).

Substantiated principles and approaches obtained in the focus group survey, student youth needs were the basis for determining the content and selection of methods, tools and techniques in the implementation of the program of social responsibility of young people in higher education. Preference was given to the use of interactive technologies, involvement of student youth in various actions, projects, participation in training and volunteer work. This format of the program for participants of both EGs provided for the establishment of multilateral communication, maintaining high personal activity, immersion in a real atmosphere of cooperation not only with researchers and psychologists of higher education institutions, but also with practitioners, well-known regional leaders, public figures institutions and institutions of the social sphere (rehabilitation centres for children and youth with disabilities, social services for children and youth, orphanages, geriatric institutions, social service centres, educational institutions, animal shelters, etc.), representatives of volunteer organizations, etc.

Approbation of the program of formation of social responsibility of young people in the process of obtaining higher education for the participants of EG provided for the simultaneous implementation of several content lines:

- participation in various planned events (professional meetings, meetings with famous leaders and public figures, graduates, workshops, webinars, web-quests, etc.);
- inclusion in the project activity (development and implementation of an independent mini-project; involvement in the current project of volunteer, environmental, social and other direction);
- involvement in training sessions on the development of qualities that are important for strengthening personal and social responsibility (stabilization of self-esteem and level of demands, increase of communicative potential, strengthening of self-confidence and self-efficacy, development of goal-setting, self-regulation, empathy, stress resistance and tolerance -semantic sphere, etc.);
- work as a trainer in the format of "from equal – to –equal" with peers, junior students in the context of the problem of individual social responsibility (conducting interactive classes with elements of training, development and presentation of thematic booklets and other printed materials, etc.).

Participation in conferences, round tables, on-line meetings, meetings with well-known leaders and public figures, workshops, webinars, web-quests, etc. were necessary to create opportunities for student youth to look at the problem of social responsibility in society, in terms of implemented efforts, achieved results of activities of individuals or organizations that have led to improved quality of life, improved well-being, meeting the needs of citizens, solving specific

problems of family, community, environment, etc. It was important to make young people aware and understand that the manifestations of personal initiative and socially responsible behaviour of each individual citizen within their capabilities, abilities, and interests give a real socially significant result, lead to change, level social passivity, stimulate active citizenship. It should be noted that such meetings were held in extracurricular time, and were integrated into the structure of some classes of professional disciplines, which enriches the resources of the educational environment of higher education institutions, strengthens the potential of dual and non-formal student youth education.

The inclusion of EG participants in the project activities within the approbation of the program of formation of social responsibility of young people in the process of obtaining higher education was aimed primarily at the development of specific skills of socially responsible behaviour. It is also worth noting that initially the participants of the program had the opportunity to cooperate (in some cases in on-line format) in the framework of existing projects in rehabilitation centres for children and youth with disabilities, orphanages, NGOs. The topic of the individual project was chosen by the student independently, in some cases taking into account the specialty in which higher education is obtained. The project was developed by each participant of the EG and implemented for the relevant target audience. The involvement of other EG participants in the implementation of the developed project was approved. As projects, the participants of the EG presented videos and social advertising related to current social issues, the need to lead a healthy lifestyle; information and educational campaign and developed booklets for high school students on legal liability; ecological quest to clean the territory from garbage; historical retrospective with a competition of photographs and drawings; volunteer action for orphans, etc. It is appropriate to discuss the developed projects before their implementation in the group with the invitation of experts – professional practitioners.

Training sessions proved to be an important resource for the formation student youth social responsibility during the implementation of the program. This is due to their high reflexive saturation, the use of technology to improve self-knowledge and self-understanding skills, stabilization of self-esteem, awareness of the value of "I" and their own life purpose, feedback and mutual support. Training sessions were built using interactive techniques (brainstorming, case method, group discussion, psychotechnical exercises, energizing exercises, relaxation techniques, reflection tasks, etc.), the work was modelled taking into account the individual characteristics of participants, their needs, dynamics of changes in the state of social responsibility and qualities important for its strengthening.

The work as a coach in the format of "from equal – to – equal" with peers, junior students in the context of social responsibility of the individual integrates the experience of socially responsible behaviour, actions, intentions, beliefs, creates an opportunity to rethink their conclusions, hear peers, analyze their attitudes to situations of prosocial subjective activity. This role can be performed in different formats: social tutoring; conducting mini-performances with elements of training exercises; social theatre; establishing communication using messengers (Facebook, Telegram, Viber, WhatsApp, Instagram, etc.); organization of web-quests on certain pages on the Internet with the implementation of tasks; blogging, etc. It is worth mentioning that in some places the participants of such meetings were persons, who were involved in individual projects that developed by EG representatives.

The structural components of the developed and tested program of formation of social responsibility of young people in the process of obtaining higher education are summarized in Fig.1.

After the approbation of the program of formation of social responsibility of young people in the process of obtaining higher education, all participants of experimental and control groups were re-tested for the level of social responsibility according to the method of "Social Responsibility Scale" by L. Berkowitz and K. Lutterman (according to K. Muzdybaev). The results of re-diagnosis after completion of the forming phase of the experiment are presented in Table 2.

Table 2 The Results of the Diagnosis of Social Responsibility of Young People after the Completion of the Formative Stage of the Study

Levels of social responsibility	EG1	EG 2	CG
	number of persons in%		
high	23	26	-
situational	44	37	65
low	33	37	35

Empirical data shows the presence of dynamics in the state of social responsibility of all members of groups that were created for research and experimental work. However, in both experimental groups, these changes proved to be more productive: the number of young people with low and situational levels of social responsibility decreased; according to the results of diagnosis, students with a high level of social responsibility were identified among the participants of the experimental groups. Thus, it can be assumed that the developed program of social responsibility of young people in the process of obtaining higher education was effective in achieving sustainable positive dynamics in the state of this quality in student youth. The empirical conclusion about the effectiveness of the program

was confirmed by using Student's t-test. In the process of mathematical and statistical calculations in the program SPSS Statistics v21 it was proved that there are statistically significant differences in the state of social responsibility of young people who participated in the approbation of the program and students of the control group ($t = 3,234$ at $p \leq 0,01$).

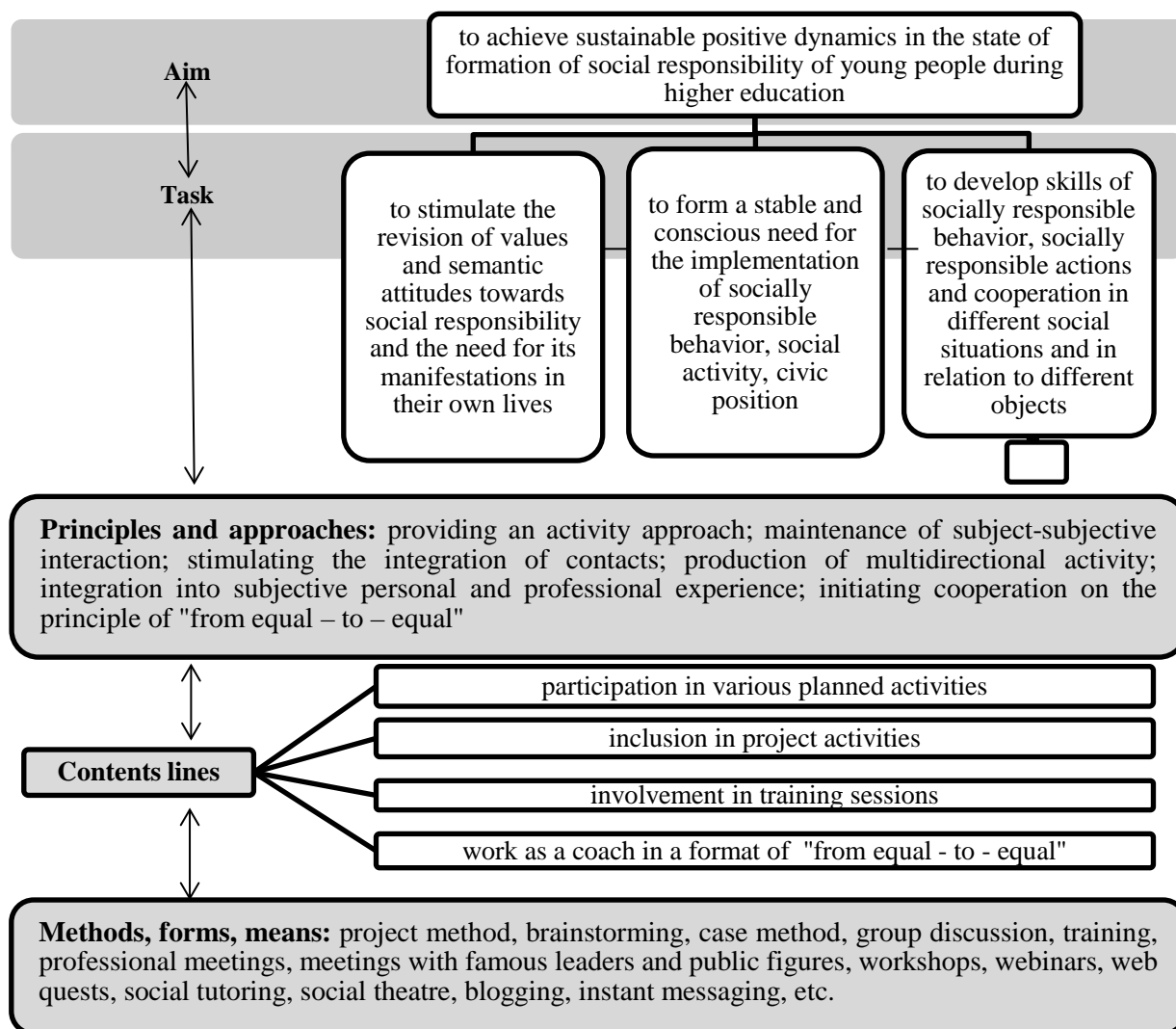


Figure 1 Structural Components of the Program of Formation of Social Responsibility of Young People in the Process of Obtaining Higher Education

Conclusions

Analysis and generalization of theoretical sources, the results of research and experimental work on the approbation of the program of formation of social responsibility of young people in the process of obtaining higher education allowed drawing the following conclusions.

Social responsibility is an important personal quality, the formation of which in young people is a guarantee of personal and professional self-realization, conscious civic activity and national-patriotic orientation. Young people are sensitive to the formation in the process of primary professionalization of social responsibility and other personal and professional qualities. However, the work of higher education institutions in this direction is unsystematic, overburdened with education, requires restructuring and shifting the emphasis to the active plane.

Approbation of the program of formation of social responsibility of young people in the process of obtaining higher education convinced in expediency of modelling of activity bases of formation of social responsibility of student's youth, involvement of students in participation in concrete social projects and volunteer work during interaction with socially active citizens, integration of professional training and development of important personal and professional qualities in the process of purposeful psychological and pedagogical support.

The long-term effect of the introduction of such changes in the educational policy of higher education institutions is not only the formation of professionally competent and responsible professionals, but also socially active and patriotic citizens, ready to take responsibility and promote civil society institutions, join the life of a particular community, make conscious efforts to achieve social progress.

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ПРОФЕССИОНАЛЬНОЕ САМООПРЕДЕЛЕНИЕ ОБУЧАЮЩИХСЯ СТАРШИХ КЛАССОВ

Professional Self-determination of Higher School Students

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Abstract. *The article is devoted to the problem of professional self-determination, which is urgent for today's youth. The role of professional choice in a person's life is great, and the possibilities with which a young man approaches this process plays a decisive role. In their article, the authors present the results of an empirical study of the personal characteristics of students in grades 9, 10, 11 and their readiness to choose a profession. We identified important and significant connections between the level of development of self-esteem and reflexivity with such indicators of professional self-determination as autonomy and emotional attitude. This result indicates that the level of development of his self-awareness plays a decisive role in the professional self-determination of a young man. It is the teacher's task to help high school students in professional self-determination.*

Keywords: *high school students, professional self-determination, professional development, self-awareness, adolescence.*

Введение

Introduction

Вопросы профессионального развития в целом и профессионального самоопределения в частности последние годы приобрели особую актуальность. Это обусловило появление большого количества исследований, выполненных на эмпирическом либо теоретическом уровнях. Вместе с тем, сложившееся понимание профессионального самоопределения как существенной стороны общего процесса профессионального развития личности, необходимость рассмотрения данного вопроса в контексте основных проблем личностного и социального развития обучающихся

старшей школы создают потребность в его дальнейшем осмыслении (Bugaychuk, 2019).

Рассматривая временные рамки профессионального развития личности, необходимо отметить, что осознанное включение в процесс профессионального становления происходит в период ранней юности. Л.И. Божович пишет, что «задача выбора профессии становится аффективным центром жизненной ситуации старших школьников» (Bozhovich, 2008). Вхождение личности в данный процесс связывается с развитием рефлексии, что подтверждается работами Л.С. Выготского и Ж. Пиаже, которые писали о развитии рефлексии мышления в процессе обучения. В.И. Слободчиков (Slobodchikov & Tsukerman, 1996) отмечает формирование личностной рефлексии в подростковом и юношеском возрасте, анализ исследований генезиса рефлексии, проведённый А.В. Карповым, И.М. Скитяевой подтверждает эту точку зрения (Карпов & Skityayeva, 2002).

Исследование важного возрастного новообразования ранней юности – профессионального самоопределения – является актуальным и необходимым прежде всего с приходом новых поколений, воспитанных на цифровых технологиях (Dobryakova & Frumin, 2020).

Теоретические основы исследования *Theoretical Substantiation of the Problem*

В настоящее время в психологии обозначилось несколько ведущих направлений изучения профессионального самоопределения личности.

Как отмечает Е.А. Климов, профессиональное самоопределение – динамический процесс, имеющий свое содержание, в качестве таких динамических показателей можно выделить профессиональную направленность и профессиональное самосознание (Klimov, 2004).

По мнению Д.А. Леонтьева, профессиональное самоопределение – определенный выбор, очень сильно изменяющий дальнейшую жизнь. Оно крайним образом влияет на множество аспектов жизни молодежи в перспективе, это и брачно-семейные отношения, и материальное благополучие, и формирование психологических характеристик (в том числе, самооценку и самоотношение), а также на место и условия проживания, социальную активность и многое другое. Трудно назвать хоть одну сторону жизни, на которую кординальным образом не повлиял бы профессиональный выбор, сделанный в старших классах и по выпуску из образовательной организации (Leont'yev & Shalobanova, 2001).

По мнению Н.С. Пряжникова профессиональное самоопределение можно трактовать как произвольный и осознанный поиск смысла будущей

профессии, и связанной с нею основными сферами жизни (Pryazhnikova & Pryazhnikov, 2005).

Как считает Л.Б. Шнейдер, профессиональное самоопределение рассматривается как длительный процесс внутреннего, субъективного плана, поиск человеком «своей» профессии и «себя в профессии», планирование и достижение профессиональных перспектив. По мнению автора, определение в профессии можно считать определенным этапом социализации, в процессе которого формирует в себе готовность и способность в самостоятельной профессиональной деятельности, то есть становится ее субъектом. Также следует отметить, что находясь в субъектной позиции, можно считать завершенным основной процесс профессионального самоопределения, тем не менее в дальнейшем продолжается развитие человека в профессии и углубление специфичности видов профессионального самоопределения (Shneyder, 2001).

Т.М. Буякас считает показателями самоопределения прежде всего способность делать самостоятельный и ответственный выбор, занимать свою позицию, быть открытым и готовым к изменениям жизненного, профессионального пути. Деятельность выбора более успешна при интернальности личности, осмысленности жизни, компетентности во времени. Конструкт локуса контроля личности может служить показателем активности личности, степени принятия ею ответственности за свой выбор. Локус контроля оказывает регулирующее влияние на процесс профессионального самоопределения и выступает способом разрешения личностных кризисных ситуаций. Через локус контроля проявляется саморегуляция личности, которую также называют интегральным показателем, оптимизирующим процесс профессионального самоопределения (Буякас, 2002).

Также следует отметить мнение Л.М. Митиной, которая в качестве основного фактора профессионального самоопределения собственную активность личности. В качестве основных показателей которой можно выделить осознание необходимости личностного самоизменения, потребность в самореализации, поиск возможностей саморазвития в профессиональном труде. От степени осознанности профессионального самоопределения в итоге и зависит его влияние как на дальнейшую жизнь в целом, так и на отдельные ее аспекты (Mitina, 2004).

Такие исследователи профессионального самоопределения, как Л.М. Карнозова, Ю.Л. Репецкий, И.Н. Семенов, Л.Ю. Сидорова также делают акцент на активной природе этого процесса, на разрешении противоречий. Если самоопределение – это рефлексия смысла жизни, актуализирующаяся осознанием кардинальной жизненной ситуации, в которой невозможна дальнейшая самореализация личности, то критерием наличия процесса

самоопределения может стать изменение самоотношения личности (в частности, снижение уровня самопринятия, наличие конфликтности самосознания, столкновение «Я» с мотивами), а предпосылкой успешного самоопределения – развитая рефлексия.

Важнейшим фактором развития личности является стремление старшеклассника строить жизненные планы. Именно жизненные планы Л.С. Выготский рассматривал как показатель овладения личностью своим внутренним миром и как систему приспособления к действительности, связывая с ними «целевую» регуляцию принципиально нового типа (Vygotskiy, 1982).

Следующим основополагающим фактором психологической базы самоопределения в профессии и готовности старшего школьника к повышению социального статуса, является наличие потребностей и способностей, позволяющих старшекласснику наиболее полно реализовать себя гражданской, трудовой и семейной сферах жизнедеятельности.

Одной из таких потребностей, входящих в психологический базис юношеского самоопределения, является потребности молодого человека занять позицию взрослого, осознать и реализовать себя в качестве гражданина, определиться в социуме, то есть определить свои потенциалы и возможности в процессе реализации себя в новых, меняющихся условиях.

В работе В.И. Слободчикова и Г.А. Цукермана этот период рассматривается как особенный в онтогенезе, поскольку его содержанием является становление юноши как субъекта собственного развития (Slobodchikov & Tsukerman, 1996). В юности главной задачей развития становится разрешение конфликта, названного Э. Эриксонем «идентичность против ролевой диффузии» (Erikson, 1996). Юношеское самоопределение противоречиво по своей сути, поэтому создает основу внутреннего переживания данного состояния, как ценностно-смыслового кризиса. В процессе его разрешения может возникнуть кризис идентичности, соответственно – кризис самоопределения, в том числе профессионального.

В попытке преодоления или избегания кризиса идентичности, некоторые представители молодого поколения, либо слишком торопятся самоопределиваться, либо смиряются с ситуацией предопределенности будущего и поэтому не торопятся раскрыть свои потенциалы. Другая часть молодежи, напротив пытаются растянуть период рассматриваемого кризиса, попадая в ситуацию диффузной идентичности на длительное время, пытаясь сэкономить силы и ресурсы в прохождении затянувшегося периода самоопределения. Иногда расплывчатая идентичность выражается так называемой «негативной идентичности», при которой человек берет на себя асоциальную или социально нежелательную роль. Но, чаще всего,

большинство юношей и девушек формирует в себе одно из нескольких возможных позитивных «Я».

И здесь нам близок подход современного специалиста в области профориентационной работы Г.В. Резапктовой, которая считает, что профессиональное самоопределение реализуется только в контексте общего самоопределения обучающегося, психолого-педагогическое сопровождение которого должно идти в течение всего обучения в школе, а не эпизодически, на этапе выбора профиля обучения, как это происходит сейчас, так как фундамент ценностей закладывается в раннем возрасте в семье. Когда ребенок видит, что родители честно делают свое дело, любят свою работу. Потом – в школе, когда воспитываются качества, необходимые в любой профессии. Трудолюбие, ответственность, уважение к другому. Важно, чтобы семейное и школьное трудовое воспитание поддерживали друг друга на протяжении всего школьного курса. Только в этом случае у ребенка будет формироваться целостная, непротиворечивая картина мира труда и профессий. Но, когда мы беседуем с подростком на эти темы только в старших классах, то строим здание профориентации, начиная с крыши. Без фундамента и этажей (Rezapkina, 2020).

Профессиональное самоопределение как процесс выбора и принятия профессии – это всегда критический момент в развитии личности; он связан с решением целого комплекса противоречий, в основе которого лежит развивающееся противоречие между индивидуальным и социальным.

Таким образом, очевидно, что цель нашего исследования, заключающаяся в изучении профессионального самоопределения обучающихся старшей школы является востребованной.

Материалы и методы исследования *Materials and Methods*

В процессе теоретического анализа мы выявили характеристики личности молодых людей, оказывающих влияние на профессиональное самоопределение. В качестве исследуемых особенностей юношей были взяты следующие: идентичность, самооценка, уровень рефлексивности и такие факторы профессиональной готовности, как автономность, информированность, способность принимать решения и планировать профессиональную деятельность, эмоциональные реакции к ситуации профессионального выбора.

Исследование проводилось на учащихся 9-11 классов школ города Ярославля. Общее количество испытуемых – 96 обучающихся, из них в 9-х классах обучаются 39 человек; в 10-х классах – 26 человек; в 11-х классах –

31 человек. Исследование проводилось в первой половине дня на занятиях профессионального самоопределения.

Для диагностики исследуемых особенностей испытуемых был использован ряд методик. Диагностика личностной идентичности была проведена с помощью методики М. Кун «Кто я такой?». Полученные результаты можно определить как словесное описание «Я-концепции» испытуемых. Для определения уровня самооценки использовалась методика А.В. Петровского «Самооценка». Для выявления меры индивидуальной рефлексивности школьников использовалась «Психодиагностическая методика определения индивидуальной меры рефлексивности» А.В. Карпова. Для диагностики профессиональной готовности школьников, выявления особенностей их профессионального самоопределения использовалась методика А.П. Чернявской «Профессиональная готовность».

Для оценки достоверности различий исследуемых параметров между выборками 9, 10, 11 класса был использован непараметрический критерий достоверности различий Манна-Уитни. Для определения наличия связей между исследуемыми параметрами был использован коэффициент корреляции Спирмена.

Результаты и их обсуждение *Results and Discussion*

Рассмотрим только достоверные различия исследуемых параметров между выборками 9, 10, 11 класса по критерию Манна-Уитни (Табл.1, 2, 3).

Полученные данные по исследованию идентичности обучающихся старших классов показали, что наибольшее внимание десятиклассники уделяют своим психологическим особенностям, социальные же роли в большем приоритете у 9 и 11 классов. По нашему мнению, причина этого факта кроется в переориентации социального мировоззрения и общественных ценностей в 10 классе, они дают себе возможность саморазвиваться, занимаются самопознанием. Это можно также объяснить тем, что в 10 классе начинается смена ведущего мотива поведения: юноши и девушки стремятся к самовыражению, и наиболее важными для них в этом возрасте являются способы и методы самопрезентации, выражения своих внутренних качеств и психологических возможностей. А вот обучающиеся 9 и 11 классов больше как раз сориентированы на профессиональное самоопределение, на социальные ориентиры общества, друзей и семьи. Для девятиклассников и одиннадцатиклассников социальные роли являются более значимыми, так как в данном возрасте для них важно, как их оценивают и воспринимают другие окружающие их люди.

Таблица 1. Значимые результаты различий между 9 и 10 классами по критерию Манна-Уитни

Table 1 Results Significant Differences between Grades 9 and 10 of the Mann-Whitney

Исследуемые переменные		Среднеарифм. значения показателей учащихся 9 класса	Среднеарифм. значения показателей учащихся 10 класса	Значение коэффициента достоверности различий Манна-Уитни (р – уровень значимости)
Идентичность	Психологические качества	4	5,6	U=18 p=0,05
	Социальные роли	5	3,5	U=368,5 p=0,03
Профессиональная готовность	Автономность	12	14,7	U=270,5 p=0,0005
	Эмоциональное отношение	11,8	14,3	U=330,5 p=0,009

Таблица 2. Значимые результаты различий между 10 и 11 классами по критерию Манна-Уитни

Table 2 Significant Results of Differences between Grades 10 and 11 according to the Mann-Whitney

Исследуемые переменные		Среднеарифм. значения показателей учащихся 10 класса	Среднеарифм. значения показателей учащихся 11 класса	Значение коэффициента достоверности различий Манна-Уитни (р – уровень значимости)
Идентичность	Психологические качества	5,6	4,8	U=15 p=0,026

Таблица 3. Значимые результаты различий между 9 и 11 классами по Манна-Уитни

Table 3 Significant Results of Differences between Grades 9 and 11 according to Mann-Whitney

Исследуемые переменные		Среднеарифм. значения показателей учащихся 9 класса	Среднеарифм. значения показателей учащихся 11 класса	Значение коэффициента достоверности различий Манна-Уитни (р – уровень значимости)
Профессиональная готовность	Автономность	12	15	U=334 p=0,0005
	Эмоциональное отношение	11,8	14,8	U=402,5 p=0,007
Уровень рефлексивности		107	107	U=455,5 p=0,04

Таким образом, можно сделать вывод, что такие позиции идентичности, как психологические особенности и социальные роли имеют большее значение при протекании юношеского кризиса, чем физические качества. При кризисе профессионального самоопределения значимость социальных ролей увеличивается.

Статистическая обработка результатов исследования самооценки показала, что значимой динамики данного процесса нет. Однако по среднеарифметическим значениям можно увидеть небольшое снижение самооценки в 11 классе. Это можно объяснить тем, что в этом возрасте более развито самосознание, появляется более адекватная оценка своих способностей и возможностей вследствие повышения требований к ним со стороны общества.

Нами были исследованы таких факторы профессиональной готовности, как: автономность (независимость в поступках и суждениях), информированность о мире профессий и умение соотнести информацию со своими способностями, умение принимать решения, умение планировать свою профессиональную жизнь, эмоциональное отношение к ситуации выбора профессии. Статистическая обработка данных показала только 2 важных фактора в системе профессиональной готовности в юношеском возрасте.

При анализе результатов по показателю автономности отмечается положительная динамика развития данного процесса от 9 к 10-11 классу. Это говорит о том, что уровень независимости в суждениях и поступках к 10 классу увеличивается и развивается в 11 классе. Это можно объяснить тем, что если в 9 классе мнение группы или большинства более значимо для подростков, а собственное мнение отодвигается на второй план, то в 10-11 классе собственное мнение и процесс самопрезентации являются приоритетными. Важно отметить, что наличие автономности говорит о развитой позиции профессионального самоопределения и по этому показателю кризисности не наблюдается.

При анализе такого критерия, как эмоциональное отношение к выбору профессии было выявлено, что существует значимая положительная динамика данного фактора от 9 к 11 классу. Это можно объяснить тем, что по сравнению с девятиклассниками учащиеся 10-11 классов более подготовлены к выбору и принятию решения, поэтому их эмоции более устойчивы и имеют положительный характер. Одиннадцатиклассники более заинтересованы в выборе своего дальнейшего профессионального и жизненного пути в отличие от девятиклассников, выбор которых в большинстве случаев определяется родителями. Таким образом, исследование профессиональной готовности показало, что существует положительная динамика таких факторов, как автономность и

эмоциональное отношение к выбору профессии. Остальные факторы не имеют ярко выраженной динамики.

Исследование уровня рефлексивности учащихся 9-11 классов показало, что существует значимая положительная динамика между 9 и 11 классами, а статистические различия между 9-10 и 10-11 классами незначительные. Так, мы пришли к выводу, что уровень рефлексивности от 9 к 11 классу возрастает. Данный процесс планомерно развивается, и в 11 классе склонность анализировать своё поведение и свои внутренние качества у старшеклассников имеет наивысшее значение. Становится очевидным, что уровень рефлексии тесно связан с профессиональным самоопределением, и это подтверждается корреляционным анализом.

Он показал, что существуют значимые положительные связи между уровнем рефлексивности и уровнем профессиональной готовности, а также между уровнем самооценки и уровнем профессиональной готовности. Чем выше уровень самооценки и рефлексивности, тем выше уровень профессиональной готовности, то есть развитие самосознания личности позволяет более четко и уверенно подойти к профессиональному выбору.

Заключение *Conclusions*

Итак, по результатам проведенного эмпирического исследования мы можем сделать вывод, что существует значимая динамика таких факторов профессионального самоопределения обучающихся старших классов, как идентичность, уровень рефлексивности, автономность (независимость в суждениях и мнениях), эмоциональное отношение к ситуации выбора профессии. К 11 классу у учащихся повышается уровень рефлексивности, автономности (независимости в суждениях и мнениях), эмоциональной включённости в ситуацию выбора профессии, а также увеличивается значимость социальных ролей при снижении значимости психологических качеств в собственной идентичности. Однако отсутствует динамика, и соответственно мы можем здесь говорить о кризисности развития таких факторов профессиональной готовности, как информированность о мире профессий и умения принимать решения, соотносить получаемые знания со своими способностями, умение планировать свою профессиональную жизнь. Были выявлены значимые положительные связи между уровнем самооценки и уровнем профессиональной готовности, а также между уровнем рефлексивности и уровнем профессиональной готовности. Это значит, что чем выше уровень самооценки и рефлексивности, тем выше уровень профессиональной готовности (Timonin, Bugajchuk & Korjakovseva, 2016).

Summary

The transformation of an individual into a professional belongs to the category of fundamental scientific problems, the enduring relevance of which is determined by the high importance of professional activity both for society and for each individual. We believe that the purpose of psychological and pedagogical support of high school students in professional self-determination is assistance in the design of individual educational routes in the school education system: ensuring the personal and professional development of students, taking into account their individual psychological characteristics and socio-professional orientation. The process of professional self-determination during the period of study in the senior grades is of an uneven nature, the specific features of which must be taken into account when drawing up curricula and educational programs at school for the further successful formation of professional identity during the period of vocational training.

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INTEGRATION OF CONTENT AND LANGUAGE INTEGRATED LEARNING ELEMENTS IN THE EDUCATION OF NONLINGUISTIC SPECIALTY STUDENTS BY MEANS OF INFORMATION TECHNOLOGIES

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Abstract. *The article deals with the problem of CLIL elements integration when teaching students of non-linguistic specialities. Main approaches to the definition of this teaching method are given. It is found that different authors consider CLIL as an educational approach, special education techniques, flexible curricular etc., the main purpose of CLIL methodology is to create the link between the study of the foreign language and the content of the students' major discipline. The necessity of the IT implementation into the educational process has been substantiated (it allows to reduce the unproductive costs of the teacher's labour, gives students wide scope to a freely choose their own trajectory, increases the efficiency and objectivity of monitoring and evaluating learning outcomes, promotes individualization of educational activities, etc.).*

We have to use IT technologies as they help improve and diversify students' work. Precisely, when working with students we often use Moodle platform as it provides unlimited opportunities for both students and teachers. It is found that Moodle platform allows developing reading, listening, writing, and grammar skills. Some examples of how to work using Moodle platform is given in the article. It is shown that such parts of Moodle platform as Chat and Forum are of great interest for both foreign language teachers and students. For those students who officially work or are ill, the Assignment module is of particular interest.

Keywords: *non-linguistic students; CLIL; information technologies; Moodle.*

Introduction

Learning a foreign language is a necessary element of the future specialists' formation in any field of science and human activity. This is due to the processes of globalization and European integration of Ukraine. Those who speak English fluently, have the opportunity to be acquainted with the latest developments of the science they specialize in, share experience with colleagues from other regions and countries, participate in international conferences without a language barrier, etc.

Nowadays, practice has proved that teaching English based only on texts on specialty and exercises aimed at the remembering lexical units and grammar constructions, is not relevant any more. On the one hand, this is due to the informatization of society, and on the other hand, it is linked to the change in the mentality of young people who spend most of their time in the virtual world. As it is known, students find most information on the Internet, but not in print media. Thus, we have to meet modern requirements and take appropriate steps when teaching a foreign language.

One of the effective ways to solve this problem is the integration of CLIL (Content and Language Integrated Learning) elements using IT in the pedagogic process. Such an approach allows studying non-core disciplines and deepen their professional knowledge at the same time. Within the framework of the CLIL methodology, students gain proficiency in lexical units and learn to use appropriate grammatical constructions in professional communication, which allows them to prepare them for participation in academic mobility projects and for participation in international conferences, the working language of which is English.

We should also empathize that the introduction of CLIL elements in the educational process is rather teamwork, which requires creative approaches, discussions and sharing experience. Thus, the article represents the approaches of the authors who work with students of different specialties.

Literature review has shown that CLIL has been used as a method of the foreign language teaching for a long time. Its founder is David Marsh who used this method to teach the French language in Canada and North America in the mid-1960s (D. Marsh & T. Nikula, 1998). Over time, this teaching technique began to attract more attention from scientists all over the world. In particular, the theoretical aspects of CLIL are discussed in the works by D. Coyle, P. Ball, D. Lindsay, and D. Marsh (the history of the formation of this pedagogical problem, its pedagogical significance and definition); Ch. Dalton-Puffer and D. Marsh (Discourse in Content and Language Integrated Learning Classrooms); M. Long (Focus on form: A design feature in language teaching methodology); T. Nikula (Terminological Considerations for Content and Language Integrated Learning),

Atkinson D. (Sociocognitive Approach to Second Language Acquisition), etc. Such researchers as V. Malanin, S. Suslov, B. Polyanin, A. Kokareva, M. Zvereva, O. Vyshtak and many others have investigated the problem of IT in the educational process.

At the same time, deeply appreciating the contribution of scientists to the development of this scientific problem, we believe that the pedagogical literature does not sufficiently cover the practical methods of CLIL integration in the teaching process.

Therefore, the purpose of our publication is to share the experience of integration of CLIL elements in the educational process of non-linguistic specialties students during English language classes by means of information technologies, as modern society requires the implementation of IT in the educational process.

For this we consider it necessary to solve the following tasks:

1. generalize CLIL theoretical issues;
2. outline the role of IT in the educational process;
3. share some pedagogical experience on this issue.

Methodology

The methodological basis for writing our article is the methodological works of Coyle, Hood, & Marsh (2010), Llinares & Whittaker (2006), etc. During the work on the article, the methods of critical analysis of scientific literature, the method of systematizing and generalizing the approaches how to work with students of non-linguistic faculties were used. These approaches helped to identify the priority of CLIL methods for working with students in non-linguistic specialties.

Research Results

Theoretical Background

On the basis of the analyses of pedagogical literature we can state that there are different approaches to CLIL definitions. It is considered as:

- a pedagogic approach and learning tool which create the connection between the content and language in the form of a case or a project. Such an approach does not require the use of another language to give instructions (Coyle, Hood, & Marsh (2010));
- special academic techniques used during workshops to facilitate the process of a foreign language acquisition (Ball & Lindsay, 2010; Llinares & Whittaker (2006));

- a methodological approach, based on (special) professional knowledge (Marsch et al, 1998; Content and Language Integrated Learning at School in Europe [CLILSE], 2006);
- flexible curricular design and timetable organization which are ranged from early total, early partial, and late immersion type programs, to modular subject-determined slots (Beadsmore, 2008);
- the mix of the theoretical grounds of constructivism and foreign language learning (Marsh & Frigols, 2013);
- means of foreign language studying, which combines the content of learning, communication, cognition, and culture (Language competences for employability, mobility and growth [LCEMG], 2012).

Thus, summing up the approaches to the CLIL definitions, we can conclude that CLIL is a flexible teaching method which combines the acquisition of knowledge on specialty and the study of a foreign language.

CLIL can be implemented during classes with both students who are fluent in the language at the A2 level and with individuals who are fluent in the language at a higher level. An important part of CLIL methods is scaffolding, which is a special type of instructional process that takes place in situations where the teacher and learners interact to solve learning problems. The main characteristic of the scaffolding strategy is “fading help” from the teacher. As it is stated in Content and Language Integrated Learning at School in Europe (2006) and Language competences for employability, mobility and growth” (2012), “fading help” from the teacher at the beginning of training can be frequent and meaningful, and by the end of the course, it is significantly reduced or absent altogether.

The analysis of pedagogical literature also proved that CLIL:

- creates conditions for a naturalistic approach to language learning;
- encourages active communication in English during classes;
- creates positive motivation for learning English focusing on content, rather than on the form of expression;
- allows acquiring new knowledge and skills;
- stimulates mental processes which are responsible for the development of skills which connecting concrete and abstract concepts;
- teaches students to compare alternative points of view and views on concepts and events (Ball et al. 2010; CLILSE, 2006; Dalton-Puffer & D. Marsh, 2007).

P. Lightbown and V. Spada emphasize the fact that the second language (in our case English) is better acquired if the conditions for its usage are similar to their mother tongue and express the similar view. In other words, the emphasis in the provision of instructions to learning shifts from the form of expression to its

content. Scientists emphasize that students will be more effective if they learn a foreign language not by performing various exercises and reading texts on speciality, but rather when communicating with other students (Lightbown & Spada, 1997).

Role of IT in the Educational Process

The use of modern information technologies in the educational process makes it possible to improve the quality of education and enhance the educational effects from the use of innovative pedagogical programs and methods, since it gives teachers additional opportunities for building individual educational trajectories of students. The use of information technology makes it possible to implement a differentiated approach to students with different levels of readiness for learning.

The training system using information technology has a number of advantages:

- allows to reduce the unproductive labour costs of the teacher;
- gives students wide scope to a freely choose their own trajectory of learning in the process of acquiring knowledge;
- supposes a differential approach to students, based on the recognition of the fact that they may have different previous experience and level of knowledge in the studied areas of knowledge, each student comes to the process of mastering new knowledge with his own intellectual baggage, which determines the degree of understanding of them new material and its interpretation;
- increases the efficiency and objectivity of monitoring and evaluation of learning outcomes;
- guarantees continuous communication in the relationship "student-teacher";
- promotes the individualization of learning activities (differentiation of the pace of learning, the severity of learning tasks, etc.) (Kulik, 2019).

Regarding the use of IT technologies in foreign language classes teachers state that IT help:

- form students' reading skills;
- improve listening and writing skills;
- enrich students' vocabulary;
- improve knowledge of grammar;
- find out a lot of new interesting and up-to-date information about the culture of the country, its traditions etc. (Kotova, 2015; Ovtcharenko, 2018; Borova, 2013; Long, 1991).

Today there are many interesting and useful sites and platforms that promote the study of a foreign language, but the Moodle system is the most popular among higher educational institutions. According to the information located on the world site in the Moodle system, as of January 2018, 65,000,000 users, 6,000,000 courses and 64,000 sites were registered in 233 countries around the world.

Moodle's popularity can be attributed to its focus on collaboration. The system provides a lot of tools for this: wiki, glossary, blogs, forums, workshops. At the same time, training can be carried out both asynchronously, when each student studies the material at his own pace, and in real time, organizing online lectures, webinars and seminars. Moodle also provides ample opportunities for the use of multimedia in the system, the use of which significantly increases the effectiveness of teaching and the interest of students in learning new material (Kolos, 2011).

Findings

Teaching English to students of non-linguistic specialties differs from training foreign-language department students. The main task of classes of ESP (English for Specific Purposes) is to unite English as a subject with information on specialty. Our pedagogical experience has shown that Moodle is one of the best options to solve these tasks, as it provides unlimited possibilities for both teachers and students to create qualitative, dynamic, logical and structured courses and tasks for students' independent work. One important thing is that when working with Moodle, its users do not need any special programming skills, they can create a learning environment following the instructions on this educational platform. Moodle provides great opportunities to develop reading, writing, and listening skills of students. Working with Moodle students can choose convenient time and place to perform the tasks given (Petruk, 2011; Forostiuk, 2017; Lukianenko, 2014).

There are several opportunities for English teachers when working in Moodle. They can add several interactive elements to the platform, creating various kinds of activities (Nergiz Kern, 2013) and combining the acquisition of special knowledge with the learning of the foreign language, which is the core idea of CLIL (Coyle, 2010). For example, working with students who specialize in microbiology we ask them to read and translate the text on the specialty using Moodle as a home task. For this we download (or give a link to) the text on specialty and do special assignments on the platform. At the end of the text, we give them several questions on the topic or create tests in the quiz section. These activities allow saving time for checking homework, as the results are displayed on the monitor of the computer, and the teacher can see who accomplished the task. Besides, students can be directed to other useful resources including video,

audio or texts which can be very helpful as material for presentations and supplementary resources on the topic.

In addition to texts and lectures, the teacher can add different drawings or illustrations to the chat, which motivates students to use creative thinking, and thus we encourage the students to study the topic. From the perspective of CLIL methods, it helps not only improve English writing skills and vocabulary, but allows mixing some theoretical concepts of the students' major and foreign language learning (Marsh & Frigols, 2013).

For example, working on the topic of "History of Microbiology", "Morphology and System of Microorganisms", "Physiology of Microorganisms" we invite students to join Forum and Chat where both the students and the teacher can share information by writing comments. From the point of view of CLIL methodology such a technique can be considered as a way to compare alternative points of view and views on concepts and events (Ball et al. 2010; Dalton-Puffer & Marsh, 2007).

Similar tasks and techniques are used when working with students of Schools of Physics. For example, Moodle course for Physicists includes the following topics:

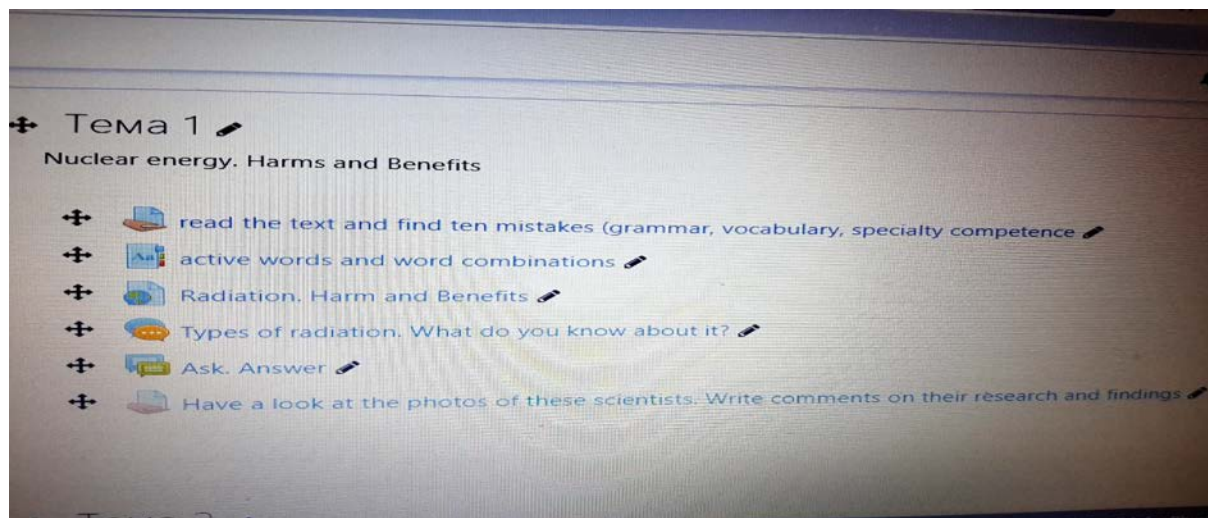
- Nuclear energy. Harms and Benefits;
- Structure of Atoms;
- Different Branches of Physics. What to Choose to be Successful.

In order to implement CLIL elements we suggest students to read and translate a text on specialty. Such texts include some mistakes that they have to find and correct. Mistakes can be of different nature (grammar, spelling or specialty competence) depending on the level of students' knowledge. Doing this task, students share their comments and reasons (speaking about mistakes on special knowledge) in such sections of Moodle as Forum or Chat. To prove their point of view they can give a link to an English site, an article, a video, a book, etc.

Another technique to combine how to learn major and English is to download some photos of famous physicists (Marie Curie, A. Becquerel, A. Compton, and others) and ask students to write comments on their research and findings. This task helps practice writing skills and vocabulary, and on the other hand familiarizes students with the greatest scientific achievements, because, as practice has shown, not all students are aware of the evolution of a specific science even if it is their major.

The structure of the topic "Nuclear Energy. Harms and benefits" is represented in Figure 1.

Figure 1 *The structure of the topic “Nuclear Energy. Harms and benefits”*



To accomplish each topic students are given two weeks. They have to read the text and do some exercises, watch a video and write a comment on it, write a short essay on the topic and respond to other students' ideas (agree or disagree, and explain why).

It is important to mention that such activities as finding grammar mistakes, writing essays and making presentations are considered to be scaffolding activities, as students are encouraged to work independently, on the ground of the vocabulary and grammar constructions in the texts, which were read and translated with the help of the teacher.

From our point of view, the fulfilment of such tasks on the one hand allows plunging into professional knowledge, and on the other hand, improve English language skills. At the same time, it should be noted that for the effective organization of educational activities, it is advisable to coordinate the topics with the work programs of the main disciplines and study these topics in parallel with them.

To create conditions for a naturalistic approach to language learning, stimulates active communication in English during classes and encourage students to acquire new knowledge and skills.

In chat, we organize the discussion on the topic, which is studied. Creating and downloading tasks, we should bear in mind that there are four types of Forum, which you can use depending on your purpose:

- standard Forum for general use;
- general discussion of a matter;
- discussion for every participant;
- question-answer.

Along with Forum, we use Chat as a very convenient tool for guidance, where the teacher and the student can communicate online with each other. The Chat can be controlled by the teacher and, in order to use it online, the teacher and the student determine in advance the specific time and the Chat participants must log in to Moodle at the exact time. In order for Chat to work efficiently, the teacher has to limit the number of participants to 6–8, and then all students are guaranteed participation. The advantage of Chat is that the students receive answers immediately. During such an activity we discuss some grammar topics, prepare for group presentations or reports.

Speaking about Moodle, we should mention Assignment module which can be very useful for the students who are absent from classes for one reason or another. By means of this module students can accomplish tasks and send them in the form of electronic document through the Moodle. Only the teacher can see these documents. If the task is given in the form of the test, the teacher, without leaving the Moodle system, can check, correct and make comments. This module is also interesting for shy students who are not ready to make presentations in class. This platform is also used for the training of listening skills, as Moodle has the opportunity to download audio and video materials on the specialty. Different tests can be created for checking students' progress. There is an option to limit time of test performance by students if necessary.

Moodle has gained even more significance since the spring of 2020, when the quarantine was announced. Teachers had to reconsider their educational methods and look for the development of e-learning.

Conclusions

Summing up, we shall note that CLIL is an effective teaching method for students of non-language faculties, with the help of which applicants for education have the opportunity to review the educational material that is studied during core disciplines and learn English. The use of information technologies, in particular Moodle, makes the learning process even more effective, because e-learning opens up a wide range of opportunities for each student and his/her academic achievements; helps teachers facilitate the control of students' performance and intensify the educational process. It is also very important that such a type of learning increases students' motivation to learn the subject. Moodle is an effective tool to improve reading, writing, and grammar skills; it also helps teachers and students to be in touch, being an interactive means of communication. This allows the teacher to give some classes to students not only during the class time, but also extracurricular, as well as to evaluate students' knowledge at any time.

However, on the other hand, we believe that despite all the advantages of using this platform in order to organize an effective learning process, these

methods should rather be an addition to the classical methods of teaching a foreign language.

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ВНЕДРЕНИЕ ПРАКТИКО-ОРИЕНТИРОВАННОГО ПОДХОДА В ПОДГОТОВКУ БУДУЩИХ БАКАЛАВРОВ С АГРОИНЖЕНЕРИИ

Implementation of Practice-oriented Approach in the Training of Future Bachelors in Agricultural Engineering

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Abstract. *Modern trends in the labour market of Ukrainian agricultural sector place high demands on the professional expertise and training of future Agricultural Engineers. Agricultural sector of Ukraine is currently experiencing an acute shortage of human resources capable of adapting rapidly to new social and economic conditions, mobile and competitive in the world labour market. In this case, the development of professional competence is an important requirement risen for future Agricultural Engineering bachelors' training. The article discusses the essence of the practice-oriented approach used for future Agricultural Engineering bachelors' training and identifies effective practice-oriented technologies for their training future. The experiment was conducted at Hlukhiv Agrotechnical institute named after S. A. Kovpak, Sumy National Agrarian university. 90 undergraduate students, 15 university teachers participated in the study and 18 representatives of employers. The study was aimed at identifying effective training technologies targeted at developing Agricultural Engineers' skills necessary in the labour market. In order to conduct experiment a questionnaire was developed to identify teaching and learning problems as well as students' requests to improve the educational process. The survey also identified the most effective training technologies and those that didn't find their widespread practical use.*

Practice-oriented technologies facilitate future Agricultural Engineering bachelors' professional activities during their training in higher education institutions. These include contextual learning technologies, design technologies, case-study technologies, interactive technologies, problem-based technologies, portfolio-based technologies, master class technologies.

Keywords: *practice-oriented approach, teaching technologies, professional activity, bachelors, Agricultural Engineer.*

Введение *Introduction*

Современная профессиональная подготовка специалистов аграрного сектора ориентирована на личностное развитие и творческую самореализацию будущего специалиста, формирование поколений, способных учиться на протяжении всей жизни, развитие ценности гражданского общества, консолидации украинской нации, ее интеграцию в европейское и мировое пространство.

Повышение качества профессиональной подготовки специалистов аграрного профиля детерминированы необходимостью обеспечения предприятий аграрного сектора квалифицированными, с высоким профессиональным уровнем подготовки, инициативными кадрами, которые быстро адаптируются к меняющимся условиям рынка, творчески проявляют активную самостоятельность в решении проблемных ситуаций, возникающих в аграрно-хозяйственной деятельности предприятий, выдерживают большие умственные перегрузки.

Возрастающие требования к профессиональной подготовке будущих агроинженеров является объективной тенденцией, что обусловлено экономической политикой современного общества. Работодатели требуют от агроинженера не только профессиональных знаний, но и положительной мотивации, ответственности за принятые решения, коммуникабельности, толерантности, не бояться внедрять новые инженерные идеи, проекты, быть профессионалом в эксплуатации и обслуживании машин и агрегатов, стремиться к самосовершенствованию и саморазвитию.

Решение проблемы повышения качества образования агроинженеров связано с формированием профессиональной компетентности будущих специалистов. Следовательно, повышение требований к квалификации выпускников высших аграрных учебных заведений и потребности самих специалистов аграрного сектора обуславливают необходимость внедрения новых подходов к обучению, ориентированных на результат.

Таким образом внедрение практико-ориентированного подхода в подготовку будущих бакалавров с агроинженерии способствует формированию профессиональной компетентности, усовершенствованию технологий обучения, профессионально-личностному развитию будущего бакалавра с агроинженерии.

Целью статьи является теоретическое исследование практико-ориентированного подхода в подготовке будущих бакалавров с агроинженерии и определении основных практико-ориентированных технологий применяемых в обучении, уровня удовлетворенности

практической подготовкой студентов и работодателей, определение путей совершенствования практической подготовки.

Обзор литературы

Literature Review

Подготовка современных агроинженеров в системе образования требует инновационного подхода во многих аспектах педагогической деятельности, а также обуславливает необходимость внедрения современных технологий, активных форм и методов обучения, необходимость формировать существенно новый подход к профессиональной подготовке будущих бакалавров с агроинженерии. Необходимым условием успешного развития будущего специалиста является использование таких интерактивных форм и методов обучения, которые активизировали коммуникативную, познавательную и творческую деятельность студентов, обеспечивали формирование знаний и умений, необходимых для будущей профессиональной деятельности.

Ученые, исследования которых были посвящены становлению и развитию инженерной деятельности в разные исторические периоды, отмечают, что на современном этапе инженер выполняет работу ученого, конструктора, менеджера, который решает узкие профессиональные задачи, сочетает обязанности специалистов различных направлений и обеспечивает системное решение нестандартных задач, связанных с природной средой и культурными формациями (Romashkin, 2003).

В Украине основные требования к специалисту отражены в профессиональном стандарте, где описано виды деятельности, функции, выполняемые на рабочих местах, а также определены необходимые для этого знания, умения и навыки. На основе профессионального стандарта разрабатывается образовательный, регламентирующий те результаты обучения (компетенции), которые должен демонстрировать выпускник образовательной программы. Например, в стандарте высшего образования Украины первого (бакалаврского) уровня по специальности «Агроинженерия» интегральная компетентность будущего специалиста сформулирована следующим образом: «способность решать сложные специализированные задачи и практические проблемы в области агропромышленного производства и в процессе обучения, предусматривает применение определенных теорий и методов соответствующей науки и характеризуется определенной неопределенностью условий (Standart Vyshchoi Osvity Ukrainy, 2018). Таким образом, должность агроинженера рассматривают как специалиста, который создает технические объекты для отрасли агропромышленного производства на основе теоретического

осмысления проблемы и практического применения материальных средств. Отечественные и зарубежные авторы почти единодушно отмечают, что основу инженерного дела составляют не только исследования, проектирование, конструирование, технологическая подготовка и создание изделия, но и его реализация (Zhuykova, 2014).

Г. Горбенко считает, что практико-ориентированный подход в настоящее время один из эффективных средств профессионализации обучения в ВУЗе, поскольку максимально приближает студентов к будущей профессиональной деятельности (Horbenko, 2015).

Его сущность базируется в организации учебного процесса направленного на формирование практических умений и навыков будущих бакалавров, объединяя теоретические знания с профессиональной деятельностью.

Д. Варнеке отмечает, что практико-ориентированный подход – это активная форма организации профессиональной подготовки, предназначена для применения в теоретическом и практическом компонентах, реализуется с помощью насыщения учебного процесса элементами профессиональной деятельности (Warneke, 2007).

Рассматривая зарубежный опыт С. Бобракова акцентирует внимание на том, что практико-ориентированный подход направлен на воссоздание реальных профессиональных ситуаций в академической и практической фазе подготовки. При этом осуществляется перераспределение соотношения теоретической, практической и методической информации в сферу формирования профессиональной компетентности будущих специалистов (Bobrakov, 2012).

Е. Авласович считает, что практико-ориентированный подход в высшем аграрном образовании должен создать оптимальную модель (технология) использования теоретических знаний в решении практических вопросов, связанных с формированием профессиональных компетенций обучающегося (Avlasovich, 2017).

Л. Байбородова считает, что практико-ориентированный подход реализуется, если осуществляется взаимодействие всех структур, участвующих в подготовке кадров (Bayborodova, 2015).

В исследовании (Ivanov, Kryvoruchko, & Kurenko, 2015) указывается, что целью педагогики высшей школы является внедрения практико-ориентированного подхода, который способствует формированию профессионального опыта студентов в процессе их погружения в профессиональную среду во время производственной и преддипломной практики. Автор считает, что применение профессионально-ориентированных технологий обучения влияет на формирование у будущих специалистов значимых для профессиональной деятельности компетенций,

профессионально-важных и социально значимых качеств. Подготовка будущего бакалавра на основе практико-ориентированного подхода включает профессиональную компетентность, готовность к профессиональной деятельности и соответствующие индивидуальные качества.

Анализ научно-педагогической литературы показал, что практико-ориентированный подход в обучении изучали специалисты разных отраслей и направлений.

Практико-ориентированные технологии способствуют реализации профессиональной направленности обучения в высшем учебном заведении. К ним относятся: технология контекстного обучения, проектные технологии, кейс-технологии, интерактивные технологии, технологии проблемного обучения, портфолио, технология мастер-класса, информационно-коммуникационные технологии (Kovalchuk & Fedotenko, 2018).

Использование практико-ориентированного обучения дает возможность адаптировать тематику учебных дисциплин к будущей профессии. Сочетание теории и практики целенаправленно формирует профессиональную конкурентоспособность будущих агроинженеров.

Таким образом, внедрение практико-ориентированного подхода позволяет преобразовать программы обучения и условия для подготовки будущих агроинженеров. При эффективной реализации практико-ориентированного подхода нужно учитывать следующие факторы: продуктивность обучения, профессиональную направленность, индивидуальный подход, ситуационный метод, интерактивность, мобильность, практико-ориентированную направленность, мотивацию, связь с практическим обучением, целенаправленность.

Применение интерактивных технологий позволяет использовать обширный спектр деятельности. Принципы, которого заключаются в поддержании контакта со всеми студентами одновременно, использование технических средств и гаджетов, анализ конкретных ситуационных задач, использования мультимедийного оборудования, умение принимать решения в узком промежутке времени, использование индивидуальных заданий, развитие логического мышления.

Технологии проектного обучения основываются на развитии профессиональных навыков, логического мышления, умения выдвигать гипотезы, анализировать полученную информацию, развивать критическое мышление, владение компьютерной техникой.

В основу метода проектов заложена идея, что отражает сущность понятия «проект», его прагматическую направленность на результат, полученный при решении той или иной практически, или теоретически значимой проблемы. Главным является то, что этот результат можно увидеть, осмыслить, применить в реальной практической деятельности.

Чтобы добиться такого результата, необходимо уметь самостоятельно мыслить, находить и решать проблемы, используя для этого знания из различных отраслей, прогнозировать результаты и возможные последствия разных вариантов решения проблемы, устанавливать причинно-следственные связи (Dovbenko, 2005).

Использование технологии мастер-класса в практико-ориентированном обучении основывается на презентативности, эксклюзивности, эффективности, прогрессивности демонстрации практических приемов и технологий для повышения квалификации студентов. В этом случае учитываются особенности формы взаимодействия лектора и студента, место и методы проведения, работа в малых группах, которая позволяет совместно принимать решения в поставленной проблеме, рефлексия.

Внедрение новых образовательных технологий в учебный процесс обеспечивает воплощения определенной стратегии в подготовке будущих бакалавров с агроинженерии.

Практико-ориентированный подход позволяет обеспечить многофакторность профессиональной подготовки и создать на этой основе новую модель профессионального образования будущих агроинженеров.

Методология *Methodology*

При изучении научных трудов отечественных и зарубежных исследователей, которые непосредственно касаются профессиональной подготовки будущих агроинженеров нами использованы такие методы: анализ и синтез, сравнение, обобщение и систематизация, анкетирование.

Экспериментальная работа проводилась в Глуховском агротехническом институте имени С.А. Ковпака Сумского национального аграрного университета. Исследование заключалось в определении распространенных технологий обучения агроинженеров. Для проведения эксперимента нами разработана анкета. Анкета включает в себя общие вопросы; вопросы о применении в учебном процессе видов технологий обучения; вопросы влияния практической подготовки на уровень знаний и навыков студентов. Следующая анкета предполагала выявления уровня удовлетворенности студентов практической подготовкой и факторов влияния на уровень практической подготовки. Для работодателей проводилось анкетирование и ранжирование необходимых навыков современному специалисту. Анкетирование проводилось анонимно в онлайн режиме с помощью гугл форм. В эксперименте приняли участие 90 студентов образовательной степени бакалавр и 15 преподавателей и 18 представителей работодателей.

Результаты исследования ***Research Results***

Первым этапом в эксперименте был анализ анкетирования преподавателей и студентов. По результатам анкетирования определены наиболее распространенные технологии обучения и те, что используются недостаточно. Второй этап предусматривал сравнение результатов ответов студентов и преподавателей. И завершающий этап заключался в обобщении и систематизации полученной информации.

Проанализировав ответы на вопросы анкеты установлено, что при подготовке будущих бакалавров преподаватели наряду с традиционными методами и формами обучения применяют инновационные технологии. К самым распространенным относятся интерактивные технологии (85%), проектные технологии (78%), технология мастер-классов (65%).

Технологии проблемного обучения (17%), технология контекстного обучения (16%), кейс-технология (9%) используются малым количеством преподавателей.

По итогам опроса и обработки данных самые используемые технологии в обучении являются проектная технология, интерактивные технологии и мастер-класса.

В то же время установлено, что игровые технологии, информационно-коммуникационные технологии, тренинги, личностно ориентированные технологии, технология портфолио, используются недостаточно.

Интерактивная технология основывается на использовании преподавателями Глуховского агротехнического института имени С.А. Ковпака Сумского национального аграрного университета мультимедийного оборудования, интерактивных досок, интерактивных программ, различных платформ для создания сайтов, программ для проектирования, дистанционном обучении, компьютерном тестировании. Так же интерактивные формы применяются при проведении аудиторных занятий, при самостоятельной работе студентов и других видах учебных занятий. Так на период дистанционного обучения преподавателями института созданы по дисциплинам виртуальные классы на платформе Google Classroom. Организация образовательного процесса на период карантина осуществляется с использованием дистанционных технологий (группы в Viber, Google Sites, Google Classroom, Meet, Zoom, Classtime).

Проектная технология строится на дипломном и курсовом проектировании. Для выполнения дипломного и курсового проекта для каждого студента разрабатывается индивидуальное практико-ориентированное задание. В ходе работы над проектом студент самостоятельно собирает, анализирует информацию, выполняет расчеты,

чертежи в программах Компас и AutoCAD, что дает ему возможность закрепить полученные теоретические и практические знания и навыки. Перед дипломным проектированием будущие бакалавры с агроинженерии проходят преддипломную практику на агропредприятиях. Знакомятся с характеристикой хозяйства, под руководством наставника приобретают профессиональные навыки. В процессе обучения у будущих бакалавров формируются такие качества как умение анализировать производственную ситуацию, работать в коллективе и индивидуально, принимать самостоятельные решения, развивать инженерное мышление. В результате практико-ориентированных проектов формируется профессиональная компетентность. Такие проекты способствуют самостоятельному приобретению профессиональных знаний и навыков, стремлению к саморазвитию и самообразованию.

Технология мастер-классов в рамках практико-ориентированного обучения построена на сотрудничестве Глуховского агротехнического института имени С.А. Ковпака Сумского национального аграрного университета с аграрными компаниями ТОВ «KUNN-Ukraine», компании New Holland и украинно-германским проектом «Содействие развитию профессионального образования в аграрных колледжах Украины» FABU. Во время мастер-классов будущие бакалавры изучают строение, принципы работы и регулирования, техническое обслуживание и ремонт сельскохозяйственной техники. Благодаря сотрудничеству с партнерами-производителями в распоряжении студентов солидный перечень разнообразного оборудования, которое применяют современные агропредприятия. В ходе мастер-класса студенты участвуют в обсуждении тех или иных вопросов, получают консультацию по интересующей их теме, предлагают свои варианты по решению проблем.

Нами проведено исследование по определению уровня удовлетворенности студентов практической подготовкой по соответствующей шкале, где интервал 1-3 – низкий уровень, 3-4 – средний уровень, 4-5 – высокий уровень удовлетворенности.

Мы получили следующие результаты: 62% студентов считают уровень практической подготовки высоким, 36% – средним и только 2% – низким (Рис. 1).

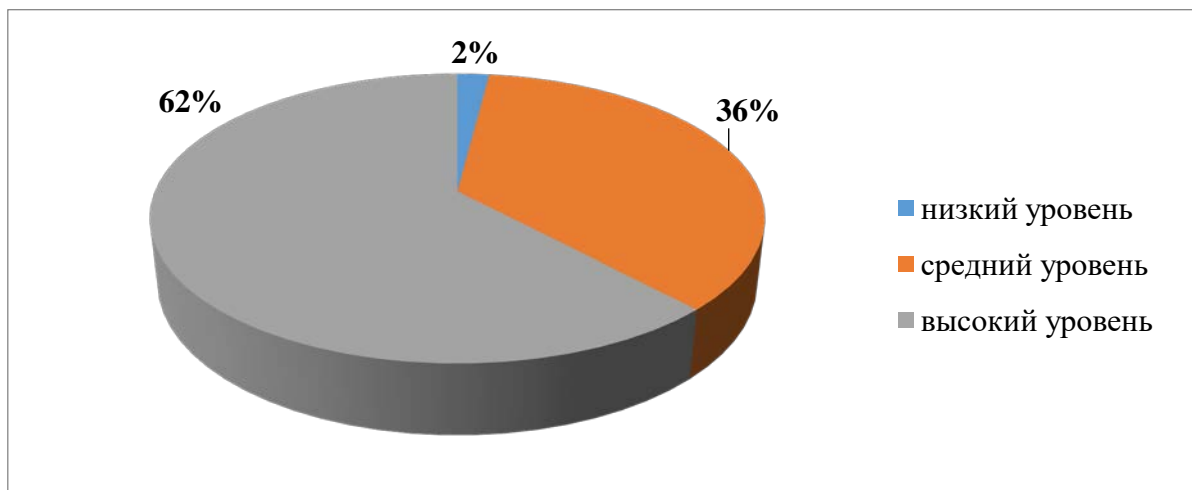


Рисунок 1. Результаты удовлетворенности студентов практической подготовкой

Figure 1 Results of Students' Satisfaction on Practical Training

На вопрос что именно влияет на ваш уровень практической подготовки 44% респондентов считают прохождение практики на ведущих предприятиях отрасли, 24% – привлечение профессионалов-практиков к образовательному процессу, 18% – современную материально-техническую базу учебного заведения, 14% – внедрение современных технологий обучения (Рис. 2).



Рисунок 2. Результаты опроса относительно факторов влияния на уровень практической подготовки

Figure 2 Survey Results on Influencing Factors for Practical Training Level

Результаты исследования убеждают в необходимости приближения образовательного процесса к реальным условиям рынка труда путем тесного сотрудничества с работодателями, совершенствование материальной базы и внедрение в образовательный процесс современных технологий обучения адекватных потребностям и запросам современного поколения молодежи.

Сегодня существует разрыв между рынком труда и системой образования. С целью выявления запросов работодателей касательно навыков, которые актуальны на рынке труда и нужны будущим агроинженерам, мы провели опрос представителей работодателей. По результатам опроса мы сформировали список из 10 навыков. Далее мы попросили проранжировать их по важности от 1 до 10 (где 1 – наиболее весомая, 10 – наименее значительная). Мы получили следующие результаты: технические способности (22%), способности применять современные средства в инженерной деятельности (20%), коммуникативные навыки (16%), владение цифровыми технологиями (12%), гибкость (8%), социальная ответственность (6%), инициативность (6%), проектное мышление (4%), креативность (4%), знание иностранных языков (2%). Как видим в списке навыки которые являются чисто техническими и те, которые помогут специалисту быть эффективным на рынке труда и адаптироваться к меняющимся условиям.

По результатам исследования мы можем сделать вывод, что высшие учебные заведения должны оперативно реагировать на требования рынка труда и изменения, которые в нем происходят. Актуальность приобретает внедрение эффективных технологий обучения будущих специалистов, которые будут способствовать их гармоничному развитию и смогут удовлетворить потребности рынка труда, способствовать повышению конкурентоспособности собственно самого учреждения высшего образования, обусловят более высокий уровень компетентно квалификационных качеств выпускников. Тенденции профессиональной подготовки специалистов аграрной отрасли требуют обновления содержания обучения и постоянного развития научно-педагогических работников (Kovalchuk & Fatieiev, 2019). Приоритетной задачей профессионального агроинженерного образования является подготовка к профессиональной деятельности специалиста, способного решать задачи, аналогичных которым не было ни в его практике, ни у предшественников; специалиста, который осознает, что знания, полученные самостоятельно, приобретают содержания и ценности, а предмет изучения осмысливается путем накопления личного опыта и формирования собственной позиции.

Заключение *Conclusions*

В контексте нашего исследования выяснены особенности внедрения практико-ориентированного подхода в подготовке будущих бакалавров с агроинженерии. Практико-ориентированный подход задает принципиально новое направление в организации профессионального образования.

Таким образом на основе анализа научной литературы и анкетирования установлено, что практико-ориентированный подход в подготовке будущих бакалавров с агроинженерии будет успешным при использовании продуктивных технологий. Особенность этого подхода в том, что формируется профессиональная компетентность, создается фундаментальный запас знаний одновременно с профессиональными умениями и навыками. Результаты исследования показали удовлетворенность уровнем практической подготовки соискателей высшего образования. Для решения проблемы несоответствия образования потребностям рынка труда нужно налаживать сотрудничество между бизнесом и учебным заведением, а также создание партнерских отношений с разными заинтересованными сторонами.

Будущий агроинженер должен быть готов к вызовам с которыми столкнется в будущей профессиональной деятельности. Среди которых: рост темпов накопления и распространения информации, междисциплинарная инженерная практика, глобальные рынки и глобальная конкуренция, проблемы защиты окружающей среды, растущая социальная ответственность и быстрые изменения технологий и условий производства (Rugarcia, Felder, Woods & Stice, 2000). Новые вызовы все больше трансформируют инженерную деятельность, она приобретает инновационный характер и требует от специалистов не столько знаний и умений действовать в стандартных ситуациях, сколько готовности к решению нетипичных задач, к деятельности в условиях отсутствия предыдущего опыта или инструктивной информации и тому подобное. В таких реалиях профессиональная подготовка будущих агроинженеры должна базироваться на действенной оптимальной научно обоснованной системе, которая будет отвечать не только имеющимся вызовам времени, но и будет направлена в будущее, учитывая перспективы развития и изменений в агропромышленной отрасли.

Summary

The article discusses the essence of the practice-oriented approach used for future Agricultural Engineering bachelors' training and identifies effective practice-oriented technologies for their training future. The study was aimed at identifying effective training technologies targeted at developing Agricultural Engineers' skills necessary in the labour

market. In order to conduct experiment a questionnaire was developed to identify teaching and learning problems as well as students' requests to improve the educational process. The survey also identified the most effective training technologies and those that didn't find their widespread practical use. Practice-oriented technologies facilitate future Agricultural Engineering bachelors' professional activities during their training in higher education institutions. These include contextual learning technologies, design technologies, case-study technologies, interactive technologies, problem-based technologies, portfolio-based technologies, master class technologies. Presented results of students' satisfaction on practical training and Survey results on influencing factors for practical training level.

The study showed a high and average level of student satisfaction with practical training and ways to improve it.

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EXPERIENCE OF INTRODUCING CLOUD TECHNOLOGIES

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Shostka educational complex: specialized school of I-II degrees-lyceum of Shostka town council of Sumy region, Ukraine

Abstract. *Modern education is closely connected with widespread digital technologies, through which communication, collaboration, creativity, and innovation can be organized. The aim and objectives of the article consist in describing the experience of real experience with cloud technologies on the example of a municipal organization (institution, establishment) “Shostka educational complex: specialized school of I-II degrees-lyceum of Shostka town council of Sumy region”.*

To test the effectiveness application of cloud computing technologies in the educational process of the institution, experimental work was carried out, as a result of which carried out: analysis of the possibility application of cloud computing technologies in the learning process; determination of pedagogical conditions application of cloud computing technologies in the learning process; testing the effectiveness of certain pedagogical conditions.

Assessment of the possibility of using the selected technologies in education was carried out according to the results of a survey of all participants in the study. This stage made it possible to determine the main directions of research, take into account the possible obstacles to their use.

To implement the selected pedagogical conditions, guidelines for teachers on the use of these technologies in the learning process were developed, which contain a set of methods and techniques for organizing lessons, ways to implement a business game, cluster, senkan, fishbone, comparison chart, brainstorming .

Organizing the educational process with the help of cloud technology is one of the priority areas of updating modern education that allows not only to improve the quality of education, but also to achieve a new level of relations between participants in the educational process at all stages of teaching. They help teachers work not only with children but also with their parents.

During the transition to the new educational standards, cloud technologies contribute to forming a new digital culture of teachers and students. Their applying in the educational allows to make the educational space open.

Keywords: *digital technologies, cloud technologies, educational process, online education.*

Introduction

Modern education is closely linked to the widespread use of digital technologies, through which it is possible to organize communication, collaboration, creativity and innovation. Realizing their functional features, limitations, general principles, consequences and risks of use, it is advisable to implement changes in the educational process, the central figure of which is the student.

Digital technology is an integral part of modern education (Kovalchuk, 2019). They provide an opportunity to increase study time through independent work of higher education students; change the forms of control over the quality of the educational process; to provide flexibility in the management of the educational process; increase the digital competence of the educational process participants, that makes them a powerful means of improving the quality of education (Yakovenko, 2019).

The problems of using cloud computing technology in education are covered in the works of N. Bakhmat (Bakhmat, 2013), T. Vakalyuk (Vakalyuk, 2016), Y. Dyulicheva (Dyulicheva, 2013), G. Kiselyov (Kiselyov, 2013), V. Kobysya (Kobysya, 2012), S. Litvinova (Lytvynova, 2016), N. Morse (Morse, 2018), A. Struk (Struk, 2014), N. Khmil (Khmil, 2015).

In her works, S. Lytvynova identified the types of educational clouds, forms and necessary components of using cloud technologies, types of activities supported in the cloud, the possibility of using these technologies to organize a cloud-based learning environment at school (Lytvynova, 2016). T. Vakalyuk considered the topic of choosing a cloud platform for designing a cloud-based learning environment (Vakalyuk, 2016). N. Morse and O. Kuzminska in their works reveal the topic of using cloud computing for testing and independent work (Morse & Kuzminskaya, 2012).

Cloud technologies provide educational institutions with resources and services that are available without significant capital investment in hardware and software. The undoubted advantage of their applying is also constant access to information and software for its processing. Therefore, in the current conditions, cloud technologies are very necessary and important for education.

With the help of cloud technologies there is an opportunity to create an accessible cloud-oriented educational environment for organizing cooperation which aim is to achieve certain didactic goals, fulfill pedagogical tasks, unite subjects and objects of the educational process for effective cooperation aimed at improving the quality of students' educational results by means of cloud technologies (Lytvynova, 2016).

The benefits of cloud technology are multifaceted. The use of programmes and services supplied by external providers is a cost-effective solution for

educational institutions. Their use reduces the cost of hardware and software, as well as reducing the cost of their maintenance by specialists, paying for the use of cloud technology only for actual consumption, and the most attractive is that there are many free services for educational institutions (Danylyuk, 2019).

Cloud technologies provide access to educational resources and software from any device and at any time of its connection to the Internet. This, in turn, allows the ideas of mobile learning to be realized not only in the use of cell phones for learning purposes, but also in the mobility of participants in the learning process and the possibility of their lifelong learning.

At present, there are a large number of cloud service providers, the most popular used in education are Google's G Suite for Education and Microsoft's Office 365.

Purpose and Tasks of Research

The object of the study is the introduction of cloud technology in the educational process.

The subject of the study is the possibilities of applying cloud technologies in the pedagogical process of the school. The purpose of the study is to make a list of fixed assets and their capabilities based on the experience of implementing cloud technology in the school educational process.

Based on the purpose of the study to verify the effectiveness of the cloud technology usage in the educational process of the school, the following tasks were set:

- 1) to analyze the possibilities of using cloud technologies in the pedagogical process;
- 2) to determine the pedagogical conditions for the cloud technologies usage in the educational activity;
- 3) to check the effectiveness of certain pedagogical conditions.

Let's consider the experience of implementing cloud technologies on the basis of the municipal organization (institution, establishment) "Shostka educational complex: specialized school of I-II degrees-lyceum of Shostka town council of Sumy region".

The methodological basis of the study:

- analysis and synthesis of the literature on the topic of research in order to determine the state of development of the problem under study in the context of digitalization of education; system analysis to determine the pedagogical conditions for the use of cloud technologies in educational activities;
- questioning, testing, observation, pedagogical experiment to test the effectiveness of certain pedagogical conditions;

- data processing methods: grouping, ranking, parametric methods of comparison of research results for quantitative and qualitative analysis of the data obtained, methods of generalization, comparison and prediction; method of generalizing indicators for analysis of aggregate data; tabular and graphical methods.

Results

In order to implement the first task, a literature analysis of the problem under study was conducted. The result suggests that the use of cloud computing technology is a promising area that can improve the efficiency of the educational process and reduce the cost of its implementation.

These technologies provide opportunities for resource sharing and online collaboration, as data is stored on the servers of the company providing the services. With cloud technology, education participants work in real time on shared documents, projects and tasks. Everyone can see and comment on the activities of other participants, which increases the benefits of cooperation.

Cloud technology serves as a tool for creating an interactive educational environment in which there is active interaction in educational activities, students collaborate and communicate with all participants in the learning process. They are an indispensable tool for cooperation between students on joint projects, where everybody performs individual tasks, and the results are represented as a joint document. Students can evaluate and edit project work during collaboration, which promotes the development of critical thinking, analysis and evaluation skills, expression of opinion, etc. Interaction encourages students to actively participate in various tasks because the results of their joint work are visible to others. Teachers can objectively assess students' knowledge and skills, as there are options for tracking and establishing each student's personal contribution.

Cloud technologies also provide the ability to work offline with further synchronizing (when Internet connection is available), no ties to the place where the training takes place and the time of the training, which gives participants the freedom to work at their own pace.

There is a special educational application Google Classroom for creating courses while organizing the educational process. In the courses you can create tasks of different types, according to which you can distribute and collect students' work. With the help of Google Classroom you can organize individual or group work using the appropriate access settings. You can add different types of files from your computer, Google Drive, YouTube channel or links to educational resources in the classroom. Managing educational activities is realized through commenting, responses, i.e. quality feedback. Students have the opportunity to communicate with teachers when completing tasks, while

comments and questions are divided into private and open for discussing with the class. Children work on tasks use of these technologies and have the ability to add files of various types (text document, spreadsheet, presentation, photo or video from mobile phones).

Applying communication programmes in the educational process, such as e-mailing, instant messaging, online conferences, forums and others expands the opportunities for communication between the teaching participants. With their help you can add comments to tasks and creative work, share creative thoughts, seek advice from the teacher and all these activities proceed in real time.

Participants in the learning process can manage future and current events, meetings with the help of calendars. The capabilities of the calendar created for the classroom are useful in managing individual tasks of students, notification of various events. Common calendars help the training participants to more effectively organize joint work on group projects. Teachers can use the calendar app to set lesson dates and due dates, as well as monitor the timeliness of assignments.

For creating and editing documents in G Suite there are appropriate programmes: for the ability to process text it is Google Docs, for spreadsheets it is Google Spreadsheets, and Google Presentations. One of the major benefits of using these technologies is real-time file sharing with all students. They can simultaneously view, comment on and edit shared files. Opportunities for comments and messages improve collaboration and can be used to share ideas, discuss and communicate. The change history is also available, and teachers can track changes and revert to previous versions.

Creating and working with text documents, spreadsheets and presentations using cloud technology is possible in the centralized cloud storage of Google Drive. Participants of the educational process have access to a virtual disk and updated versions of all documents. Cloud storage is gaining popularity because of the ability to share documents, which improves productivity. For managing files on Google Drive there are appropriate tools that allow creating folders, which then move the files, add a description, thus allowing you to use different criteria when searching in collections of saved documents.

Storing information on a virtual disk has numerous advantages. The main one is the ability of all trainees to access saved files at any time and anywhere through different devices.

Cloud technologies make it possible to work both online and offline. Files are automatically updated and synchronized between user's different devices and between multiple users who work with them when connected to the Internet.

At present, when every student has a mobile phone, the aim of school is to teach students to use them not only for entertainment but also for educational

purposes. An essential feature of cloud technology is the ability to support various cloud technologies to organize interaction on different devices.

An essential feature of cloud technology is sharing, with different levels of access to shared files: read-only, editing options, shared ownership.

Organization of shared access to files of all participants in the learning process involves communication in different forms: comments, chat, which increases the level of interaction, increases productivity and quality of educational activities. Also, teachers who have access to students' assignments can monitor their performance, give instructions, thereby providing timely feedback, assessing the contribution of each to the solution of common tasks.

It is possible to use Google Meet to conduct online lessons in the format of video meetings at school. With the help of the application or previously created link in Google Classroom, teachers organize online learning. It is not difficult for students to join such lessons, which makes the organization of online learning at school a very simple process from the technical point of view.

The study identified a number of benefits that the school will have when using this technology. Educational opportunities and tasks realized by means of cloud technologies were defined, among them - increase of degree of availability of educational content and possibility of its operative updating, organization of educational process by means of cloud technologies, organization of various forms of the control and monitoring of performance of educational tasks.

For realization of the second task of research the analysis of scientific works was carried out, pedagogical conditions were allocated and proved: motivation to learning by means of cloud technologies; organization of learning by means of cloud technologies; introduction of effective forms, methods of learning on the basis of cloud technologies.

The implementation of the first pedagogical condition is defined as an important stage of the study, as the effectiveness of the educational process is directly related to how high motivation is.

To increase the interest in the accumulation of knowledge, skills, appropriate conditions are necessary: to use active teaching methods, such as discussions, role-playing games, trainings and others; presentation of educational material to combine with appropriate emotional accompaniment; organize productive learning activities; create a favorable emotional climate for learning; organize feedback; to analyze the success and causes of failure.

Success is an important aspect of motivation. Awareness of the need for success contributes to the formation of goals. Motivation of learning and cognitive activity is likely to decrease if the need for success is not met. Therefore, it is important to create the necessary conditions for its achievement.

Thus, the use of active forms and methods of teaching, creating a comfortable atmosphere of interaction between participants in the educational

process, the amount of content and novelty of educational material, respect for the individual contributes to the active formation of motivation in students.

To implement the second and third pedagogical conditions, a survey was conducted among the participants of the experiment, as a result of which the possibility of using cloud computing technology in the learning process was assessed. This stage allowed us to identify the main areas of cloud computing in the organization of learning in the school. As a result of the analysis and assessment of the possibilities of cloud technologies, the educational activities in the municipal organization (institution, establishment) “Shostka educational complex: specialized school of I-II degrees-lyceum of Shostka town council of Sumy region”.

As a rule, cloud technologies in the basic version for educational institutions are free, which makes them even more attractive. G Suite for Education is a set of free Google programmes designed for educational institutions. The G Suite for Education package includes 14 basic and 51 additional Google services, including Gmail, Google Drive, Google Class, Google Meet (video conferencing tool), Google Calendar, Google Docs, Google Spreadsheets, Google Presentations, Google Sites, and a digital interactive Jamboard.

Due to G Suite for Education, our educational institution has free access to cloud technologies that can be used in the educational activities. This made it possible to create a cloud-based educational environment for the school. Each participant in the educational process has a personal account. Cloud technologies are available through a web browser and the Internet, so they do not depend on the equipment that allows teaching participants work on various devices, including mobile ones.

The application of the technologies highlighted in the study in education is one of the priority areas of modern education renewal, which allows not only to improve the quality of education, but also to reach a new level of relationship between teachers and students at all stages of education. They help teachers work not only with children, but also with their parents.

It is worth noting that in the current difficult conditions there is a need to change the traditional forms of work with parents. In the conditions of adaptive quarantine parents' access to school is limited and, therefore, such actions as parents meetings, consultations, questionnaires on various issues, seminars, welcoming days, carrying out joint actions, registration of information stands, booklets have objective difficulties together with all their positive characteristics. With the development of digital technology, when each parent has technical means and can find any information, teachers have the opportunity to communicate with them virtually. Using Google Meet, for example to hold parents meetings online as a video conference, becomes a necessity and can turn parents into active teaching participants.

To implement the identified pedagogical conditions of the study developed guidelines for teachers on the use of cloud technology in learning, which contain a set of methods and techniques for organizing classes, ways of implementing a business game, cluster, senkan, fishbone, a comparison table, brainstorming.

The total number of students of municipal organization (institution, establishment) “Shostka educational complex: specialized school of I-II degrees-lyceum of Shostka town council of Sumy region” involved in the experiment - 175 people, including 98 people in the experimental groups and 77 people in the control groups.

To test the effectiveness of the selected pedagogical conditions, training was conducted with the introduction of a new factor (new teaching tools) and the effectiveness of its application was determined.

According to the results of the comparison of the obtained monitoring data, there was a significant improvement in the results of educational activities. The study showed that the number of participants in the educational process who recorded a sufficient and high level of achievement in the experimental groups increased. There was also a decrease in the low and average levels. In the control group there were no significant changes after the end of the experiment (Fig.1).

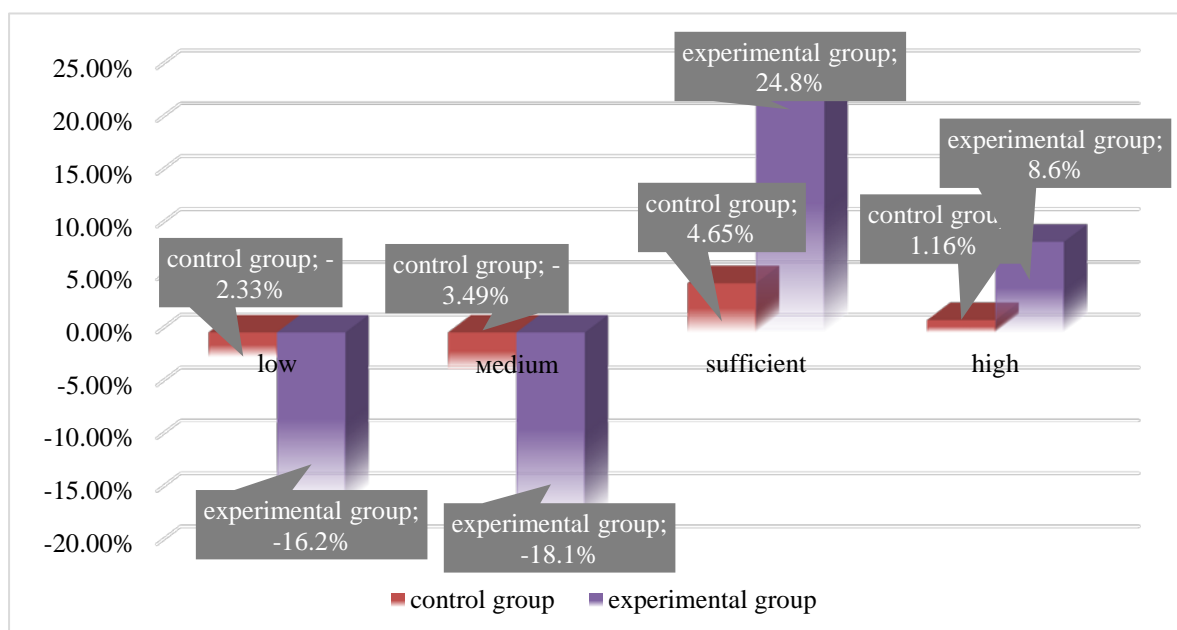


Figure 1 Experimental Results

The solution of the tasks of the study led to the achievement of its goal. In general, according to the results of the analysis we can talk about the high motivation of students to accumulate knowledge when organizing the learning process using cloud technology.

Thus, cloud technology provides the following opportunities for the educational establishments:

- 1) creating text documents, spreadsheets and presentations;
- 2) exchanging files and cooperation;
- 3) managing contacts, communication and calendars;
- 4) organizing online learning with the help of Google Classroom and Google Meet.

Files are available on various devices (including mobile ones), there is the ability to synchronize data between multiple devices and users, that makes cloud technology very popular for education.

Conclusions

The study showed that in the context of the digitalization of modern society and modernization of education an obligatory technological tool to maintain and implement the educational process is cloud technology.

During the transition to the new educational standards, cloud technologies contribute to forming a new digital culture of teachers and students. Their applying in the educational process allows to make the educational space open.

Cloud technology is a space of interesting and productive education for students and teachers, it does not violate the principles of equal access to education, implements self-affirmation, disclosing individual and creative abilities, development of independence, responsibility, ability to analyze and synthesize selected material, increases interest in the subject. It is such new forms of virtual interaction that stimulate motivation, thinking, provide an opportunity to learn new means of virtual communication and digital environment, ensure the full use of the potential of the personality.

As part of the study, the set tasks were implemented. An analysis of the necessity and possibility of organizing training in the school with the help of cloud technologies was carried out. The pedagogical conditions of the use of cloud technologies in the organization of the educational process at school were identified, substantiated and experimentally tested.

As part of the experimental work a pedagogical experiment was conducted. The analysis and generalization of its results showed the positive dynamics of quantitative and qualitative changes in the educational activity of students that occurred during the period of the experiment.

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CHOPPED-POT SITUATION IN TEACHERS DEVELOPMENT VIA ACTION RESEARCH TECHNIQUES IN CYBER ERA

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Abstract. *Chopped-pot (chop pot) is a poker term and a critical opening metaphor for this article. Applied action research steps and these extensions are necessary for practice during a pandemical situation in unstable and challenging teaching at universities in Czechia. Forms of teaching, personal contact and process of monitoring students' results have changed dynamically. Mass influence of pandemic situation stopped actions at schools and many institutions all over the world. In Czechia, there has been transferred all practical and cognitive (theoretical) subjects to cyberspace. Due to the lack of government information, public fear and low digital literacy level, students have been learning in virtual classes and individual consultations. Many of them have lost contact with their critical practice and opportunities to transfer their knowledge into the school environment. We tried to modify classical action research approaches to new conditions in cyberspace and use it for pre-service and teachers' innovation from an innovative perspective. In the methodological part, there is research presented from a full semester of gradual teachers' development. The constructed research tool was tested in virtual conditions and monitored activities and the progress of development in teachers' self-reflection for their future daily practice. The mixed design of research tools and a combination of the postproduction process of data open scientific feedback for their subjective inquiries in the individual personal development of educational staff in Czechia via action research model.*

Keywords: *action research, teachers' development, teaching & learning, self-reflection, university preparation.*

Introduction

The long period of dogmatic teacher's preparation at universities has been banned/restricted by pandemical wave COVID-19. New restrictions have injected conditions of educational standards in Czechia without any warnings. These restrictions cause an unstable functional mechanism that supports students' development and guarantees them voluntary options of practical and applicable preparation in schools' environment. Face-to-face practical development is for future teachers, furthermore teacher in general, very important. Nowadays, it has been all moved to cyberspace. The pedagogical intense and educational field needs to focus on daily practice which is also supported by haptic knowledge,

transfer and life-experience in the educational institution. Daily greetings, social contact, experience sharing and feedback from more skilled mentors and academical staff have silenced. Adaptation on students' cyber preparation at the Faculty of Education at Palacký University in Olomouc (Palacký University, 2020) moved to virtual rooms, and teachers' professional competencies cannot fluently adapt to it. Suddenly, traditional ways of action research teaching and inquiry techniques were less attainable from couches and PC screens. Students' learning conditions were various, and many of them struggle with complicated elderly theoretical frameworks and dry theory of action research by themselves. The most complicated has been entry level of understanding what is now action research, factors, the influence of those practical applications to their professional work without touchable experience or full support inquiry feedback.

Action Research and 'Covidity' Pitfall in Education

Preparation for education practice is tightly connected with the transposition of theory into a live experience. We accept original empirical and theoretical studies on important topics and their relation to practice. Hence, it is a pillar of elaborate pre-service preparation. Teachers must know how to do research in the school environment and effectively influence their teaching excellence. Teaching excellence positively influences the school environment and teaching skills, helping to understand the pragmatism of knowledge in real-time tasks. The action research is hidden in part of pre-service preparation. We may find many diversities which strategy is necessary to implement for our work. Mainly it is taken as a part of vague theoretical conceptualisation of participatory research with mixed general ideals of the action research phases.

In Czechia, there has been banned social contact and presence at the educational institution based on national evaluating strategy against COVID-19 threats called PES (MZČR, 2020). Students' are lost, and they have to deal with an enormous quantum of the best of the best literature approaches entirely alone. This advanced level of action research seems to be too much perfectionist for pre-service students' level without a lecturer explanation. Potential usage is gone due to the lack of teachers' informal language. Advance level of action research is fantastic for academical discourse on the flat ground at universities. The approach is perceived only as a utilitarian academical source. We must explain it merely by reduced theories to pre-service students, not by the cycles, but by the specific examples of good practice or results of action research plans. They cannot understand cycles in details and transform it into their cognitive development of teachers identity. Teachers' role in the school environment is between investigative creators, semi-researchers and as we call it in the informal labelling 'doubting Thomas (seekers)' of their daily endeavour.

Henceforth, open teachers' minds lead to better achievement in practice and push their skills to the next level in natural developing ways. Pre-service students may not always try new ways to change their actual knowledge in blank educational situations and stimulate their imagination.

Research & Action - Don't Let Me Be Misunderstood

The current literature sources include definitions of existing paradigms of actions research conceptions that exclude each other. Action research presented in view of many Western authors' examples (Edwards-Groves, Grootenboer & Wilkinson, 2018; Reason & Bradbury, 2008; Waite, 1995) has much more practical value for better understanding than transposition from Czech authors (Richterová et al., 2020). The questionable situation is connected with linguistical roots in a definition of 'action' to the Czech meaning '*akční*' which sounds to a student like dynamism to do something on the movement as terrain research, based action from a teacher, nor like act to change something. Taking actions in education is natural. It must also be connected with right inquiries and should lead to progressive results, which do not have to be only positive, e.g. to help to understand the subjectivity of the mechanism inside the self-reflective level of teaching skills themselves.

Action, not based on the movement or dynamism, presented by (Bill, 1998; Burnes, 2004) links to a planned cycle of movements. On the other hand, new coming authors (Chudý & Kropáč, 2019) represent the contradictory mindset. Action research is not just about fully complementing the circle of actions or movements, albeit students finish their partial phases of planning, they could make vital progress for their teaching and learning development, which is pushing them to the next internal level of self-esteem during preparation. Raised questions benefit from pre-service preparation because, after external evaluation, teachers are in the terrain where each classroom or school involves investigative actions to comprehensively understand the situation. Teachers are changing their teaching competences to 'reflective school reformer' in action. They must understand research elements and basic methods such as an observatory, diagnostic, dialogue techniques, inquiry methodology and soft skills. Without that, they are drowning victims in an educational reality. They are wearing wellington boots and try to avoid educational reality problems such as unfunctional teaching methods and forms, strategies, and lack of authority, which is conducting self-esteem partnership over boards of a classroom at the school.

Whereas research is rigorous, we work with an axiom that action research enriches teaching practice more efficiently. Thus, it is recommended to focus on inquiry, results of actions and those impacts on the teaching & learning development. Let us compare Western authors (Greenwood & Levin, 2008) and

Czech interpretation of action research in pre-service preparation. We should be more concerned about open options connected with the main paradigms of this approach. Simultaneously, strict cyclic schemes and movements are beneficial in the traditional research approach in connection with philosophical standards of used methodology with a broader population impact.

Advanced typology of action research persuades the researcher to plan and step in roundabout cycles. However, for pre-service teachers, strategies are more critical to transfer knowledge and practical results through problem-solving situations. In Czech sources, traditional authors (Janík, 2004; Nezvalová, 2002; Walterová, 1995) pointing on a conservatory approach of cycles and achievable results, but we may expect less of that from pre-service preparation at universities. Especially during COVID-19 restrictions, limitations arise. The typical time for tasks, team-work communication and teaching were reduced. The user's technological tools and ID on the cyberspace do not bring in early times expecting values (Kropáč, 2020). Participants have to set rules for how and when they will be realising tasks and pray for the platform's functionality, storages of data and connectivity of each student or teacher. Everyone was struggling and suffering. Indeed, it is the weakness of teaching action research online. That is not due to ideal technical tools, but due to impersonal teaching, human errors and feedback and warm life motivation from lecturer side, which is on cyberspace just only emoji or blank label.

In cyber conditions is missing element critical assuming feedback. Hence, students can react on task or questions but not always answered on the inquiry. Conditions are not suitable for longitudinal solutions of pre-service preparation. Students need to develop their internal self-reflections ability and involve broader implementation of their solving strategies to the external environment. Switching between *in vitro* and *ex vitro* conceptualisation of development students' autonomy must be balanced, and each component of personality have to lead to excellent teaching. Those techniques are part of action research preparation and more comprehensively influence students in cyberspace, albeit as lecturers, that have to skip some procedures or mass inquiry tasks that cannot be realised in a virtual room due to low sound echo in 'cyber hive'.

In the legacy of Lewin's idea of action research (Burnes, 2004), we have to tent to apply for 21st Century teachers and their needs as school researchers. That is why traditional methodologists have accepted action research as an assisting tool or uncomplex method with unfinished cycles without objectivity for the whole population. On the other side, action research in pre-service preparation has a dominant role when students accept synergy of planning, communication and publishing their thoughts into creative results and projects. Traditional methodological approach with specific tools in default point on something in

research vacuum but action research is implemented further interpreting daily bread of teachers' mission.

Everyone Loves the Chopped-pot

As we mentioned before, the chopped-pot is a poker term. However, the article is a primary key concept in dealing with complicated situations where students and teachers are separated. There is only a technical tool that helps cross the barrier and makes students' knowledge rise. Chopped-pot is usually a situation when two or more persons split their chips inside a poker game, and everyone is a winner and does not matter if they had a potent combination or not. That is the same in many situations during the teaching process, where the teacher strongly influences students. However, sometimes conditions are not user-friendly for the best results or expected value of a teaching time-investment. Technological transfer, connectivity and sharing in cyberspace brings many useful add-ons, plugins and supporting tools. Indeed, it is necessary to mention that sometimes students have to struggle only with their devices' elementary functions. Many of them had a complicated learning environment due to sharing the same devices in home conditions. Also, not everyone could fully present their individuality in the 'masticated' educational conditions in cyberspace. Mentioned factors are opening rhetorical questions: 'Who is a winner in cyber conditions, and how can the transfer of students' knowledge development progress?'

Methodology

Methodology approaches are mixed (Tashakkori & Teddlie, 2012). We are using two steps verification of validity and reliability in our presented results. Firstly, we analysed an amount of self-reflectional documents created by our students in the actual semester. The central concept is the hypothesis presented below, which is benchmarked by statistical method Cochran's Q Test. Secondly, we analysed data files of worksheets created in cyberspace platforms by our students in the actual semester.

Our research data has been collected during the last semester at Palacký University Olomouc at the Faculty of Education. Research's primary sample has been pre-service teachers. The total amount was 117 full-time students and 178 part-time students-all of the students finishing their master degree in 2 years accredited programmes. Collecting of data started in September 2020 and finished in December 2020. Nominal data as gender or age was not crucial for our research analyse. During monitoring and postproduction of data sets, we need to verify who and how will be using action research in practice after finishing the partial preparation.

Fundamentals of Research Tools

Firstly, our research's measurement tools were self-reflection technique where students had to complete their vision about themselves. However, it was complicated for them due to an instant reflection of their experience because they were limited by time and task completion. Lately, all of them completed self-reflections have been post-produced by Atlas.ti version 8, and deeply investigated. Secondly, students had to work together on a specific task during cyber lesson. Constructed action research worksheet has one page with instructions and four more preprinted worksheets distributed online where students had to fill their solutions of that task. All of the students from full-time preparation had the same task.

Environment (platform), where it was realised, was a Microsoft Teams. Students did not have any clues on what and with whom they would work. This simulation is very close to daily practice in schools where we cannot predict who will need our help in a short time. The session's maximum length was set up to 45 minutes (approx. equal to one class lesson at school). They were invited to the available virtual room. After five minutes, they had to disconnect and reconnect to prepared channels with limitation maximum of 15 persons per team and could not switch teams during activity. All of their progress was monitored by recording option on this platform, and lecturer was in role as guide. The recording was fully legal according to the internal policy of Palacký University Olomouc and 32016R0679 Regulation (EU) 2016/679. The measure of their activity was possible through video-analyses after a task. We monitored as their team communicate, processing of analyses of calls and inquiries leading to results. It was analysed a portfolio of each group (worksheets) and recorded activity which has approximate 60 minutes per team. We may comprehensively analyse over 660 minutes of pre-service inquiry solving strategies in action research with daily classes students.

The distance pre-service students had similar tasks transformed into a fully comprehensive tool distributed by online form and tried to complete their action research cycle. The tool was 25 steps leading to complementation, including action research methods and ordinary teaching strategies and experience. For each step was limitation maximum of 250 words without time limitation. Constructed tool does not have only open questions but also qualitative measuring questions. We count there, e.g. impact of action research on their actual and future work, understanding of action research and transformation of that knowledge into service situations, adaptation on professional development and in the last instance it was practical usage of results. Action research tool had a leading role as a validity method for *mere conduit* knowledge transfer in difficult cyber conditions.

Traditional realisation Student#1 POW	Pandemic cyber realisation Student#2 POW	Chopped-pot & win-win cyber situation Lecturer POW in cyber conditions
<ul style="list-style-type: none"> •1. Introduction •2. Entry self-reflection assesment •3. Inquiry task method •4. Participatory task method •5. Team worksheets and live feedback from lecturer •6. Assesment of work during action research preparation •7. Ending sefl-reflection 	<ul style="list-style-type: none"> •1. Introduction •2. Entry level self-reflection assesment •3. Team solving worksheets •4. Assesment of team work during action research preparation via video records •5. Ex-ante evaluation •6. Ending comprehensive self-reflection (distance students only) 	<ul style="list-style-type: none"> •1. Lead students to elementary introduction of action research •2. Finish constructed worksheets and deal with non optional cyber conditions •3. Feedback and assesments immediately action or worksheets before they forget •4. Supervise ending comprehensive tool with distance learning students •5. Open mind •6. Teachers' informal language

Figure 1 Phases of Action Research Preparation

Findings Quantitative Insight

Based on the conceptual selection of sample data set, the main valuable factor which leads to the identification of application action research to daily practice was based on the critical values where participants selected a rating of importance, length of practice and future usage of this tool. In the first phase of comprehensive postproduction, we focused primarily on data interpretation and objectivity for a detailed understanding of relationships between more experienced pre-service students. We added values of action research approaches as a daily tool for their practice.

All qualitative values are nominals, and these pairwise relationships have been analyses in IMB SPSS Statistica version 25. For instance, we present a critical data set validation procedure thought Cochran's Q Test table below and hypothesis determination. The statistical hypothesis of dependency is presented as a link to future usage of action research for future practice (e.g. self-reflection, an external tool for cooperation), and connection to the experience of pre-service teachers of distance learning students. A formula interprets pairwise tests testing criterium for a null hypothesis as $H_0: \pi_a = \pi_b$ and the alternative hypothesis formula $H_A: \pi_a \neq \pi_b$.

Table 1 Cochran's Q Test SPSS Results

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
SPSS Cochran Q test	The distributions of 0 practice, <5 years of practice, >10 years of practice and >5 years and < 10 years of practice are the same.	Related-Samples Cochran's Q Test	,000	Reject the null hypothesis.
Asymptotic significances are displayed. The significance level is ,05.				

The set hypothesis is defined as:

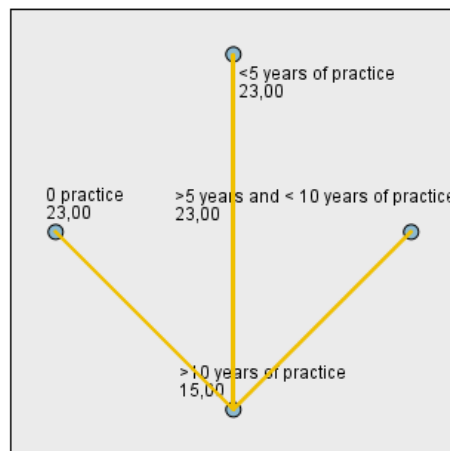
H₀: 'Between benefit for future usage of action research in cyber preparation and student practice length is not independence.'

H_A: 'Between benefit for future usage of action research in cyber preparation and student practice length is independence.'

Pairwise entities of collected data define that null hypothesis was declined and alternative one was accepted. Due to traditional Cochran's Q Test's crosstab limitation, we do not know precisely where are mutual nodes between observed pairwise relationships. For better understanding, the McNemar Test in SPSS (Figure 2) with SPSS integrated Bonferroni value adjustment, which crystalises an individual reflection of mutual adoptions between observed pairwise samples. The yellow linear lines coming from nodes are presenting significantly different results in a pairwise comparison.

After the final report and data proceeding, we accepted an alternative hypothesis that leads us to the theory about using an action research tool for future practice. We found a significant interpretation of usage by more skilled pre-service teachers. We led us to objective acceptance of opinion about the necessity of using this tool in schools mainly by teachers with a more extended practice where they may change their stereotypes of teaching habits. The pre-service teachers without practice and sample with practice under to 5 years are open for everything. Pairwise mutual connections in testing combinatory were mainly positive based on responses and compared postproduction. There was no significant ambivalence of potential usage of action research between pairwise of average skilled pre-service teachers.

Pairwise Comparisons



Each node shows the sample number of successes.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
>10 years of practice-0 practice	,348	,087	4,000	,000	,000
>10 years of practice-<5 years of practice	,348	,087	4,000	,000	,000
>10 years of practice->5 years and < 10 years of practice	-,348	,087	-4,000	,000	,000
0 practice-<5 years of practice	,000	,087	,000	1,000	1,000
0 practice->5 years and < 10 years of practice	,000	,087	,000	1,000	1,000
<5 years of practice->5 years and < 10 years of practice	,000	,087	,000	1,000	1,000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is ,05. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Figure 2 Combined Table Sections in McNemar Test

Qualitative Insight

The second phase of the presented results is mainly connected with a qualitative evaluation of datasets of student’s worksheets. Action research tool tests students’ enhancement for practice. Based on the predictions and findings, not all students’ are fully open to continue in usage daily practice, especially when dealing with unexpected and stressful situations. Problem-solving strategies and team-cooperation point on lack of self-esteem in inquiry and abstract assignment may cause complications between understanding situations, influencing decision-making, and developing rhetorical skills. These imaginative situations are crucial in developing teachers’ mastery. These findings opened a gap in cyber preparation. Students gave less feedback than in traditional lectures. The lecturer

cannot be in each channel, deeply explaining all inquiries, satisfying expectations, and leading students to the best results in action research preparation. Misunderstanding and incapacity of lecturers go hand-in-hand with other problems such as connectivity and dead souls during the team-work because lectures do not have a ‘whip’ on the non-active users working in channels. Thus, we have to mention difficulties wherein groups are no prominent leaders in students’ groups.

The statements presented below are the most interesting from all conversations during the action research task and pointing on the lack of efficacy between the situation and preparation in cyber conditions. The tool is constructed as a task with ‘onion’ structure. If the task is started from the end to the main page of the worksheet, it is the right process. Otherwise, sometimes students lead their decisions from the main page of the worksheet to the other minor worksheets. In conclusion, this dichotomic approach did not significantly impact final results in the action research approach.

Example of inquiry communication in cyber groups during worksheet solving conclusions:

All students: *‘What to do now?’*

Student A: *‘Do you understand this situation what happens? I am quite lost...’*

Students B: *‘We should ask who is responsible for the supervision of teaching at this classroom? What do you think?’*

Three students: *‘It is obvious. It is a mistake of management. I do not believe that she must face this situation alone as a graduate teacher with less than one year of practice.’*

Leader of students’ group: *‘Ok, but please focus on how we may influence a process and solve this situation. Do you think there is an option to call someone with practice? I mean now a psychologist or someone for external evaluation of teaching...’*

Student B: *‘She (teachers’ identity example in the worksheet task) will be under stress. In my situation, I will be focusing on the solutions where I may ask someone what I am doing wrong.’*

SILENCE 15 SEC

MICROPHONES’ ECHOES

TIME-BANK BETWEEN FINAL CALL

Leader of students: *‘Is there someone against our decision?’*

All students: *‘Recommendation is to ask someone from management or more skilled teachers at the school. If this will not working, call someone for external evaluation such as parents!’*

Leader of students: *‘Ok..., I am writing it to a worksheet. Next, please.’*

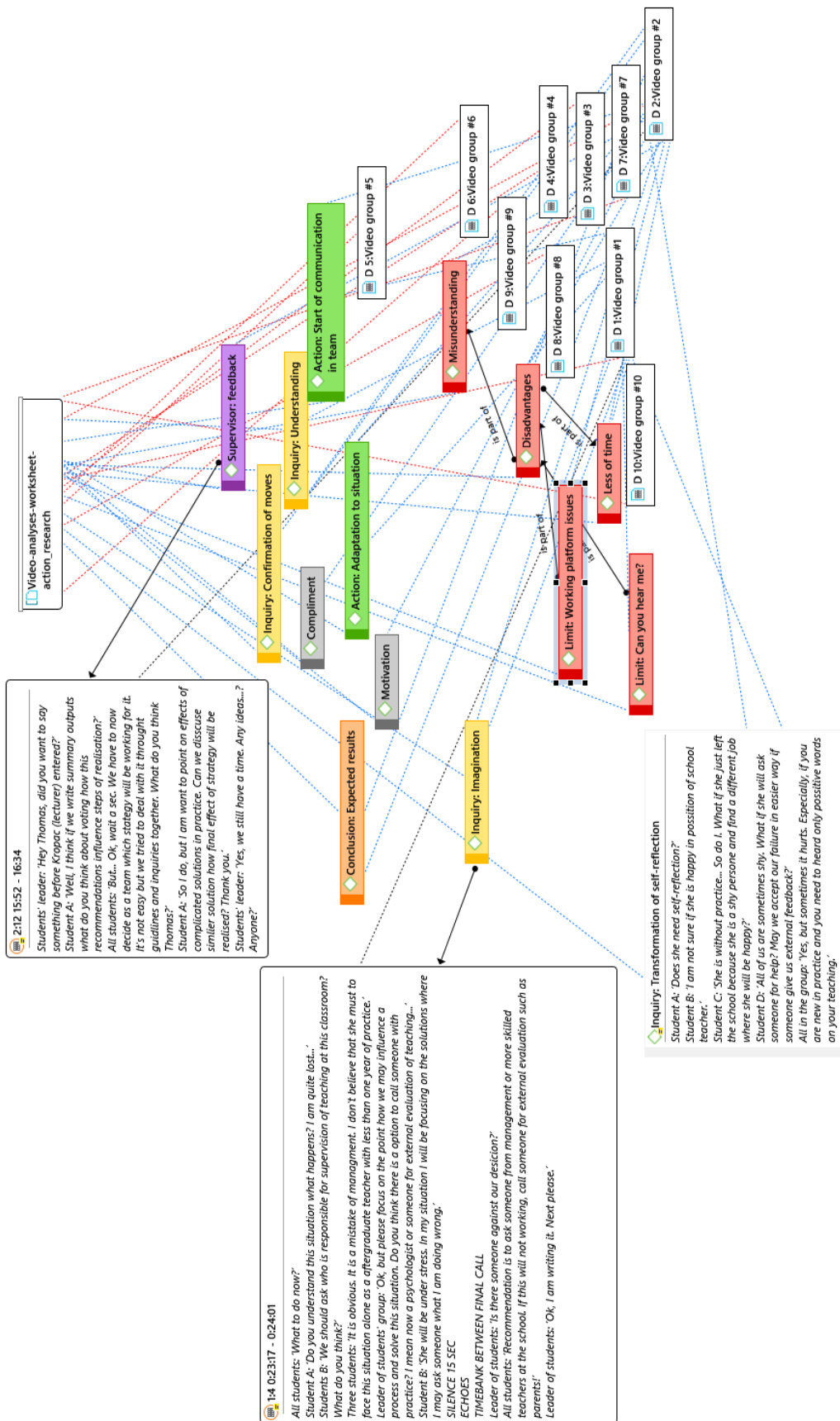


Figure 3 Atlas.ti Video-analyses Nodes

If we highlight final results, there is always a limitation in conditions dealing with lack of connectivity and limitation with shared materials in the platform due to participants' digital literacy skills. The critical disadvantages were inactive students in some groups that were passive during the solutions in some teams. However, the inactive student's percentage was around 11% of all the students, which is approx. 1-2 students per group and that is not so bad as we expected before. Moreover, worksheets push students to focus on the cycle of inquiry moves. Cyber conditions help to develop some changes in pre-service preparation such as a focus on imaginativeness of situation, understanding of the situation, action and transformation of the current situation, adaptation on the community recommendation, pre-service teachers' insight and expected value defined as final expectations of reality, self-reflection of team-work, research development in pre-service simulation, lecturer assessment.

These steps develop students' self-esteem, action research thinking and application of their future usage in school conditions, based on their research interest and skills.

Conclusion

Not everyone is a shoo-in in cyber preparation. Chopped-pot metaphor includes a pre-service student and supervising lectures. These complicated restrictions are not always positively enhancing teachers' motivation to do something new and progressive. The dogmatic ways of teaching are gone. Preparation at the universities has to deal with non-face-to-face teaching and learning options.

Cyberspace opens new trends in the teaching of action research. Lectures may be happy due to more straightforward leadership options in the groups and recording options in students' mass groups, which is added value to the lecturer for continuing feedback and enhancement of students. Otherwise, some of the steps cannot be realised in complicated platforms, and students are lost when they have to finish some longitudinal task without supervision. Especially, full-time pre-service teachers without experience are too dependent on lecturer feedback. Working strategy and recommendations influence how to inquire for better solving of action research worksheets. That is open an insecure situation for pre-service students. Students face complicated theoretical approaches alone in a specific abstract situation and cannot immediately ask the lecturer/colleague.

For instance, learning preparation is significant if teachers are open for new-coming approaches avoiding school stereotypes, enhancing and developing a teacher's practice. Henceforth, developing teaching skills is a very long process where action research may stimulate some traditional teaching habits and

motivate pre-service teachers to work on their natural development by a progressive method, which action research should be.

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Kropáč, 2021. Chopped-Pot Situation in Teachers Development via Action Research Techniques in Cyber Era

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STUDENT PERFORMANCE IN EMERGENCY REMOTE LEARNING AND ASSESSMENT IN SIMULTANEOUS INTERPRETING TRAINING

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Abstract. *The paper covers some issues of student performance in Simultaneous Interpreting modules during the emergency remote training in March – June 2020 when many universities around the world had to switch quickly to online synchronous training. Simultaneous Interpreting was chosen for this research since the existing IT platforms for online training are not sufficient in view of the complexity of simultaneous interpreting training which requires special equipment and the availability of two channels of communication. The research explores the main challenges facing trainers and students when they had to move to emergency online teaching and learning and assesses the performance of students in synchronous online simultaneous classes and final examinations or assessments. The study is based on qualitative methods guided by grounded theory and engaged 17 teachers and 24 students at seven universities teaching Simultaneous Interpreting modules. The results of the research showed that the move to emergency remote teaching and learning did not have any significant impact on the performance of students and their assessment in the remaining part of the module. Academic teams came up with a number of innovative solutions for remote teaching, learning and assessment which should be studied further in order to develop effective tools which could be used in synchronous online simultaneous interpreting teaching and learning in the future.*

Keywords: *emergency remote synchronous teaching and learning; simultaneous interpreting; synchronous online examinations.*

Introduction

In response to Covid-19 pandemic in March – June 2020, many universities around the world moved their courses to remote mode of delivery which raised a number of questions about how to support effective online teaching in various disciplines. The transfer of Simultaneous Interpreting (SI) postgraduate modules to online delivery is central in this paper. The subject was chosen for this research because of the technical requirement to have interpreting booths and at least dual-channel communication: one for the incoming presentation or speech in the source language (SL) and another one for the interpretation in the target language (TL) delivered by a student. The synchronous mode is achieved by continuous use of both channels. The existing IT platforms for online teaching used by universities

have only one channel which presented a significant challenge for trainers of SI. The present exploratory research aims to assess various approaches at seven universities around the world in providing emergency online synchronous training in SI during the lockdown period of March – June 2020: Comillas Pontifical University, Spain; Ghent University, Belgium; Heriot-Watt University, UK; KU Leuven University, Belgium; London Metropolitan University, UK; Monash University, Australia and Westminster University, UK.

The topic of online or remote teaching and learning remains a dominant theme in higher education worldwide in view of the ongoing pandemic situation. It is, therefore, important to assess the experience of emergency online training in order to develop better approaches for current and future training, especially in subjects where there is a requirement for the use of additional equipment. The framework of the current paper does not allow to cover all major themes explored in our research, e.g., how the transition to online synchronous training was conducted; the format of online classes in SI; what went particularly well and what were the challenges in delivering synchronous online training in SI such as technical difficulties, cognitive strain and lack of social interaction. These and other topics will be presented in a separate publication. This paper will focus on analysing the performance of students during online synchronous training in SI and the provision of online assessments and/or examinations.

The paper will also examine some aspects of emergency transfer to online synchronous mode since trainers had to develop necessary changes to the new remote provision of existing modules in a matter of days or weeks. At the same time, academic teams had to develop some common approaches in order to deliver synchronous training in SI and ensure that the students achieve their module objectives and sit their final SI examinations at the end of the modules.

Literature Review

The development of ICT influenced the interpreting profession and the introduction of video-mediated interpreting mostly by multi-national organisations. One of the earliest experiments was organised by UNESCO in 1976 linking the headquarters in Paris with a conference centre in Nairobi (Carl & Braun, 2017). This experiment pushed other organisations to trial online interpreting and a variety of ICT systems. The COVID-19 has dramatically changed how we work, and interpretation was not exempt since many organisations explored further the use remote simultaneous interpreting (RSI) systems since the beginning of the pandemic in 2020 (Chaoui, 2020).

Online synchronous teaching and learning also attracts more and more attention in the 21st century. Some authors thought that synchronous online teaching relies heavily on teachers, that it is good for answering questions and

troubleshooting while student-centred approach can be developed in asynchronous online teaching which has to become central for learning (Murphy, Rodríguez-Manzanares, & Barbour, 2011). The statement that synchronous teaching becomes secondary or supporting teaching and learning in asynchronous mode may sound somewhat misleading since in both synchronous and asynchronous teaching and learning teachers have key positions, however their role may change. The role of synchronous training is particularly important in skill-centred disciplines such as Interpreting.

Another area which drew the attention of scholars was around the transfer to online teaching and learning during the pandemic, how the move was managed and what particular requirements for the adaptation of approaches in teaching and learning should be taken into consideration (Boling, Hough, Krinsky, Saleem, & Stevens, 2012; Koehler & Mishra, 2009). The authors saw the transformation of routines as the main goal in the transfer to online teaching and learning. A similar situation was witnessed in teaching interpreting where some early synchronous interaction was limited to text messaging, thus mostly considering some basic forms of asynchronous learning and limited forms of synchronous learning (Braun, 2013). Alternatively, some authors considered the use of digital materials in the physical classroom and during self-study periods (Mayor & Ivars, 2007).

Moser-Mercer examined the development of remote interpreting using the first controlled experiment to evaluate human factors and technical arrangements where factors like “a sense of presence, such as degree of control, immediacy of control, anticipation of events, mode of control and the modifiability of physical environments” were “often compromised in a remote setting” (Moser-Mercer, 2005, p. 79). These findings had a significant impact on the development of the profession and remote teaching where blended approach began to gain more popularity. D’Hayer (2012) argued that technology offered unique benefits when she considered collective learning as a crucial part of public service interpreting. However, the most overarching analysis of online teaching and learning in interpreting was provided by Clifford (2018) when having analysed previous research in the field he examined the nature of online learning in interpreting through different types of interactions, such as learner-content, learner-instructor, and learner-learner.

What is obvious from previous research is that remote courses require significant time for preparation and development or adaptation. However, in contrast to programmes that are planned from the beginning and designed to be online, “emergency remote teaching (ERT) is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances” (Hodges et al., 2020). This definition clearly shows that the emergency remote teaching and learning (ERTL) is an immediate response to external circumstances, and academic staff may not have time to adapt materials or approaches for the online

mode. The main objective of the ERTL is to provide access to teaching and learning in a new environment where face-to-face teaching is not possible. The scale and timing of this transfer to the ERTL was perhaps unimaginable in pre-Internet times. Many universities had to ensure the rapid transfer to online mode, quite often relying on academic staff and their ability to improvise, what is sometimes referred to as “responsive improvisation” (Bryson & Andres, 2020).

Some authors who analysed synchronous online teaching concluded that it required more concentration from teaching staff and therefore considered more tiring and time-consuming as teachers have to work harder to “decipher” non-verbal and social clues using video links with students (Bryson & Andres, 2020; Desai, Hart, & Richards, 2009). Bearing in mind that the switch to ERTL was conducted in a very short period of time, it could have an impact on teaching staff and the quality of modules and courses, accessibility to learning materials and the achievement of learning outcomes. Thus, the current research attempts to analyse what impact the ERTL had on learning and assessment in SI.

Methodology

The methodology is based on qualitative research methods guided by grounded theory in order to establish whether there was any impact on learning during emergency online teaching and learning in March – June 2020. The current study uses a mixed methods approach where questionnaires are used as an exploratory tool thus enabling us to identify the initial themes followed by interviews with selected teachers and students. At the same time the researcher, who is a trainer of Simultaneous Interpreting and taught remotely during the lockdown period, will aim to maintain an open mind when entering this new area of study of ERTL.

The study was not conducted immediately after the completion of ERTL in SI since it was important to give both academic staff and students more time to assess fully the transfer to online training in an emergency situation. The main part of the research took place in August/September 2020. This timeframe for research was also chosen because many teachers were preparing for the next academic year, and in the majority of cases it was the preparation for the online delivery of SI modules. Participants in the study were lecturers/professionals teaching SI during 2019/20 academic year and postgraduate students in SI modules majoring in Conference Interpreting or Translation and Interpreting at seven universities in Australia, Belgium, Spain and the UK.

In the exploratory part of the research, questionnaires with open questions were used. 17 members of teaching staff participated in the research. There were two members of staff who did not specify the name of their universities in the questionnaires. Overall, 24 students took part in the research and provided

answers to our questionnaire. It is worth mentioning that both teachers and students participating in the research showed significant interest in the topic and provided comprehensive answers to all open questions included in the survey.

At the initial stage of this research, two anonymous short questionnaires, one for postgraduate students and one for teachers of SI, were designed and first piloted on a group of four students and five teachers in early August 2020. The questionnaire included mostly open questions asking participants to comment on various aspects of online teaching and learning, e.g., about previous experience in remote training and learning, how the switch from face-to-face to online teaching and learning was conducted, what went particularly well and what challenges participants experienced during ERTL. The questions in teachers' questionnaires were slightly modified and included additional questions asking them about previous experience in remote teaching of SI or any other subject, whether there were any variations in student performance during ERTL in comparison with previous face-to-face part of the course. Additionally, there was a question about online assessment and exams and whether they experienced any additional difficulties. This research paper will only address the issue of students' performance as viewed by the teaching staff during ERTL as well as issues related to online assessment and exams.

The qualitative methods used in this research allowed to capture wider issues associated with ERTL in SI and identify some aspects of the best practice in these emerging circumstances. The data received from questionnaires was triangulated with the data obtained during semi-structured interviews with individual students and teachers in participating universities. This approach enabled us to confirm and expand findings based on the answers to open questions in questionnaires and strengthen their validity. Overall, twelve interviews were conducted online: 6 interviews with students and 6 with teachers in participating universities at the end of August/beginning September 2020.

Numerous comments of participants in 37 questionnaires and 12 interviews formed a major part of the data in this study. The findings were split between feedback from students and teachers. All references to quotes from questionnaires will be presented as SQ + ordinal number for students' replies and TQ + number for teachers' replies, while quotes from interviews as SIN + ordinal number for students and TIN + number for teaching staff.

How Do Teachers Perceive Student Performance during ERTL?

The results of the exploratory questionnaires showed that the predominant theme in teachers' answers was that the performance of their postgraduate students was not affected by the move to ERTL, while some members of staff commented on even positive sides in their SI modules and the progress of students

in the new environment. 17 members of staff teaching Simultaneous Interpreting confirmed the following when answering the question on student performance:

- 6 teachers said that the performance was more or less the same as expected;
- 3 members of staff reported that the performance of students was the same or even better;
- 3 academics thought that the performance was very well or surprisingly well;
- only 5 teachers reported that there was some negative impact on the overall performance of students, however even these five members of staff confirmed that the overall performance was more or less the same.

Let us consider the comments made by each group of teachers separately in order to identify the reasons for their consideration of student performance during ERTL in March – June 2020. According to our data the majority of SI teachers thought that student performance was similar or unchanged when comparing their performance in pre-ERTL and during ERTL. They strongly believed that their students performed as expected and there were no major differences from face-to-face course in view of their performance, learning and attainment of module outcomes, e.g., TQ8, 5, 6. At the same time, there were a few members of staff who thought that students performed slightly better due to “the comfort and safety” of being in a familiar environment at home (TQ1). There were several teachers who thought that students performed very well during ERTL especially since “the course was filling their day when they could not go out, meet their friends, etc...” (TQ9), as a result, students were “more eager to practise interpreting” (TQ10) and prepare for their classes (TQ2). Several teachers also supported the idea that flexibility and more individual feedback made a positive impact on the overall performance of students in various practical assignments over the period of ERTL (TIN2, 6).

It is interesting, that some other teachers considered the same reason of working from home as a distraction which sometimes even led to interruptions and some loss of concentration during SI tasks. Several teachers mentioned noises outside the house which could have negative impact on the comprehension of the source text and production in the target language (TQ3, TIN1). Obviously, this is very individual and depends on specific circumstances of each student. However, there were other reasons which had a negative impact on student performance. Some teachers thought that a few students felt “more isolated” (TQ4) and had “less support for their peers when they struggled” in performing some tasks (TQ12). Less contact and reduced opportunities to compare their performance with the performance of their peers had some negative impact on the progress the students have made during the ERTL (TIN4, 5).

It was anticipated that students and teachers would be less happy with the technical arrangement since they had to have two devices in order to listen to a source language speech and produce interpreting into the target language at the same time during their synchronous online classes, however it turned out that although some participants felt some awkwardness about the arrangement, they did not specifically address the issue in their questionnaires or interviews. A couple of teachers reported that the online arrangement was generally more challenging and tiring for both students and teachers (TQ11, 15, TIN1, 3, 4), which confirms the results of previous research reported in the literature review (Bryson & Andres, 2020; Desai et al., 2009). Some lecturers found it more difficult “to observe and give feedback to each student at every session. It is easier to listen to students when you are on site and students are interpreting from their booths” (TIN1, TQ15). They were of the opinion that you can do more simultaneous interpreting exercises when students and teachers work in the interpreting suite. It was not exactly clear what particular features of the arrangement for synchronous online classes triggered this feedback. The feedback from the majority of students and teachers and interviews did not confirm the view that you can actually do more simultaneous interpreting exercises in face-to-face teaching.

Synchronous Online Examinations

In this part of the paper, we will consider how the teams of teachers and students managed their examinations or final assessments at the end of the semester. In the exploratory questionnaires to students and teachers we asked similar questions on the issues of assessments and exams: “In your view, how different were online/remote assessments/exams from face-to-face exams/assessments? Did you experience any difficulties or challenges specific to online/remote assessment? Any other comments?” These questions to teachers were slightly modified as they were aimed at eliciting information about the experience of both teachers and students.

It should be noted from the very start, that a couple of teachers and around four students reported that their universities were able to return to campus and conduct face-to-face examinations, while one university opted for non-exam system of assessment. Since the aim of our research was to examine the organisation and provision of synchronous online exams in Simultaneous Interpreting, the interviews were conducted only with students and teachers in universities where online exams took place at the end of the semester.

The data collected from questionnaires and interviews shows a striking difference in the perception of exams at the end of the term. While students were mostly concerned with technical issues, such as stable wi-fi, the ability to

coordinate all necessary devices and being able to record the interpretation, teachers were more preoccupied with the process of preparation for the exams and what had to be done to deal with unexpected events. We will analyse these two different approaches further with some examples from questionnaires and interviews.

Students in most universities where the exams were conducted online were worried about various technical issues such as the reliability of their devices or the availability of a stable access to Internet (SQ 1, 3, 7, 8). They identified technical issues as the main difference between online and face-to-face exams. They also thought that their worries about technical issues could have an impact on the level of concentration required in SI (SQ4). One of the students specifically addressed the issue in her questionnaire when she described her experience as “an extra pressure of possible technical failure or internet collapse... I was even worried what if the mailman comes and knocks at the door and I will lose my concentration” (SQ17). These feelings of anxiety and worry were echoed in the majority of comments received from students who apart from technical issues raised the problem of home environment (SQ23, SIN4, 6), which is not always suitable for the examination since most members of families were at home due to lockdown regulations. On the contrary, some teachers thought that the familiar home environment enabled some students to perform better in the exams, e.g., “safety of a familiar space may be less daunting as an exam room with full view of a jury” (TQ2).

The feeling of nervousness was also confirmed by some teachers who expressed their worries about some technical issues and the ability to use effectively new tools which they began to use only during the period of ERLT. Many teams of teachers had to come up with a solution for the way to play the speech and to hear the students’ output simultaneously, while using a secure platform. At the same time, they had to record each student’s performance. For the purpose of the examination, one team came up with the solution of using Blackboard Collaborate to connect to students, together with a video platform Panopto for speech recording (TQ15, TIN5). There were other solutions in different institutions, however the assessment of technical arrangements was not the aim of this study. The research aimed to analyse challenges the teams had to deal with in preparation for the examination. For example, one teacher expressed her concern about the new tool GoReact which both teachers and students had to use additionally during their exams (TQ3). Others worried about Internet connection and that it would remain stable during synchronous SI examination (TQ14). However, the main concern expressed by teachers was about the increased workload and significant pressure since they had to set all exam papers and make all necessary preparations in a very short period of time while teaching in a completely new environment (TQ1, 4, 7, 17, TIN4, 6).

It became obvious that academic teams in participating universities spent a lot of time preparing for the exam to ensure smooth running of the online examination. One team developed a step-by-step approach which they presented in a four-page long document split into three parts: before the exam, during the exam and after the exam (TIN1). They even came up with an idea of a “friend” who could press record, someone who could look after the technology during the exam thus enabling the student concentrate on the interpreting task. They also set up an “emergency room” in case there were unforeseen circumstances and students may need some support.

Teams of teachers also ran trials so that students could be familiar with the process and interface (TQ2, 10, 17, TIN1, 5) and this was one more reason for their solid performance in the exam. Another team engaged the students in organising their exam. This collective approach and student agency were extremely useful in assuring that students clearly understood the process and all technical issues which they rehearsed during mock conferences and online classes (TQ9). They also had to deal with other issues, for example some students managed to return to their home countries where they could not get a good connection to the Internet or the chosen platforms could not work in their countries due to various reasons. Academic teams had to come up with a solution on the technical side and remain flexible, e.g., about the timing of the exams (TQ16).

The preparation and the trials conducted before the exams enabled teachers to recreate exam conditions similar or close to what they would have in face-to-face situation and contributed to the preparedness of students to deal successfully with the exam tasks in the new remote environment. Most teachers reported that students coped well with the exam speeches, seemed more relaxed during interpreting, and achieved expected or even above expected results. Our findings showed that the thorough preparation and working closely with the students enabled teachers to develop necessary technical and organisational solutions in order to conduct exams effectively in synchronous remote mode.

Some Concluding Remarks

Synchronous online teaching and learning has enabled the continuation of modules in SI during the lockdown in March – June 2020. Our findings confirmed that academic teams were able to make necessary changes and develop solutions in order to complete the academic year with positive results. Irrespective of all difficulties and uncertainties at the time, students performed well and achieved all their targets for the year. Overall, they were able to complete SI tasks similar to those in face-to-face situations working in an interpreting booth.

The analysis of our data showed that our two groups of respondents expressed different concerns with regards to the organisation and running of the exams. While students were worried about technical issues and home environment which could distract them from performing well in the examination, teachers were concerned about the actual organisation of synchronous exams and preparation of speeches for SI. Thorough preparation and close collaboration between students and teachers enabled the teams to develop solutions (both technical and organisational) and conduct examinations in synchronous mode where students generally showed good results.

There were numerous innovations during ERTL which enabled the students to achieve their targets in SI modules, e.g., the introduction of a “friend” in synchronous online examination arrangements, setting up an “emergency room” in case of some technical issues, developing step-by-step procedures, and many others. These developments should be studied further to assess their effectiveness for future blended or synchronous remote teaching and learning in SI and possibly other subjects. The review of the literature confirms that we may anticipate a wider use of remote interpreting in the future, and universities will need to respond by introducing remote interpreting in the curriculum. At the same time, since a vast majority of universities continues to offer online courses, new studies should also address such key issues as student isolation, more support from peers, opportunities for collaborative work and many other relevant topics.

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AUGSTĀKĀS IZGLĪTĪBAS IZAICINĀJUMI ATTĀLINĀTO STUDIJU KONTEKSTĀ: TIESISKAIS REGULĒJUMS UN PRAKSE

The Challenges of Higher Education in the Context of Remote Studies: Legal Regulation and Practice

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Abstract. Technologies are becoming an integral component of study process. Opportunities brought by digitalisation in the field of education are not at variance with the right to education and conform to the right to exploit the achieved scientific and technical progress for enhancing human life and welfare; moreover, there no grounds for asserting that knowledge and skills acquired remotely are at a lower level than the results of face-to-face learning. However, to develop a uniform understanding and create a stable legal basis for the evolution of remote studying, legislative amendments that would define remote studying and set forth related requirements are needed.

The aim of the research is the analysis of remote studies as a form and practice of education, evaluating the provisions of regulatory enactments in order to find out its admissibility and compliance with the right to education.

The research uses document analysis, as well as methods of interpretation of legal norms and induction-deduction method, drawing conclusions and making proposals for improving regulatory enactments and practice of higher education establishments.

However, there exist various interpretations of the content of remote studies. The management of higher education establishments are also discussing the construction of the term ‘contact hour’ provided in the Law on Higher Education Institutions, including remote studying that at least partially duplicates distance and open learning and additional requirements concerning the organisation of the remote study process.

Keyword: *Remote studies, legal regulation, emergency situation, higher education establishment.*

Ievads ***Introduction***

Moderno tehnoloģiju attīstības ietekmē zināmu izaicinājumu priekšā ir studiju process augstākajā izglītībā. Paradigmas maiņu, nenoliedzami, sekmē arī pasaulē notiekošie sociālie procesi, kas tostarp saistīti ar Covid-19 infekcijas izplatību un tās ierobežošanu. Attālinātas studijas šajos apstākļos ir viens no veidiem kā nodrošināt nepārtrauktu kvalitatīvu studiju procesu, augstākās izglītības iestādēm pildot savas saistības un meklējot risinājumus, lai studējošie nezaudētu / lietderīgi izmantotu studijām paredzēto laiku.

Vienlaikus jāatzīmē, ka attālinātās studijas var tikt uzskatītas par izglītības procesa inovāciju. Tomēr izaicinājums ir novērtēt šīs inovācijas saturiskās un praktiskās komponentes. Ievērojot izglītības pētnieces Ingrīdas Bolgzdas atziņas, inovācija var tikt uztverta gan kā ideju radīšanas process, gan kā komerciāls rezultāts (Bolgzda, 2016). Šī raksta autoru ieskatā attālinātai studiju formai piemīt abas minētās komponentes. Tehnoloģisko risinājumu aktīva izmantošana mācīšanās un mācīšanas procesā nenoliedzami ir jauna ideja, kurā tehnoloģiskie risinājumi deģerē paši sevi, t.i., viena risinājuma izmantošana rada un attīsta nākošo. Vienlaikus kā praktisks ieguvums, kā komerciāls rezultāts jānovērtē attālināto studiju rezultāts – iespēja nodrošināt studiju procesa nepārtrauktību, iespēja paplašināt studējošo loku arī ar tiem, kas objektīvu iemeslu dēļ nevar apmeklēt studijas klātienē.

Tiesības uz izglītību, kas tostarp ietver tiesības uz kvalitatīvu, pieejamu un nepārtrauktu izglītību, ir nostiprinātas Latvijas Republikas Satversmes 112.pantā (Latvijas Republikas Satversme, 1922, sk. arī Latvijas Republikas Satversmes komentāri. VIII nodaļa. Cilvēka pamattiesības, 2011), tāpēc valstij ir būtiski arī dažādu krīžu un ārkārtējo situāciju gadījumos nodrošināt studiju nepārtrauktību. Nenoliedzami, studiju process nav pašmērķis, bet tas jāanalizē arī no tautsaimniecības ilgtspējīgas attīstības viedokļa. Piemēram, kā norādījis Rīgas Stradiņa universitātes rektors profesors Aigars Pētersons: “no 2021.gada līdz 2024. gadam, pateicoties RSU augstākās izglītības eksportam, Latvijas ekonomika iegūs papildu 438 milj. eiro” (Pētersons, 2020, sk. arī RSU un augstākās izglītības eksports, 2020). Vienlaicīgi, vērtējot augstākās izglītības pienesumu valsts tautsaimniecībai, jāvērtē studiju formu un studiju organizācijas atbilstība studējošo tiesībām uz kvalitatīvu, pieejamu un nepārtrauktu izglītību.

Pētījumā analizēta attālināto studiju kā vienas no izglītības ieguves formām augstākajā izglītībā atbilstība tiesiskajam regulējumam tiesību uz izglītību kontekstā.

Pētījuma mērķis ir attālināto studiju kā izglītības ieguves formas un prakses analīze, vērtējot normatīvajos aktos noteikto, lai noskaidrotu tās pieļaujamību un atbilstību tiesībām uz izglītību.

Pētījumā izmantota dokumentu analīze, kā arī tiesību normu interpretācijas metodes (vēsturiskā metode; teleoloģiskā metode; gramatiskā metode; sistēmiskā metode), analizējot normatīvos aktus, un indukcijas-dedukcijas metode, izdarot secinājumus un izsakot priekšlikumus normatīvo aktu un augstākās izglītības iestāžu darbības prakses pilnveidei.

Jāatzīmē, ka rakstā ir analizēti normatīvie akti, kas bija spēkā Latvijas Republikā uz 2021. gada 12. janvāri.

Attālinātās mācības / studijas: juridiskā izpratne ***Remote Learning / Studies: Legal Understanding***

Lai gan termins “attālinātās mācības” / “attālinātās studijas” tiek plaši lietots Latvijas Republikā vismaz kopš 2020. gada marta, tomēr joprojām tiek diskutēts par šo mācību izpratni, saturu un regulējumu. Piemēram, jau 2020. gada 3. aprīlī pieņemtajā likumā “Par valsts institūciju darbību ārkārtējās situācijas laikā saistībā ar Covid-19 izplatību” 22.pantā bija noteikts, ka “var nodrošināt mācību programmas teorētiskās daļas apguvi attālināti” (“Par valsts institūciju darbību ārkārtējās situācijas laikā saistībā ar Covid-19 izplatību”, 2020). Covid-19 infekcijas izplatības pārvaldības likums, kas stājās spēkā 2020.gada 10.jūnijā un ir spēkā joprojām, pilnvaro Ministru kabinetu noteikt “izglītības procesa organizēšanas nosacījumus un kārtību, tai skaitā mācību procesa nodrošināšanai attālināti” (Covid-19 infekcijas izplatības pārvaldības likums, 2020). Tomēr nedz šajos likumos, nedz Ministru kabineta noteikumos (piemēram, Ministru kabineta 2020. gada 9. jūnija noteikumi Nr.360 “Epidemioloģiskās drošības pasākumi Covid-19 infekcijas izplatības ierobežošanai”, 2020) minētā termina skaidrojums nav ietverts, augstākās izglītības kontekstā vien nosakot, ka Ministru kabinets “nosaka kārtību, kādā izglītības programmu vai tās daļu var īstenot attālināti, un attālināti īstenojamās daļas apjomu”..., “no 2020. gada 26. oktobra līdz 2020. gada 31. decembrim augstākās izglītības studiju programmu apguve notiek attālināti, izņemot praktiskās daļas apguvi un klīnisko praksi rezidentūrā”. Savukārt 2020. gada 17. decembrī Ministru kabinets ir pieņēmis grozījumus Ministru kabineta 2020. gada 6. novembra rīkojumā Nr.655 “Par ārkārtējās situācijas izsludināšanu”, paredzot, ka no 2020. gada 21. decembra līdz 2021. gada 11. janvārim ir jāpārtrauc studiju procesa norisi klātienē visās augstākās izglītības iestādēs (Ministru kabineta 2020. gada 6. novembra rīkojums Nr.655 “Par ārkārtējās situācijas izsludināšanu, 2020). Līdzīgais regulējums bija noteikts Ministru kabineta 2020. gada 12. marta rīkojuma Nr.103 “Par ārkārtējās situācijas izsludināšanu” 4.3.1.apakšpunktā, nosakot, ka mācību procesa norise klātienē visās izglītības iestādēs ir pārtraukta un ir jānodrošina mācības attālināti (Ministru kabineta 2020. gada 12. marta rīkojuma Nr.103 “Par ārkārtējās situācijas izsludināšanu”, 2020).

Jāatzīmē, ka vairākas Latvijas augstākās izglītības iestādes jau 2020. gada decembrī ir publiski paziņojušas, ka pagarina attālinātās studijas līdz 2021. gada 31. janvārim, t.i., līdz akadēmiskā gada 1.semestra beigām.

Papildus minētajām 2020. gada 28. aprīlī tika grozīti Ministru kabineta 2005. gada 27. decembra noteikumi Nr.1001 "Zinātniskā doktora grāda piešķiršanas (promocijas) kārtība un kritēriji", 29.punktā paredzot, ka "promocijas sēde var notikt, izmantojot tiešsaistes videokonferenci (attēla un skaņas pārraide reālajā laikā), ja pretendents, padomes loceklis vai darba recenzents atrodas citā vietā un nevar ierasties promocijas sēdes norises vietā" (Ministru kabineta 2005. gada 27. decembra noteikumi Nr.1001 "Zinātniskā doktora grāda piešķiršanas (promocijas) kārtība un kritēriji", 2005). Minētais ne tikai būtiski atvieglo ārvalstu zinātnieku līdzdalību promocijas darba recenzēšanas / aizstāvēšanas procesā, bet arī ļauj ārkārtējās situācijas apstākļos nodrošināt promociju.

Kopuma analizējot ārkārtējās situācijas regulējumu, ir jāsecina, ka ierobežojumu izglītībā, tostarp attālināto mācību / studiju, mērķis visupirms ir maksimāli iespējami samazināt pulcēšanos un klātienes kontaktus (distancēties) gan tiešajā studiju procesā, t.i., nodarbību laikā, gan pirms un pēc tā, t.i., arī ierobežot studējošo iespējas un tiesības studiju procesa mērķiem izmantot augstākās izglītības iestāžu telpas, tehnoloģijas, iekārtas.

Turklāt būtiskais, ka šie ierobežojumi ir vispārobligāti (inkluzīvi) un saistoši visām augstākās izglītības iestādēm un visiem studiju programmu veidiem, gan klātienes, gan neklātienes, tostarp tālmācības, augstākās izglītības programmām (jo arī neklātienes un tālmācības studiju programmas paredz obligātas nodarbības klātienē).

Konkrētajā gadījumā, analizējot šo ierobežojumu saturu, ir jākonstatē, ka tie ir samērīgi ar tiesībām uz izglītību un ir pieļaujami, jo ārkārtējā situācija ir īpašs tiesiskais režīms, "kura laikā Ministru kabinetam ir tiesības likumā noteiktajā kārtībā un apjomā ierobežot valsts pārvaldes un pašvaldību institūciju, fizisko un juridisko personu tiesības un brīvības, kā arī uzlikt tām papildu pienākumus" (likums "Par ārkārtējo situāciju un izņēmuma stāvokli" 4.panta pirmā daļa, 2013), turklāt to mērķis ir, nepārtraucot studiju procesu, mazināt sabiedrības veselības apdraudējumu (Covid-19 infekcijas izplatības pārvaldības likuma 2. pants, 2020).

Turpinot attālināto mācību regulējuma analīzi, ir jāmin, ka 2020. gada 12. novembrī tika pieņemti Grozījumi Izglītības likumā (Izglītības likums, 1999), 1. pantu papildinot ar 1. punktu un nosakot, ka attālinātas mācības ir "klātienes izglītības procesa daļa, kurā izglītojamie mācās, tai skaitā izmantojot informācijas un komunikācijas tehnoloģijas, fiziski neatrodoties vienā telpā vai mācību vietā kopā ar pedagogu", vienlaikus pilnvarojot Ministru kabinetu noteikt attālināto mācību organizēšanas un īstenošanas kārtību. Likumprojekta anotācijā uzsvērts, ka "attālinātas mācības organizē pedagogs un izglītības iestāde klātienes mācību ietvaros, izvērtējot un ņemot vērā izglītojamo gatavību uzņemties atbildību par

mācībās sasniedzamajiem rezultātiem un izvēloties atbildības nodošanu par mācībām izglītojamajiem (personalizācija) vai arī īstenojot ciešā pedagoga pārraudzībā pašvadītas mācīšanās stiprināšanai vai digitālo prasmju attīstībai (diferenciācija un individualizācija). Attālinātās mācības kā klātienes izglītības procesa daļa parasti tiek īstenotas ar informācijas un komunikācijas tehnoloģiju izmantošanu tiešsaistē vai arī izmantojot īpaši izstrādātus mācību līdzekļus (piemēram, digitālās platformas u.tml.)” (likumprojekts “Grozījumi Izglītības likumā, 2020).

Tādējādi ārpus ārkārtējās situācijas regulējuma attālinātās mācības / studijas visbiežāk (bet ne vienmēr) ir tehnoloģiju mediēts studiju process, kas tiek īstenots tādā pašā apjomā kā klātienes mācības. Turklāt ir iespējams, ka daļa studentu ir auditorijā, bet daļa – attālināti. Atšķirībā no ārkārtējās situācijas regulējuma attālinātās studijas – ir augstākās izglītības iestāžu izvēle (nav obligātas) un attiecas tikai uz klātienes studiju programmām.

Attālinātās studijas: prakses izaicinājumi *Remote Studies: Practice Challenges*

Kā jau tika noskaidrots, attālinātās studijas ārkārtējās situācijas laikā aptver visu studiju programmu formas un pēc būtības arvien vairāk līdzinās tālmācībai, jo klātienes saskarsme starp pasniedzējiem un studentiem ir izslēgta. Minētais, ka ir konstatējuši vairāki pedagoģijas praktiķi, var tieši ietekmēt sekmību, motivāciju utt. (piemēram, sk. Kā attālinātās mācības ietekmējušas sekmes skolās Rīgā un Cēsīs, 2020), jo ne katrs studējošais ir paredzējis / ir spējīgs studēt attālināti.

Attālināto studiju, kuras ir klātienes izglītības procesa daļa, īstenošana aktualizē jautājumu par to formu, organizāciju un norisi. Ir skaidrs, ka, uzņemot studējošo, augstākās izglītības iestādei būtu jāsniedz precīza informācija par attālināto studiju saturu, apjomu, organizāciju, piemēram, atspoguļojot attālināto studiju īpatsvaru studiju līgumā un attiecīgi studiju kursu aprakstos. Turklāt minēto studiju īpatsvars var tieši ietekmēt studiju programmas un studiju procesa izmaksas.

Vienlaikus, gramatiski interpretējot Izglītības likuma ietverto attālināto mācību definīciju, var secināt, ka attālinātās studijas var tikt organizētas vismaz divos veidos:

1) izmantojot informācijas un komunikācijas tehnoloģijas, piemēram, mācību vadības platformu, kas cita starpā nodrošina mācību procesa norisi tiešsaistē (gan tieši, piemēram, e-lekcijas veidā, gan pastarpināti, piemēram, lekcijas ieraksts). Minētais aktualizē jautājumu par studējošā nodrošinājumu ar atbilstošām tehnoloģijām un programmatūru, augstākās izglītības iestādes informētību par to, kā arī savlaicīgu sagatavotību šādam studiju procesam, kas arī var būt viens no augstākās izglītības iestādes pienākumiem. Vienlaikus minētais

aktualizē jautājumu par saturisko, tehnisko un, iespējams, psiholoģisko atbalstu, kuru augstākās izglītības iestādei būtu jānodrošina studējošam attālināto studiju procesā;

2) uzdodot studējošam pastāvīgi veicamus studiju uzdevumus, kuri individuāli vai grupā ir pildāmi un tad izvērtējami klātienē vai attālināti. Minētais aktualizē jautājumu par studējošā pašvadītām studijām, kā arī studiju un laika menedžmenta prasmēm, kuras būtu attīstāmas klātienē studiju procesā. Arī šajā gadījumā aktualizējas jautājums par studējošā atbalstu.

Attālināto studiju iekļaušana studiju programmās raisa nepieciešamību precizēt Augstskolu likuma 1.panta 7.punktā ietvertā termina “kontaktstunda – akadēmiskā personāla un studējošo tieša saskarsme, kura tiek īstenota studiju programmas mērķu un uzdevumu sasniegšanai atbilstoši studiju programmas plānam un kuras ilgums ir viena akadēmiskā stunda” skaidrojumu (Augstskolu likums, 1995). Ievērojot studiju standartos noteikto, kontakstundu īpatsvars var sasniegt ne mazāk kā 40 % no studiju programmas apjomā pilna laika studijās (Piemēram, sk. Ministru kabineta 2014. gada 26. augusta noteikumi Nr.512 “Noteikumi par otrā līmeņa profesionālās augstākās izglītības valsts standartu”, 2014). Tomēr, ka jau minēts, attālināto studiju (kas ir klātienē studiju procesa daļa) laikā šī tiešā saskarsme var izpalikt.

Minētā sakarā ir svarīgi uzsvērt arī pedagogu atbildības un pedagogu kvalifikācijas nozīmi kvalitatīvu attālināto studiju nodrošināšanā. Kā norādīts zinātniskajā literatūrā, pedagogu profesionālā atbildība ir vērsta gan uz izglītības programmu satura īstenošanu, gan izglītojamo iesaistīšanu izglītības ieguvē, ļaujot viņiem justies līdzatbildīgiem gan par mācīšanās procesu, gan tā rezultātiem (Mihailovs, Krūmiņa, 2017).

Sekmīgas attālināto studiju īstenošanas priekšnoteikums ir precīzs tiesiskais regulējums, nosakot attālināto studiju īstenošanas formu un saturu, definējot studiju procesā iesaistīto pušu tiesības un pienākumus. Tomēr ne mazāk būtiska nozīme ir tehnoloģisko risinājumu pieejamībai un pedagogu profesionālajai kvalifikācijai.

Secinājumi *Conclusions*

Iegūtie rezultāti ļauj secināt, ka digitalizētajā pasaulē tehnoloģijas kļūst par neatņemamu darba un studiju procesu komponenti, kuru, ievērojot sabiedrības attīstību, būt jāpaplašina. Digitālizācijas sniegto iespēju izmantošana studiju procesā nav pretrunā ar tiesībām uz izglītību, tā atbilst tiesībām izmantot zinātniski tehniskā progresā sasniegumus cilvēces dzīves pilnveidei un labklājības nodrošināšanai, veicina labāku dažādu tehnoloģiju un studiju metožu apguvi, kā arī ārkārtējās situācijas apstākļos ļauj mazināt sabiedrības veselības

apdraudējumu. Turklāt šobrīd nav juridiska pamata apgalvot, ka attālinātās studijās iegūtās zināšanas un prasmes ir vērtējamās zemākā līmenī nekā klātienē studijās apgūtais. Tomēr, lai veidotu vienotu izpratni un radītu stabilu tiesisko pamatu attālināto studiju attīstībai, ir nepieciešami grozījumi tiesību aktos (tostarp Ministru kabineta noteikumi un augstākās izglītības iestāžu izdotie studiju procesu reglamentējošie dokumenti), precīzi definējot attālinātās studijas, to saturu un apjomu, kā arī nosakot prasības to īstenošanai.

Vienlaikus ir jāsecina, ka:

- 1) Ir nošķiramas attālinātās studijas, kuras Latvijas Republikā tiek īstenotas ārkārtējās situācijas laikā, kad studiju process pilnā apmērā (var būt atsevišķi izņēmumi) visās studiju programmās notiek attālināti, no attālinātajām studijām vispārējos apstākļos, kad tikai daļa studiju procesa var notikt attālināti (Ministru kabinets ir pilnvarots noteikt šīs daļas apjomu).
- 2) Attālinātās studijas, ievērojot Izglītības likumā noteikto, ir tikai daļa no klātienē studiju procesā un ir attiecināmas uz klātienē studiju programmām (jāatzīmē, ka šobrīd atbilstoši Izglītības likuma 8.pantā noteiktajam Latvijas Republikā ir piecas izglītības ieguves formas, tai skaitā klātienē, neklātienē un tālmācība (Izglītības likums)).
- 3) Augstākās izglītības iestādēm, ieviešot attālinātās studijas, ir atbilstoši jānodrošina konsultatīvais atbalsts, tostarp jāattīsta pašvadīto studiju prasmes, jāpārlicinās, ka studējošā rīcībā ir atbilstošas tehnoloģijas un programmatūra un viņš prot ar tām darboties. Pretējā gadījumā tiks apdraudēta studiju pieejamība, īpaši tās finanšu, tehnoloģiskie un saturiskie aspekti, līdz ar to tiks arī ierobežotas tiesības uz izglītību.
- 4) Jāgroza Augstskolu likuma 1.panta 7.punktā ietvertā termina "kontaktstunda" definīcija, iekļaujot tajā attālinātās studijas (neatkarīgi no tās, vai tās notiek tiešsaistē, vai tiek organizētas kā pastāvīgi veicams uzdevums).
- 5) Jāgroza Ministru kabineta 2007. gada 23. janvāra noteikumi Nr.70 "Studiju līgumā obligāti ietveramie noteikumi", 4.1.punktā aiz vārda "apjoms" papildinot ar vārdiem "tanī skaitā attālināto studiju apjoms".

Summary

The usability of technological solutions in education will continue to grow. Remote studying is an innovation, which is why it is essential to develop a proper legislative framework in this area. Opportunities brought by digitalisation in the field of education are not at variance with the right to education, conform to the right to exploit the achieved scientific and technical progress for enhancing human life and welfare, promote more effective uptake of various technologies and learning methods, meanwhile minimising the threat to public health in a state

of emergency. Moreover, currently there no legal grounds for asserting that knowledge and skills acquired remotely are at a lower level than the results of face-to-face learning.

In fact, remote learning/studying is a technology-mediated learning process implemented to the same extent as face-to-face learning. In addition, some students can be physically present in the classroom, while other students can participate remotely. However remote studies, which are implemented in the Republic of Latvia during an emergency situation when the study process in full (there may be some exceptions) in all study programs takes place remotely, from remote studies in general conditions, when only a part of the study process can take place remotely. Remote learning, observing the amendments of the Law of Education, is only a part of the full-time study process and is applicable to full-time study programs.

Considering the existing legal situation, it is hard to interpret the current form of remote studying as conforming to the intended definition because the term 'remote studying' has already been incorporated into the legislation, for example: sub-paragraph 27.2.5 of Cabinet Regulation No 360 of 9 June 2020 on Epidemiological Safety Measures for the Containment of the Spread of Covid-19 Infection lays down that, from 26 October 2020 to 31 December 2020, the completion of higher education study programmes must be held remotely, except for the completion of the practical part and the clinical training during residency.

Higher education establishments, starting the remote study process implementation, need to adequately prepare the student and provide advisory support during the implementation of remote studies, including the development of self-directed study skills, make sure that the student has appropriate technologies and software and is able to work with them. Otherwise, the availability of studies, especially its financial, technological and content aspects, will be endangered, thus the right to education will also be restricted.

It should however be emphasised that quality criteria should not be eased in the case of remote studying. In order to promote the quality of remote studying, a complex set of legal and practical measures is required, including legislative amendments. Accordingly, legislative improvements should provide a more accurate definition of the term 'contact hour' (provided in Article 1(7) of the Law on Higher Education Institutions) and determine the permissible extent of remote studying. Meanwhile, practical measures should include consulting support for both students and academic staff, including verifying whether a student has required technological solutions available and can use them and, if necessary, ensuring special training for students.

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STUDENTS' MOTIVATION TO ATTEND PHYSICAL EDUCATION CLASSES IN UNIVERSITIES OF UKRAINE

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Abstract. *The article is dedicated to the research of priority motives according to attending "Physical education" classes by I and II year students from universities of Ukraine. The goal of the research is to determine the ratings of students' motivation towards attending physical education classes in the universities in Ukraine. The methods of research are analysis and generalization of scientific methodologic literature data, sociologic methods (questionnaire) and mathematical statistics methods. The questionnaire was answered by 363 students from 4 Ukrainian universities. Among them were 170 males and 193 females. The main results of the research are as follows. It was determined the general structure of students' motivation and value orientation according attending physical education classes by each university particularly. There was performed comparable analysis of significance ranking of the motives to attend physical education classes and also generalized differences between females and males in the choice of motivation priority. It was determined that 57,9% of students that have been taking part in the questionnaire, think that priority motive to attend physical education classes is to get credits from the course, while body strengthening has second priority place (47,9%). As males (46,5%) so females (67,9%) believe the most essential motive is to get credits from the course "Physical education" and body strengthening (males – 38,8%, females – 56,6%). The third place among males got the motive to improve physical efficiency (26,5%), among females – the desire to get fit (35,2%). Conclusions: The results we have got testify the importance to increase motivation level to attend physical education lessons.*

Keywords: *questionnaire, students, physical education, motives.*

Introduction

The situation of sharp deterioration of health condition of modern student youth is observing in Ukraine in last years and it becomes a huge modern problem (Loza & Homenko, 2016; Sorokolit & Kukhar, 2019). The health of young generation reflects development level of society and its well-being. The scientists (Gakman, Balacka, Grigorishina, & Nikolajchuk, 2018) specify in researches that low interest towards motor activity, lack of motivation, absence of the need in physical culture classes and sport, intensification of educational process in universities and hypodynamia have negative impact on youth's health (Maljar, 2015). It leads to specific morfo-functional condition of students' organism, that characterizes by reduction of the level of organism functional body activity, physical development and physical effectiveness. That is why, the question of forming of physically healthy and motivated students from universities for motor activity is relevant nowadays.

The question of students' motivation towards physical education classes is the subject of research as Ukrainian researches (Azarenkov, 2016; Bezverhnja & Maevskij, 2015; Grinev & Shlat, 2020; Gruzhevskij, 2014; Malahova & Bielkova, 2020; Nikolaev, 2010; Shijan, O., Shijan, V., & Svadkovska, 2016; Starosta & Popadich, 2019), so foreign scientists (Alderman, Beighle, & Pangrazi, 2013; Mowling, Brock, Eiler, & Rudisill, 2004). Thus, Starosta and Popadich; Grinev and Shlat have determined that motivation is one of the most important factors of preparation of modern scientists. Shijan, O., Shijan, V. and Svadkovska state formation of motivation is the main problem in educational process building. Malahova and Bielkova have reach the conclusion that question of students' motivation towards attending of physical education require deep investigation. Azarenkov thinks that it is important to promote and inoculate modern sights on the physical education role in the process of personality building and to stimulate the eager to be healthy and to self-improve in order to form a sustain students' motivation towards physical education classes (Azarenkov, 2016). Nikolaev states that increase of motivation-valuable attitude of students from universities institutions (HEI) towards physical education classes and sport will be effective if there is a wider list of physical activities to choose from. The list should include various forms of physical and sport activities, taking into account individual interests, predispositions and students' skills. In addition, the more university improve material and technical provision the higher will be general level of students' functional preparation (Nikolaev, 2010). Gruzhevskij emphasize on the imperfection of the modern methodic of physical education, that is directed not on the students' personality but on the priority of control norms or testing exercises of studying program (Gruzhevskij, 2014). Bezverhnja and Maevskij have determined that students participate in physical education classes in order to

prevent themselves from possible problems with attestation and exams without a goal to learn new exercises.

Foreign scientists highlight the attention mostly on the reasons of decrease of students' motivation after first year of studying (Mowling, Brock, Eiler, & Rudisill, 2004) and look for ways to increase students' motivation towards physical education (Alderman, Beighle, & Pangrazi, 2013).

Despite there is a list of researches in investigating the issue of motivation towards physical education classes, there still exist the problem of searching of efficient forms of organization of physical education that could effectively influence on forming of sustain motivation among students.

The goal of the research is to determine the ratings of students' motivation towards attending physical education classes in universities in Ukraine.

Methodology

The methods of analysis and generalization of scientific and methodic literature sources were elaborated in due to study the problem and in due to determine the goal and relevance of our research. The sociologic method of questionnaire is applied as a method to get information through writing respondents' answers on the system of standardized questions of the survey. In order to calculate we have applied method of mathematical elaboration of results, that we have got from the research.

Preconditions for performing the research is health worsening of student youth and low level of attendance of physical education classes in universities. There was applied sociological method of survey (questionnaire). This research is average according its period.

In our research have participated students from I and II year of studying in high education institutions of Ukraine. These institutions are Drohobych Ivan Franko State Pedagogical University, (DSPU named after I. Franko), Oleksandr Dovzhenko Hlukhiv national pedagogical university (HNPU named after O.Dovzhenko), Kherson State University (KhDU) and Ukrainian State University of Railway Transport, Kharkiv (UkrSURT). In general, we have asked 363 students: 170 males and 192 females (18-20 years old). The questionnaire was performed anonymously. According to way of delivering, the questionnaire was handout. The questionnaire consists of 22 questions and is divided into blocks. The block that is directed on determination of motives, goals and students' interests according attending physical education classes is a part of research. The questionnaire includes half-closed and closed questions. This has allowed for respondents as to choose among presented answers, so to write down their own point of view for one or another question. Among all the options of answers on the questions according to motivation, the respondents were proposed to choose

three options of answers, that fits in the best manner. The research has taken place from 2018 till 2020 year. All respondents have given their allowance in the participation in the questionnaire.

The Results

The questionnaire that we have elaborated has shown that students from DSPU named after Ivan Franko prefer, in general, the motive of body and health strengthening in 64,7%. The motive to pass the exam from PE has been chosen by 60,0% of respondents. The improvement of physical effectiveness and desire to get fit were checked by 31,8% and 30,6% of respondents. In total, 28,2% of respondents get pleasure during doing classes and 21,2% want to develop their physical and volitional qualities. The motive of harmonized individual development is close to 10,6% of students. Less than 10,0% of students are close to such motives as the classes are well organized and interesting (8,2%); the opportunity to learn how to perform physical exercises technically correctly (7,1%); to learn a number of physical exercises and to remove psycho-emotional stress (5,9%). There is also high percent (5,9%) of those students that are not motivated to attend physical education classes. Other motives get around 1,2% of answers (Table 1).

Table 1 The Rating of Motives of Students from Drohobych Ivan Franko State Pedagogical University

Motives	Respondents' answers		
	Total %	Males %	Females %
1. To heal the organism and strengthen health	64,7%	55,6%	69,1%
2. To pass the exam from discipline "Physical education"	60%	55,6%	62,1%
3. Improvement of physical effectiveness	31,8%	44,4%	25,9%
4. The desire to get fit	30,6%	14,8%	37,9%
5. To get pleasure from the lessons	28,2%	33,3%	25,9%
6. The development of physical and volitional qualities	21,2%	25,9%	19,7%
7. The harmonized development of the personality	10,6%	11,1%	10,3%
8. The lessons are well organized and interesting	8,2%	7,4%	8,6%
9. The opportunity to learn how to perform physical exercises technically correctly	7,1%	14,8%	3,4%
10. The removal of psycho-emotional stress	5,9%	11,1%	3,4%
11. The opportunity to learn a number of physical exercises	5,9%	11,1%	3,4%
12. No motives	5,9%	7,4%	5,2%
13. Other motives	1,2%	3,7%	0,0%
Total respondents	100%	100%	100%

n=85

Taking into account the gender approach it was determined that the main motivation to attend physical education classes by males from Drohobych Ivan Franko State Pedagogical University is organism healing and health strengthening, PE exam passing – 55,6%. Females are guided by the motive to heal organism and strengthen health in 69,1%.

The students from Oleksandr Dovzhenko Hlukhiv national pedagogical university believe the main motive to attend physical education classes is the motive to pass the exam from this discipline in 75,0%. The desire to heal organism and strengthen health gave been found in 65,0% of respondents and desire to get fit – in 38,0% of respondents. Less than 30,0% of answers reflect such motives: to improve physical effectiveness in 27,0%, to get pleasure during classes in 26,0% and to improve their volitional and physical qualities – 20,0% of students. There are 16,0% of respondents who want to develop themselves harmoniously and 14,0% of respondents who attend classes to remove psycho-emotional stress. The good classes organization and opportunity to learn how to perform physical exercises technically correctly were checked by 6,0% of respondents. The same level of response (2,0%) have been found in two categories – the desire to learn a number of physical exercises and lack of students’ motivation. Other motives were not checked by students (Table 2).

Table 2 The Rating of Motives to Physical Education Classes among Students from Oleksandr Dovzhenko Hlukhiv National Pedagogical University

Motives	Respondents' answers		
	Total %	Males %	Females %
1. To pass the exam from discipline “Physical education”	75,0%	63,0%	79,5%
2. To heal the organism and strengthen health	65,0%	77,8%	60,3%
3. The desire to get fit	38,0%	14,8%	46,6%
4. Improvement of physical effectiveness	27,0%	22,2%	28,8%
5. To get pleasure from the lessons	26,0%	29,6%	24,7%
6. The development of physical and volitional qualities	20,0%	22,2%	19,2%
7. The harmonized development of the personality	16,0%	14,8%	16,4%
8. The removal of psycho-emotional stress	14,0%	14,8%	13,7%
9. The opportunity to learn how to perform physical exercises technically correctly	6,0%	7,4%	5,5%
10. The lessons are well organized and interesting	6,0%	3,7%	6,8%
11. The opportunity to learn a number of physical exercises	2,0%	3,7%	1,4%
12. No motives	2,0%	3,7%	1,4%
13. Other motives	0,0%	0,0%	0,0%
Total respondents	100%	100%	100%

n=100

Taking into account gender differentiations, the main motive to attend physical education classes among males from HNPU named after O. Dovzhenko is organism healing and health strengthening in 77,8%; among females – exam passing from the discipline in 79,5%.

The respondents from Ukrainian State University of railway transport gave determined the main motive to attend physical education classes. In 44,6% it is the motive to pass the exam from the discipline. The motives to heal and strengthen body, to get fit and to improve their physical effectiveness were checked by 20,8% of students. To develop harmoniously and to get pleasure during classes want 16,8% of respondents. There are 14,9% of students that are motivated by opportunity to learn how to perform physical exercises technically correctly. The well organization of classes and removal of psycho-emotional stress were checked by 12,9% of respondents. 10,9% of students have opportunity to learn a number of physical exercises and the same percentage of students are not motivated to attend physical education classes. 9,9% of students want to develop their physical and volitional qualities, 0,9% reflect other motives (Figure 1).

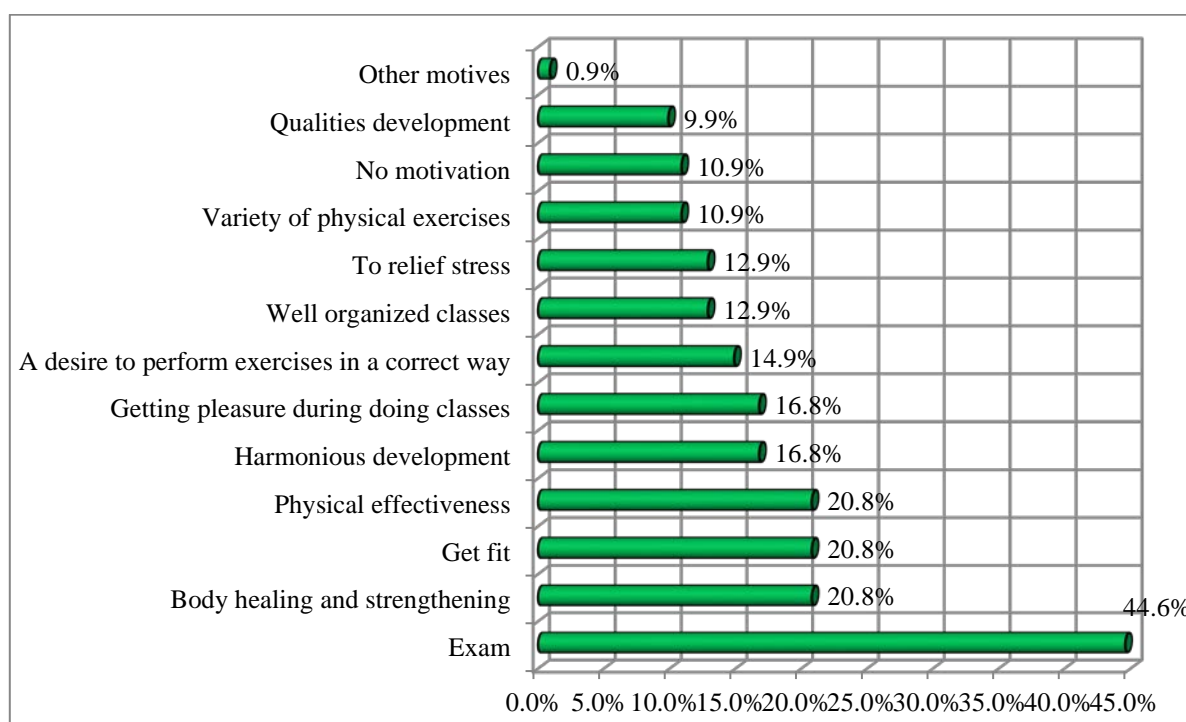


Figure 1 The Rating of Motives to Attend Physical Education Classes among Students from Ukrainian State University of Railway Transport

Taking into account gender difference, 43,0% of males and 50,0% of females believe their main motive to attend physical education classes is to pass the exam from the discipline.

The research in Kherson State University has shown that 50,6% of students are motivated to attend physical education classes in order to pass the exam from the discipline. There are 42,9% of respondents who want to heal and strengthen their body and 36,4% of students who want to develop their volitional and physical qualities. 23,4% of respondents want to develop harmoniously and get fit; 20,8% of students get pleasure visiting classes; 18,1% of respondents improve their physical effectiveness and have opportunity to learn how to perform exercises technically correctly; 16,9% of students believe that classes are well-organized and are interesting and 15,6% can remove their psycho-emotional stress during lessons. There are 10,4% of students that have opportunity to learn a number of physical exercises and 3,9% of students without motivation to attend classes. Other motives have got 1,3% of answers. Taking into account gender indicator it was determined that 40,5% of males are motivated by the reason to heal the body and strengthen their health and 65,0% of females attend classes mainly in order to pass the exam from the PE discipline.

Thus, we have elaborated the ranging of motivation of students that are studying in high institutions in Western, Eastern, Southern and North-Eastern regions of Ukraine according to results of our questionnaire (Figure 2).

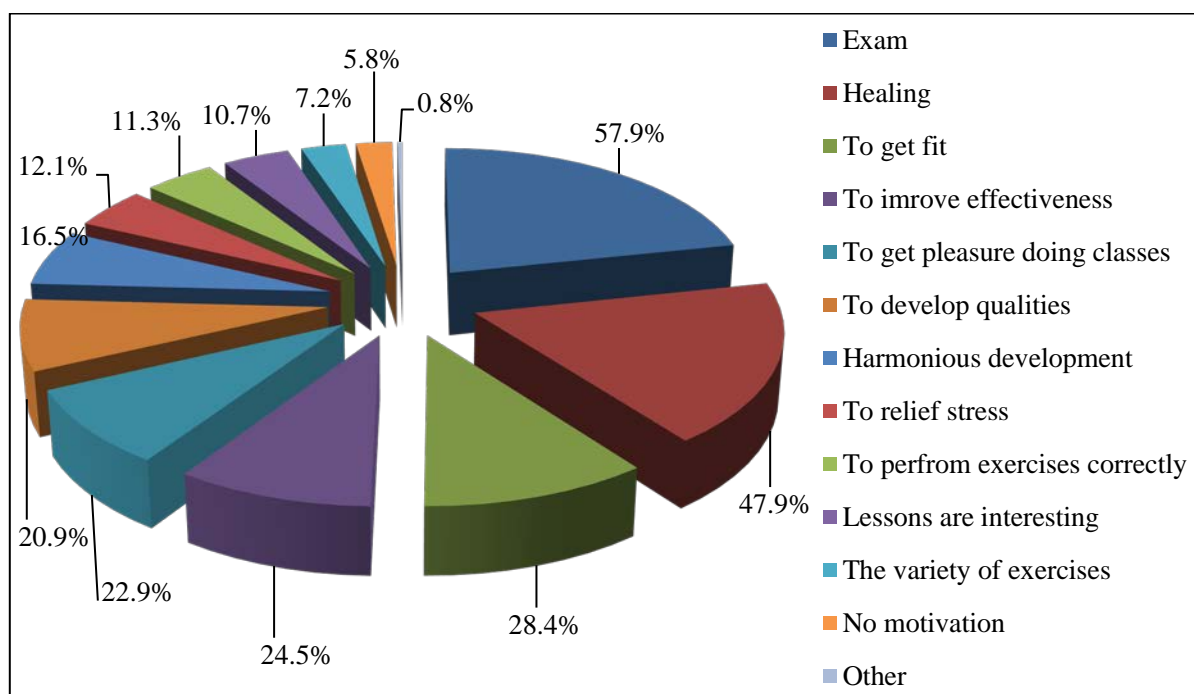


Figure 2 The Percentage Meaning of Students' Motivation to Attend Physical Education Classes in Four Ukrainian Universities

While analyzing of general percentage meaning of answers from the universities we have got the pattern: the main and priority motive to attend physical education classes for students is the desire to pass the exam from PE discipline (57,9%). It was ranged at the first place. The body healing and health strengthening is on the second place (47,9%). The third place has got the desire to get fit (28,4%); on the fourth – the motive to improve physical effectiveness (24,5%); on the fifth place – to get pleasure while doing classes (22,9%); on the sixth – the desire to develop their volitional and physical qualities (20,9%); on the seventh – harmonious development of the personality (16,5%); on the eighth – to remove psycho-emotional stress (12,1%); on the ninth – the opportunity to learn how to perform physical exercises technically correctly (11,3%); on the tenth – classes are well-organized and are interesting (10,7%); on the 11th – opportunity to learn a number of physical exercises (7,2%); on the 12th – no motives to attend physical education classes (5,8%); 13th – other motives (0,8%).

Taking into account gender approach with the comparative analysis of general results of anonymous questionnaire we have found out some different and common points between females and males in the choice of motivational priorities to attend physical education classes. As males (46,5%), so females (67,9%) believe that to pass exam from the PE discipline is the main motive to attend physical education classes. In our opinion, it is the result of physical education department's work in the direction of building normative approach, when they put external indicators, that are characterized by average control standards from the educational program from PE instead of individual students' desire and preferences. On the second place as males (38,8%) so females (56,5%) have put the motive to strengthen the body and health. This indicates general students' awareness about positive impact of physical exercises on the human body and health in general, but they do not make it dominant. This point causes a lot of concerns. Males have put the motive to improve physical effectiveness on the second place (26,5%). This may state that modern student is aware about how much important is the qualified specialists with high physical and professional effectiveness in due to provide full-fledged professional activity in modern society conditions. From the contrary, females are pushed by the desire to get fit (35,2%) as far as esthetic motivation for women is much more important than for men, young generation look after their appearance, they want to look nice and make a positive impression.

Discussion

The generalized results of the survey have determined that the dominant motive among students is exam passing from PE discipline. So, external motives overcome inner students' motives. The presented results of our research prove the

results of other domestic scientists about the lack of inner realized motivation (Bezverhnja & Maevskij, 2015). We can observe contrary tendency, such as domination of inner motivation towards physical education when perform comparison with foreign scientific researches about this problematics (Ferrer-Caja & Maureen, 2000; Kuśnierz, Rogowska, & Pavlova, 2020). Though, this motive is not on the first places among all universities in the research. There was stated that students from Drohobych Ivan Franko State Pedagogical University prefer the motive to heal the body and give them first place. This may be as the result of a good work of a physical education department in this direction, so a good students' awareness about positive impact of physical exercises on their bodies and health.

We also have noticed that results of our research differ from the standard imagination about taking care after health in gender approach. A lot of domestic scientists (Shijan, V., Shijan, O., & Svadkovska, 2016, Zelenskyi, B. & Zelenskyi, R., 2018) highlight that women care about their health more than men. According to results we have got, males-participants tend to keep more attention on their health than females. From the contrary, females, in general, are motivated by passing the exam in order to avoid problems during the attestation from the PE discipline.

It is also worth mentioning that indicator of absence of students' motivation to attend physical education classes is on the lowest stages among other motives if to talk about generalized results. Though, if to look at each university individually, it is significantly high at the level of 10,9% in Ukrainian state university of railway transport. In our opinion, the physical education department has to implement modern innovative technologies and studying methodic, taking into account personal approach according to students' opportunities and need in such case. In this manner, it will promote increase in level of motivation towards physical education classes in high educational institutions.

Conclusions

Concluding the presented information, we have stated that 57,9% of students, that participated in the research, believe the priority motive to attend physical education classes is to pass the exam and the motive to strengthen the health get the second place with 47,9%.

As males so females determine the motives to pass the exam from the discipline "Physical education" and health strengthening as the most significant ones (males – 38,8%; females – 56,6%). On the third place is the desire to improve physical effectiveness among males and among females is the desire to get fit.

The results we have got show the importance to increase motivation level to attend physical education classes, to increase interest of the student youth towards

different kinds of motor activity and to form a sustain demand in systematical physical trainings.

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**РАЗВИТИЕ ДИАМОНОЛОГИЧЕСКОЙ
КОМПЕТЕНТНОСТИ БУДУЩИХ УЧИТЕЛЕЙ
НАЧАЛЬНОЙ ШКОЛЫ
В ПРОЦЕССЕ ПРОФЕССИОНАЛЬНОЙ
ПОДГОТОВКИ**

***Development of Diamonological Competence of Future Primary
School Teachers in the Process of Professional Training***

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Abstract. *The implementation of active forms and methods of group interaction in the educational process is recognized as a perspective means of developing future teachers' communication. From the authors' standpoint, it is necessary to re-evaluate the developmental potential of such specific methods as discussion methods (group discussion, analysis and commentary of situations); play methods (role-, director-, and counterplays) and play psychotherapy, trainings of interpersonal sensitivity, personal growth, techniques of non-verbal interaction and others. The topicality of such re-evaluation is caused not only by the reform processes in the education system of Ukraine, but also by the modern challenge to the whole system of world education - the need for large-scale implementation of distance forms of the educational process organization in connection with the pandemic situation. The survey of future primary school teachers conducted by the authors, indicates a low readiness of modern teachers to use active teaching methods for training schoolchildren of different age groups, to organize speech interaction with students based on emotional involvement in work, critical re-evaluating of self-position, frank and reasoned expression of thoughts and feelings. In this regard, the issues of the development of diamonological competence of the higher education institutions students acquire additional relevance in the pedagogical discussion.*

Keywords: *competence-based approach, components of communicative competence, dialogical and monologic utterance, future teachers, primary school, professional training, speech interaction.*

Введение ***Introduction***

Вхождение Украины в европейское образовательное пространство вызвало необходимость коренных изменений в существующей системе образования, обеспечение образовательного процесса на основе эффективного взаимодействия его субъектов, сохранения демократических социальных ценностей, культурных и образовательных традиций (Vyshkivska, Shykyrynska, Malinka et al., 2020). Вместе с тем, важно предоставить субъектам образования максимальные возможности для успешной самореализации и саморазвития в течение всей жизни. Ориентация системы образования Украины на становление и развитие ключевых компетентностей выпускников средней школы успешно реализуется в образовательном проекте «Новая украинская школа» (Ministerstvo osvity i nauky Ukrainy, 2016).

В соответствии с Государственным стандартом начального образования (Derzhavnyi standart pochatkovoї osvity, 2018) к ключевым компетентностям (среди основных десяти) относят свободное владение государственным языком, способность общаться средствами родного и иностранных языков, что предусматривает активное их использование в различных коммуникативных ситуациях, в частности в быте, образовательном процессе, культурной жизни общества, владение навыками межкультурного общения. Таким образом, содержание, формы, методы и приёмы, конечные результаты развития коммуникативной компетентности и её составляющих у носителей языка от младшей возрастной группы (дошкольное и начальное образование) до старшей (профессиональное образование и последипломное самообразование) приобретают особую актуальность.

Для межличностной коммуникации субъектам необходимо слышать и понимать друг друга, адекватно реагировать на вербальные ситуации, планировать и организовывать их, корректировать своё участие, оценивать степень успешности в реализации. Таким образом, для школьников, их педагогов, родителей жизненно важным является совершенствование диалоговческой компетентности как одного из компонентов коммуникативной компетентности.

Параллельно с развитием диалоговческой компетентности у младших школьников (первая образовательная ступень), считаем необходимым

целенаправленно развивать аналогичные качества для продуктивного управления собой, эффективного взаимодействия в паре или группе, проявления инициативы в общении, качественном осуществлении рефлексии и у педагогов начальной школы. Тогда существенные изменения школьной системы образования приобретут качественную поддержку в системе профессиональной подготовки педагогов.

Цель статьи – теоретическое и эмпирическое обоснование преимуществ использования активных форм развития диалоговой компетентности будущих педагогов в процессе профессиональной подготовки в высшей школе (тренинговых занятий).

В статье представлены материалы, полученные с помощью теоретического анализа литературных источников, фокус-группового опроса студентов с целью выяснения мотивов выбора учебного предмета «Тренинг личностного роста», а именно, понимание ими необходимости дальнейшего развития умений диалоговой компетентности; наличие связи личностного совершенствования и приобретении умений для дальнейшей профессиональной деятельности.

Методы исследования: теоретические – изучение и анализ педагогической литературы по вопросам модернизации образовательной сферы; эмпирические – опрос, анализ творческих работ студентов, наблюдение в процессе проведения рефлексивных упражнений; методы статистического анализа для преобразования эмпирических данных в количественные показатели.

Теоретическая основа темы The Theoretical Background

Тренинг как метод активного обучения, кроме навыков самопознания, саморегуляции, межличностного взаимодействия максимально способствует развитию коммуникативных и профессионально ориентированных умений. На тренингах личностного развития широко практикуют дискуссионные методы обучения, предусматривающие публичный спор с целью выяснения и сопоставления различных мнений, определения истинной позиции, продумывания вариантов позитивного решения проблемы (Smith, 2001).

Учеными ведётся дискуссия по поводу того, какой вид тренинга должен быть первым в профессиональной подготовке педагога. Одними исследователями обосновывается позиция, что первым должен быть тренинг личностного роста (Prutchenkov, 2001), а не коммуникативных или деловых качеств. Другие считают, что при подготовке будущих специалистов первоначальным должен быть тренинг коммуникативной

компетентности (Fedorchuk, 2014). Наш многолетний опыт работы со студентами свидетельствует, что в процессе использования активных методов подготовки именно тренинг личностного роста способствует развитию коммуникативной компетентности будущих педагогов в целом, диалоговой компетентности в частности. Эти два вида тренингов тесно связаны между собой, поскольку в их основе – использование групповых упражнений, ролевых игр, дискуссий, которые позволяют снять барьеры в общении и научиться воспринимать и лучше понимать себя самих и окружающих.

В своём исследовании мы базируемся на рекомендациях М. Форверга (Vorweg, 1971), который разработал и научно обосновал метод, в основу которого положены ролевые игры с элементами драматизации – социально-психологический тренинг (СПТ). Основной целью СПТ, по мнению ученого, является развитие компетентности в общении. Но после проведения экспериментальных исследований М. Форверг пришел к выводу о продуктивном влиянии СПТ на повышение интерперсональной компетентности за счет интериоризации личностью новых коммуникативных установок и их перенесения в область профессиональной деятельности.

Поскольку тренинг – творческий процесс, сценарий которого постоянно видоизменяется в связи с многочисленными показателями (количество участников, личностные качества самих участников, руководителя и др.), программа тренинга может быть ориентировочной схемой проведения каждого занятия. Для создания экспериментальной тренинговой программы нами были использованы уже существующие разработки: программа тренинга личностного роста соискателей высшего образования (Radionova, 2019), ориентировочная программа «Тренинг личностного роста», наполненная различными упражнениями, играми, психотехниками, которые рассчитаны на практическое использование (Fedorchuk, 2014), собственные разработки и задания, апробированные в течение многих лет тренинговой практики (Liubchak, 2017).

Методы, организация и результаты исследования Methodology, Organization and Results of the Research

С целью определения мотивов развития коммуникативной компетентности в целом, а диалоговой в частности, у студентов Винницкого государственного педагогического университета было организовано эмпирическое исследование. Оно предусматривало фокус-групповой опрос студентов в ходе проведения системы тренинговых

занятий, анализ и обобщение результатов, формулирование выводов и рекомендаций.

В исследовании участвовали 37 студенток первого курса специальности 013 Начальное образование, которые среди предложенных учебных предметов по выбору добровольно выбрали дисциплину «Тренинг личностного роста». Все возможные предметы по выбору были представлены будущим педагогам для ознакомления на сайте университета в виде электронных презентаций с кратким комментарием целей и задач каждого.

Добровольный выбор студентками (каждая вторая из 74 студентов факультета) учебного предмета «Тренинг личностного роста», который предлагал будущим педагогам возможности для усовершенствования навыков межличностного общения, приобретения опыта эффективного взаимодействия, повышения учебной мотивации и пр., убедил нас в понимании студентками уровня личных коммуникативных трудностей.

В связи с пандемией и необходимостью использования дистанционных форм организации образовательного процесса мы испытывали существенные трудности в проведении тренинговых занятий, которые предусматривают непосредственное взаимодействие в групповом общении. Рабочая программа рассчитана на 16 занятий в течение первого семестра (циклический тренинг). Ослабление карантинных мероприятий дало возможность провести первых пять занятий в каждой подгруппе в офлайн-режиме. Студентки смогли познакомиться друг с другом, проявить степень доверия, осознанно сформулировать правила работы в группе. Это способствовало созданию позитивной основы для возможной динамики и продуктивной работы по развитию диалоговой компетентности будущих специалистов на дальнейших онлайн-занятиях. Нами были зафиксированы ожидания первокурсниц от такого вида занятий. Они записывались в специальном протоколе помощником тренера и представлены в таблице.

После первого офлайн-знакомства студентки получили возможность высказаться по поводу их личных ожиданий от такого вида занятий («Дерево ожиданий», на котором будущие учителя в виде стикеров прикрепляли собственные варианты ожидаемых результатов от участия в тренинге).

Нами были проанализированы и сгруппированы ответы студенток и определены мотивы их участия в тренинговых занятиях:

- установление эффективного межличностного взаимодействия («Хочу найти подруг», «Хочу поближе познакомиться с одногруппницами»);

- овладение приемами самоанализа и самовыражения («Стремлюсь разобраться в себе», «Хочу решить собственные трудности, которые существенно мешают в жизни»);
- коррекция собственной манеры общения и поведения («Хочу не бояться выступать перед большой аудиторией», «Стремлюсь научиться решать конфликты», «Хочу избавиться от агрессии в отношениях с близкими людьми»);
- использование приобретенных навыков в будущей профессиональной деятельности («Не бояться общаться с родителями учащихся», «Быть интересной современным школьникам», «Научиться вести дискуссию с учащимися»).

Представим полученные данные в таблице.

Таблица 1. Мотивы выбора будущими учителями начальных классов тренинговых занятий

Table 1 Motives for Choosing Training Sessions by Future Primary School Teachers

Мотив	Количество выборов	
	Количество студентов	% соотношение
Установление эффективного межличностного взаимодействия	13	35,1%
Овладение приемами самоанализа и самовыражения	11	29,8%
Коррекция собственной манеры общения и поведения	9	24,3%
Использование приобретенных коммуникативных навыков в будущей профессиональной деятельности	4	10,8%

Как видим из таблицы, только 4 студентки из 37 (10,8%) в начале работы тренинговой группы ожидают усовершенствования собственных коммуникативных умений для успешной профессиональной деятельности.

Система тренинговых онлайн-занятий предусматривала выполнение определенных практических заданий. В условиях дистанционного обучения практические задания выполнялись студентками самостоятельно и прикреплялись в гугл-классах в оговоренные сроки. Еженедельные видеоконференции были необходимы для рефлексии предварительно выполненных заданий, комментирования трудностей и возникших собственных проблемных ситуаций, приобретения навыков группового взаимодействия.

Программа тренинга личностного роста предусматривала серию занятий по определенным разделам: самопознание, самопрезентация, целеполагание, тайм-менеджмент, устойчивость к стрессу, мотивация (Radionova, 2019). Приведем примеры упражнений и заданий, выполнение которых, по нашему мнению, способствовало развитию у будущих педагогов диалогиической компетентности.

Так, выполнение упражнения «Мой образ» предусматривало такое задание: «Представьте себе, что у вас есть возможность попасть на другую планету. Но не в человеческом теле, а в виде предмета, растения, животного или птицы. В каком образе вы представляете себя на этой планете? Из какого материала сделаны, какого цвета? Какими свойствами, качествами владеете? Каково ваше предназначение? Если вы представили себе свой новый образ, детально описали его, можете его изобразить (нарисовать)».

Алла В. изобразила себя в виде птицы и объяснила, почему выбрала данный образ: *Это – голубь. Основная причина выбора именно этой птицы – свобода, умение летать, стремление к миру. Он раскрашен в несколько цветов, каждый из них имеет свое значение. Эти цвета максимально точно характеризуют меня как личность. Желтый – оптимизм и энергичность; оранжевый – доброжелательность, радость, характерные для людей, стремящихся к кардинальным изменениям. Синий – цвет небесного пространства – вечности, свободы мысли, бесконечности. Это характерно для мечтателей и целеустремленных людей. Красный – жизненная сила, любовь; характерный смелым, волевым людям. Зеленый – покой, гармония, надежда и молодость.*

Студентки могли продемонстрировать на экране свой рисунок, прокомментировать его и получить от членов группы уточняющие вопросы: Есть ли у птицы друзья, враги? Они такого же цвета, или обычного – серого? Комфортно ли ей с таким оперением на другой планете? Может ли она изменить окраску оперения?

Кристина Ш. отметила, что могла бы стать хамелеоном, ведь он от природы может изменять свой окрас под цвет окружающей среды: *В жизни я так же могу приспосабливаться к людям, окружающим меня, поддерживать разговор. Не всегда мои интересы совпадают с их заинтересованностью, но я, скорее всего, смогу поддержать разговор на любую тему.* Вопросы к студентке касались ее эмоций и чувств во время изменения окраса кожи, определения актуальных тем для общего обсуждения и т.п.



Рисунок 1. Образцы рисунков студентов по результатам выполнения упражнения «Мой образ»

Figure 1 Samples of Students' Drawings Based on the Results of the Exercise "My Image"

Достаточно интересную дискуссию вызвало выполненное студентками упражнение «Инвентаризация стрессов», целью которого было осознание будущими педагогами актуальных стрессоров и стрессовых ситуаций, а также причин восприимчивости к их влиянию. Следует констатировать, что для студенток первого курса на лидирующем месте среди причин, вызывающих у них стрессовое состояние, были названы такие: длительное отсутствие полноценного отдыха и приближающаяся сессия; на втором месте – карантинные ограничения, отсутствие живого общения, дистанционное обучение, одиночество. Отдельные студентки указывали на конфликты в семье, страх потерять близкого человека, экономическое положение в стране и т.п.

При обсуждении причин, вызывающих часто стрессовое состояние, студентки высказывали предположения о коммуникативных качествах, которые им следует развивать. Среди наиболее востребованных – умение владеть (управлять) своими эмоциями во время взаимодействия с партнерами по общению, а также умение говорить «Нет», научиться корректно и аргументировано выражать собственное мнение публично, продуктивно реагировать на замечания собеседников, общаться на деловом уровне.

На завершающем занятии, при подведении итогов работы, выполняя упражнение «Щит», студентки проанализировали собственные достижения или ответили на вопрос «Чем я сейчас горжусь?». Занятие проходило в режиме видео-конференции, которая, по согласию группы, была записана. Поэтому ответы мы смогли зафиксировать и проанализировать.

Мы сравнили ожидания студенток на начальном и завершающем занятиях, выяснили, какой опыт приобрели будущие педагоги в ходе работы над собой в тренинговой группе, изменились ли их мотивы участия в

подобного рода занятиях, осознают ли они взаимосвязь между личностным ростом и эффективностью своей дальнейшей профессиональной деятельности.

Как видим из диаграммы, значительно возросло количество студенток первого года обучения (с 4 (10,8%) до 10 (27,0%)), которые в ходе рефлексии на завершающем занятии отметили, что приобретенные коммуникативные навыки смогут использовать в будущей профессиональной деятельности. Они утверждали: «Мне легче выражать свои мысли в присутствии других людей. Теперь не боюсь общаться с учащимися», «Подтвердила правильность выбора профессии. Научилась взаимодействовать с другими студентками», «Научилась не только говорить, но и слушать других. Думаю, что это пригодится в работе с учениками», «Лучше разобралась в себе. Надеюсь, что смогу принять школьников такими, какие они есть» и др.

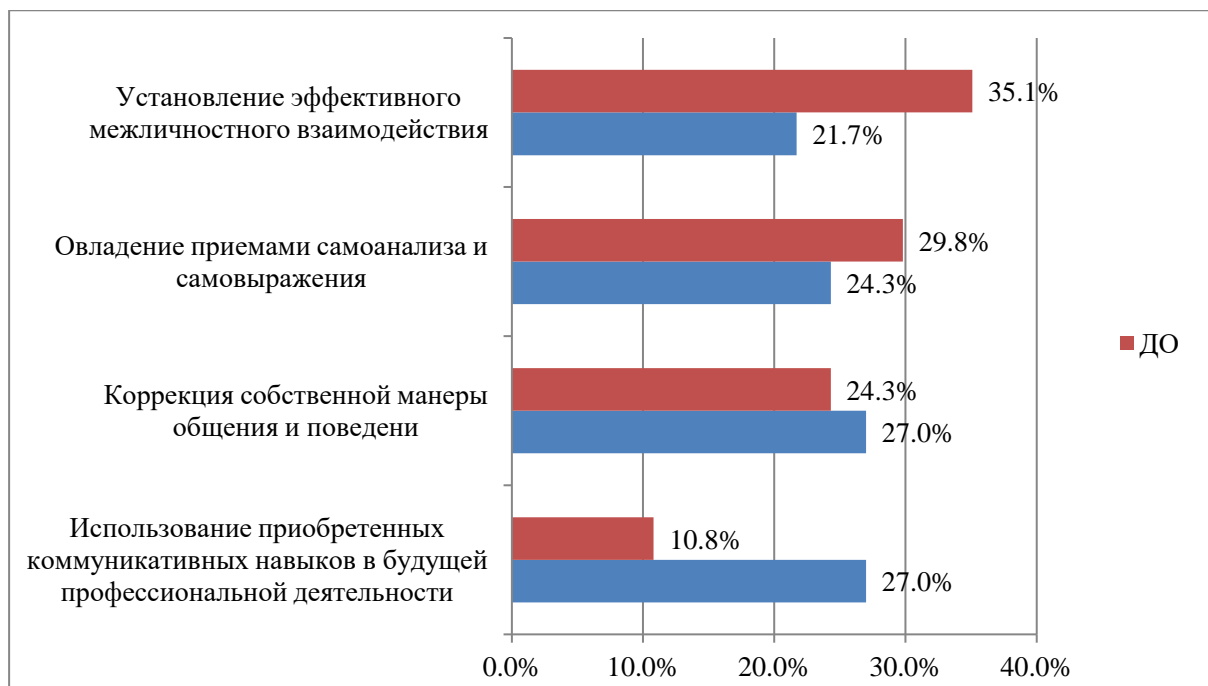


Рисунок 2. Результаты осознания студентами мотивов развития диалогической компетентности для дальнейшей профессиональной деятельности

Figure 2 The Results of Students' Awareness of the Motives for the Development of Dialogical Competence for Further Professional Activity

В связи с принятыми в группе правилами, среди которых есть и конфиденциальность, мы не можем сообщить все результаты выполнения студентками упражнений и заданий. Вместе с тем, нами зафиксирована положительная динамика у первокурсниц не только при решении личностных трудностей, приобретении навыков межличностного и

группового взаимодействия, но и существенное повышение уровня развития диалоговческой компетентности, что скажется на степени их готовности к профессиональной деятельности. По результатам работы тренинговых групп можем констатировать существенные преимущества использования активных форм развития диалоговческой компетентности будущих педагогов в процессе профессиональной подготовки в высшей школе.

Обобщение Conclusions

Обобщение теоретических источников и результатов экспериментальной работы позволило сделать следующие выводы:

1. Развитие диалоговческой компетентности будущих педагогов начальной школы обусловлено совершенствованием образовательного процесса в высшей школе как важного этапа системы непрерывного образования в течение всей жизни человека. Профессиональная подготовка педагогов на компетентностной основе является одновременно и логичным продолжением преобразований в системе образования Украины, и вместе с тем, фундаментом коренных изменений в начальной школе. Поэтому для развития коммуникативности различных возрастных групп следует активно использовать разнообразные формы и методы группового взаимодействия: ролевые игры, групповые дискуссии, тренинги личностного роста, тренинги межличностного взаимодействия и другие.
2. Использование возможностей описанных тренинговых занятий, кроме самопознания, саморегуляции и активизации межличностного общения студентов, максимально способствовало развитию у них диалоговческой компетентности, коррекции собственной манеры общения и поведения, использования приобретённых навыков в будущей профессиональной деятельности с младшими школьниками. Они были направлены на совершенствование способности студентов формировать и формулировать собственное мнение или позицию, внимательно прислушиваться к мнению других, корректно реагировать на изменение ситуации общения в соответствии с позицией собеседника.

Summary

Thus, the development of dialogical competence of future primary school teachers is due to the improvement of the educational process in higher education as an important stage in the system of lifelong education throughout life. Professional training of teachers on a competency-based ground is both a logical continuation of the transformations in the educational system of Ukraine and the foundation of fundamental changes in primary school. Therefore, for the development of communication in all age groups, various forms and methods of group interaction should be actively used: role-playing games, group discussions, trainings for personal growth, interpersonal interaction, and others.

The use of the described training sessions possibilities, in addition to self-knowledge, self-regulation and activation of students' interpersonal communication, maximally contributed to the development of their dialogical competence, correction of their own manner of communication and behavior, and the use of acquired skills in future professional activities with younger students. They were aimed at improving the students' ability to form and formulate their own opinions or positions, to listen carefully to the opinions of others, to respond correctly to changes in the communication situation in accordance with the interlocutor's position.

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SOFT SKILLS FORMATION THROUGH THE PRISM OF UNIVERSITY STUDENTS' VIEW: ANALYSIS OF SURVEY RESULTS

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Abstract. *Fundamental changes in the educational paradigm of the Ukrainian education modern system have led to a revision of the process of improving the university students' professional training. The issue of students' soft skills formation as mandatory for the diversification of career opportunities in the labor market is relevant. Unification with European standards has led to the necessity to fill the new content of university education to ensure personal development and self-development of future professionals in the course of mastering fundamental and special disciplines and the soft skills formation, which determines the novelty of the issue. The purpose of the study was to carry out a theoretical analysis of the problem of students' soft skills formation and empirical study of the students' attitude (pedagogical specialty) of Ukrainian universities to this process in the context of preparation for their future career. The main method was a survey conducted by respondents filling out an author's questionnaire "What is an ideal preschool teacher?" in electronic form on the online platform Google. Students of the specialty 012 "Preschool Education" of the first (bachelor's) level of higher education (1–4 years of study) from 2 Ukrainian universities (n = 191) were included into the sample. The results were processed both quantitatively and qualitatively and demonstrated that students are aware of the need to form soft skills in preparation for their own professional activities. However, more emphasis was placed on them by senior respondents, who, having mastered a large number of specialized subjects and had various types of educational practices, realized the importance of developing skills (soft skills) for personal growth. In this regard, changes are needed in the educational and professional curriculum of the first (bachelor's) level of higher education, where it is important to outline the task of students' soft skills formation as a mandatory component of future professionals' training to meet the requirements of today's labor market.*

Keywords: *conscious attitude, pedagogical activity, professional training, questionnaires, soft skills formation, students, universities.*

Introduction

One of the main tasks of modern changes in the educational policy of the Ukrainian state is to integrate the standards of the European education area. With regard to the higher education system, it is reflected in the students' number of key competences formation, among which soft skills form a separate group (European Union, 2006; Key Competences for Lifelong Learning, 2007).

Numerous studies of foreign and Ukrainian researchers (Arat, 2014; Hora, Benbow, & Smolarek, 2018; Koval, 2015; Robles, 2012) note that the main trend in the labor market is the requirement for employers to be experts in the relevant field, possess professional knowledge and skills and necessarily possess soft skills. It is soft skills that will be able to provide future professionals with a high level of competitiveness, which will contribute to their successful joining the workforce and observance its corporate ethics (Gilland, 2009; Lobodynska & Hrydzhuk, 2020) in interpersonal interaction and achievement in professional activities (Cornalli, 2018). It is especially important to develop soft skills in students of pedagogical universities, who are supposed to interact in their work with different categories: children and their parents, colleagues, staff.

A successful professional is distinguished by the development of the ability to establish communication, work effectively in a team, the ability to quickly make decisions in different situations, resolve conflicts, etc. (Ciappei & Cinque, 2014). In the Ukrainian education system, this issue has become topical only in recent years, so it is still insufficiently studied, which determines the relevance of scientific research. Its novelty is to clarify a kind of conglomerate: professional training based on the mastery of fundamental and special disciplines, and future specialist's personal development and self-development, which is interpreted as soft skills formation.

The *aim* of the research is to carry out a theoretical review of the essence of the "soft skills" as a concept and empirical study of the conscious attitude of students (pedagogical specialty 012 "Preschool Education") of Ukrainian universities to master such skills for their future professional activities.

Objectives of the study: 1) to review and analyze the literature on the formation of soft skills in students/graduates of universities and to determine the essence of the studied phenomenon; 2) to characterize the importance, based on the students' opinion of the soft skills formation in their professional training while studying at the university; 3) analyze the results and draw conclusions about the peculiarities of the soft skills formation in students from their own point of view.

Methods. In order to solve the tasks of the study, the following theoretical methods were used – analysis, synthesis, systematization and generalization of the scientific source base of the study, as well as empirical methods – a questionnaire for survey participants (students) and processing of its results.

Literature Review

An analysis of the literature base suggests that there are different scientific positions on the essence of the concept of “soft skills”. In the study of Schulz (2008), these skills are grouped into three varieties: personal qualities, interpersonal skills and additional skills (knowledge). According to the scientist, the main emphasis should be placed on the formation of communication skills that affect the formation of personality in general (ibid). Similar scientific ideas have been expressed by Cornalli (2018), who noted that the effectiveness of modern professional activity is determined by generic skills through the level of mastery of social interaction skills, interpersonal communication, sensitivity and ability to work in a team, which are soft skills (ibid). As noted Arat (2014), Guerra-Báez (2019), Padhi (2014), it is soft skills that contribute to the formation of future specialist’s important personal qualities and lead to realization of academic disciplines studying and the generic skills development.

The priority of soft skills is noted during corporate training, which will further ensure the success of career growth (Hora, Benbow, & Smolarek, 2018). In particular, the most effective soft skills are: “integrity, communication, courtesy, responsibility, social skills, positive attitude, professionalism, flexibility, teamwork, and work ethic” (Robles, 2012, p. 453). The teacher’s individuality plays a significant role in the soft skills formation, the main function of which is pedagogical cooperation and the development of each student’s personal potential (Briggs, 2015; Haselberger, Oberhuemer, Perez, Cinque, & Capasso, 2012).

The study of scientific sources of the topic under consideration demonstrated that the issue of soft skills is an important component of university education in different countries. In particular, the following were studied:

- curriculum changes and arrangements to raise students’ realization of soft skills development, which has improved learning, as well as a number of benefits in Indian educational institutions (M. Wats & R. Wats, 2009);
- Malaysia students’ and teachers’ attitudes towards the necessity to develop soft skills in the training process (Nikitina & Furuoka, 2012; Ngang, Chan, & Vetriveilmany, 2015);

- finding out the effectiveness of the soft skills implementation in teachers' (university graduates) professional activities during their first two years of work in primary schools in the north-eastern region of Thailand (Kanokorn, Pongtorn, & Sujanya, 2014), as well as studying the level of seven soft skills formation ("critical and problem solving skills, team work skills, ethics, moral and professional skills, leadership skills and innovation invention and development skills") of young teachers in the Secondary Schools of Khon Kaen Secondary Educational Service Area 25, Thailand (Attakorn, Tayut, Pisitthawat, & Kanokorn, 2014, p. 1010);
- analysis of the influence of soft skills development on the education quality and determination of interest to studying among students of Chinese universities (Yan, Yinghong, Lui, Whiteside, & Tsey, 2018);
- comparative assessment of the Finnish and Italian students' perceptions about the necessity of soft skills to perform their professional duties successfully due to the requirements of socio-economic development of society (Caggiano, Schleutker, Petrone, & González-Bernal, 2020).

In Ukrainian science, despite the novelty of the problem, modern researchers (Korniush, 2020; Koval, 2015; Lobodynska & Hrydzhuk, 2020; Tiutiunyk, 2015) proved the importance of soft skills and their impact on the content of professional activities in the process of future professionals' training. Thus, without denying the importance of generic skills (Ruokonen & Sepp, 2020), based on the review of the literature on the essence of the concept of "soft skills" we have come to the following scientific generalizations: the formation of soft skills in university education is recognized as important and obligatory as a component of effective training of future professionals for their professional activities in various fields of work.

Methodology of Research

Research tools. The main tool was to create a written questionnaire – the questionnaire "What is an ideal preschool teacher?" (see forms.google.com. https://bit.ly/Portret_Vykhovatelia) to diagnose the conscious attitude of students (specialty 012 "Preschool Education") of Ukrainian universities to acquire soft skills for their future professional activities. Information about the survey was disseminated through the social network Facebook (academic groups of subscribers). The content of the questions was based on the order of the relevant ministry – the Ministry of Education and Science of Ukraine from 21.11.2019 № 1456 "On approval of the standard of higher education in specialty 012 "Preschool education" for the first (bachelor's) level of higher education"

(<https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/2019/11/22/2019-11-22-012doshkilna-B.pdf>) according to which 3 types of competencies are defined – these are integral, general and special (professional), including a list of some soft skills (moral values, teamwork, etc.). The results of studies by Attakorn, Tayut, Pisitthawat, & Kanokorn (2014) and Robles (2012), were also taken into account, specifying the names of soft skills that students should master while studying at university.

The questionnaire contained only 8 questions: one (the first) of which was an open-ended question, which determined the group affiliation of the respondents according to their sample; 6 questions – with a selective answer (three answer options for the choice of respondents, from the list of which it was necessary to choose one) and the last (8th) – an open question with a completely free answer. The list of questions (from 2nd to 6th) lists the names of 12 soft skills (virtue, creativity, teamwork skills, skills of tolerant communication with colleagues, interpersonal communication skills, social skills, flexibility, positive attitude, skills of leadership, moral skills, sensitivity, skills of maternal care for children) and 6 hard skills – professional knowledge, skills and abilities required for pedagogical activities (skills of organizing the educational process in preschool institution, skills of working with sources of educational and scientific information, skills of making an individual program of preschoolers' development, skills of etiquette in communication, a high level of knowledge in preschool pedagogy, child psychology and methods of educating children; skills of innovative forms of work).

Data collection procedure and methods of analysis. The materials of the research were collected by processing the author's questionnaire "What is an ideal preschool teacher?" filled in by students online during September 2020. Questionnaires were processed, namely how many of them were filled in (quantitative analysis) and the content of the answers, their completeness and validity (in the case of open answers) was carried out during October 2020. Analysis and generalization of the results: determination of students' attitude to soft skills, students' understanding of their necessity in their own further pedagogical activity and definition of the most topical, according to respondents, soft skills – carried out in November 2020.

Study sample are described. Participants of the empirical study (questionnaire) were full-time students of 1–4 years of study who are getting the first (bachelor's degree) level of higher education (field of knowledge 01 "Education/Pedagogy") and study on the specialty 012 "Preschool Education" in Hryhorii Skovoroda University in Pereiaslav and Bohdan Khmelnytsky National University of Cherkasy (Ukraine). Due to the specifics of the specialty, only females tend to study on the specialty "Teacher of Preschool Children", the groups were homogeneous in gender and differed only in age and number according to

the years of enrollment: 1st year of study – 48 participants, 2nd year of study – 51 participants, 3rd year of study – 45 participants, 4th (graduates) year of study – 47 participants. Due to the fact that both universities are state regional institutions of higher education, and therefore carry out equivalent training of students, the participants of the experiment were divided into 4 groups according to their course of study: 1st group – 1st year of study, 2nd group – 2nd year of study, 3rd group – 3rd year students, 4th group – bachelor's graduates.

Results of Research

Based on the analysis of the questionnaire “What is an ideal preschool teacher?” from the participants (n = 191) of the experiment it was found out that all forms were filled in, there wasn't any spoiled questionnaires, and therefore, students showed responsible attitude to their completion. Quantitative results of students' perception of the essence and choice of the importance of skills for the future implementation in their own pedagogical activities in preschool education are presented in Table 1.

Table 1 The Results of a Survey of Students as to the Necessity of Soft Skills Development

n = 191

№ questions and answer options (according to the questionnaire)	Indexes							
	1-st gr.		2-nd gr.		3-rd gr.		4-th gr.	
	n=48	%	n=51	%	n=45	%	n=47	%
2. A) skills of organizing the educational process in a preschool institution B) virtue C) creativity	39	81.25	33	64.7	19	42.22	13	27.66
	2	4.17	9	17.65	12	26.67	19	40.43
	7	14.58	9	17.65	14	31.11	15	31.91
3. A) skills of working with sources of educational and scientific information B) teamwork skills C) skills of tolerant communication with colleagues	23	47.92	7	13.73	6	13.33	2	4.26
	21	43.75	31	60.78	26	57.78	21	44.68
	4	8.33	13	25.49	13	28.89	24	51.06
4. A) interpersonal communication skills B) social skills C) skills of making an individual programme of preschoolers' development	19	39.58	8	15.69	11	24.44	17	36.17
	7	14.58	17	33.33	17	37.78	17	36.17
	22	45.84	26	50.98	17	37.78	13	27.66
5. A) flexibility B) positive attitude C) skills of etiquette in communication	5	10.41	11	21.57	12	26.67	12	25.53
	8	16.67	3	5.88	7	15.55	11	23.41
	35	72.92	37	72.55	26	57.78	24	51.06

6.	A) skills of leadership	2	4.17	5	9.8	8	17.78	8	17.02
	B) high level of knowledge in preschool pedagogy, child psychology and methods of educating children	45	93.75	42	82.36	29	64.44	28	59.57
	C) moral skills	1	2.08	4	7.84	8	17.78	11	23.41
7.	A) skills of innovative forms of work	38	79.17	12	23.53	9	20	6	12.77
	B) sensitivity	3	6.25	18	35.29	15	33.33	17	36.17
	C) skills of maternal care for children	7	14.58	21	41.18	21	46.67	24	51.06

Symbols:

gr. – group of respondents

n – the absolute index – the number of people

% – relative index

As the indexes in table 1 demonstrate, the answers of the respondents to the questionnaire and their choice of the most important skills from the suggested option were mainly different depending on the year of study. Thus, answering the question: “What skills are the most important in the portrait of a modern teacher of preschool institution?” (2nd in the questionnaire), mostly all students of the 1st group (first year of study) chose the option “A) skills of organizing the educational process in preschool institution” – 81.25% (n = 39), which indicates their recognition of the needs for professional hard skills development; a small percentage of respondents, however, determined that it is “C) creativity” – 14.58% (n = 7) and only 4.17% (n = 2) considered that the most important is “(B) virtue”. Instead, in the answers of the students of the 2nd group (second year of study) another option was observed: the option “A” – was chosen by 64.7% (n = 33) of respondents, and options “B” and “C” were distributed equally, they were chosen by 17.65% (n = 9) of respondents, which demonstrated an increase in the soft skills importance in the professional activities of 2nd year students. It was recorded that the respondents of the 3rd group (3rd year students), in answers of which a further decrease in the portion of those who preferred hard skills – option “A” – 42.22% (n = 19), and an increase in the number of soft skills choices: option “B” was chosen by 26.67% (n = 12) and accordingly “C” – 31.11% (n = 14), which is a total of 57.78% (n = 26). Thus, more than half of the 3rd year students being surveyed have already realized the importance of soft skills developing in professional training. Instead, the answers of the students of the 4th group (bachelor’s graduates) testified to the soft skills priority. Thus, the number of respondents with the answer “A” was only 27.66% (n = 13), and those who chose the answers “B” and “C” – 72.34% (n = 34) (in fact – 40.43% (n = 19) + 31.91% (n = 15)), which is only 8.91% less than the number of students in the

first group, who identified hard skills to be the most important in the portrait of a modern teacher of preschool institution.

Answering to the question: “What skills are the most important for a teacher to work in a team (in the team of a preschool institution)?” (3rd in the questionnaire), respondents of the 1st group were almost equally determined with the choice of option “A) skills of working with sources of educational and scientific information” – 47.92% (n = 23) – are hard skills and option “B) teamwork skills” – 43.75% (n = 21) – are soft skills, the latter were joined by those who chose option “C) skills of tolerant communication with colleagues” – 8.33% (n = 4), which turned out to be scanty. However, choosing the sum of the last two options to answer this question demonstrated that more than half of the respondents (1st year students) considered soft skills to be important. It is a very significant result. Respondents from groups 2–4 recorded a cardinal difference in the choice of answers. This is an extremely sharp decline in the choice of option “A” – it is, in particular, 13.73% (n = 7) of the total number of the 2nd group; 13.33% (n = 6) – from the 3rd group and only 4.26% (n = 2) – from the 4th group. A significant jump in the number of respondents of the 2nd and 3rd groups is observed in terms of giving priority to the option “B”, it is 60.78% (n = 31) of the students of the 2nd year of study and 57.78% (n = 26) of 3rd year students. Almost the same number in these groups chose the option “C” – 25.49% (n = 13) from the 2nd group and 28.89% (n = 13) from the 3rd group. However, in the responses of graduate students (4th group) the choice between options “B” and “C” was distributed almost equally – it is, respectively, 44.68% (n = 21) and 51.06% (n = 24), but with a significant increase, compared with groups 2 and 3, the number of those who gave the choice to the latter.

The difference is also recorded in the analysis of answers to the question: “What skills distinguish the efficiency of a modern teacher of preschool institution?” (4th in the questionnaire). If, according to 1st-year students – 45.84% (n = 22) (1st group) and 2nd year students – 50.98% (n = 26) (2nd group) hard skills are defined as such – option “C) skills of making an individual program of preschooler’s development”, then senior students (3rd and 4th) in smaller numbers chose the specified answer. This was 37.78% (n = 17) (Group 3) and 27.66% (n = 13) (Group 4), indicating a trend towards soft skills prioritizing. The definition of their significance is available, starting with the 1st group. The distribution of answer options “A) interpersonal communication” and “B) social skills” is recorded in the following ratios: 1st year students – 39.58% (n = 19) and 14.58% (n = 7); 2nd year students – 15.69% (n = 8) and 33.33% (n = 17); 3rd year students – 24.44% (n = 11) and 37.78% (n = 17); for graduates (4th year) equally – 36.17% (n = 17). The latter index is a total of 72.34% (n = 34), which is convincing evidence of a growing trend in realization of students of the 4th group

in the necessity to develop soft skills compared to students in the 1st and 2nd groups.

Respondents expressed different views in answering to the question: “What skills should a teacher possess in order to establish communication with all the subjects of the educational process?” (5th in the questionnaire). In particular, the answers of students who were in the 1st group showed that 72.92% (n = 35) of them preferred hard skills – “C) skills of etiquette in communication” and a small number chose options “A) flexibility” or “B) positive attitude” – soft skills: 10.41% (n = 5) and 16.67% (n = 8), respectively. A similar trend was seen in the results of the 1st year students’ survey, the only difference was the increase in the number of option “A” choices and a decrease in “B”, although together this figure was the same with the 1st year students. In particular, option “A” was chosen by 21.57% (n = 11), option “B” – 5.88% (n = 3) and “C” – 72.55% (n = 37). If the 1st year students and 2nd year students demonstrated high indexes of hard skills choice (72.92% and 72.55%), then the respondents of the 3rd and 4th groups demonstrated its decrease: to 57.78% (n = 26) in 3rd year students and up to 51.06% (n = 24) in 4th year students. Instead, the number of choice options for answering “A” and “B” has increased, indicating the importance of considering a number of soft skills in building a successful career. The answers were as follows: from the students of the 3rd group, option “A” was chosen by 26.67% (n = 12) and option “B” – 15.55% (n = 7); from the students of the 4th group – option “A” was chosen by 25.53% (n = 12) and option “B” – by 23.41% (n = 11). It was during the graduation course that the number of those who believed that such a skill as “positive attitude” plays a leading role in communication with all the subjects of the educational process increased.

In answer to the question: “What skills are crucial for achieving high results in their own professional activities?” (6th in the questionnaire) based on the results of the analysis, it was found out that the students’ choice of options has a similar picture as in the previous question (5th). Thus, in the 1st group the largest number of respondents – 93.75% (n = 45) chose option “B) a high level of knowledge in preschool pedagogy, child psychology and methods of educating children”, which indicates the priority of hard skills; the minimum choice fell on the options that indicate soft skills: “A) leadership skills” – 4.17% (n = 2) and “C) moral skills” – 2.08% (n = 1). A similar distribution was recorded based on the results of the 2nd year students’ questionnaires, the difference was an increase to 11.39% in the answers-choice of soft skills (options “B” and “C”). In particular, option “A” – 9.8% (n = 5), option “B” – 82.36% (n = 42) and option “C” – 7.84% (n = 4). Thus, 2nd year students stood for the choice of hard skills. The shift of emphasis towards focusing on soft skills partially increased in the respondents of the 3rd group, which was 17.92% more than in the 2nd group and 29.31% more than in the 1st group. The distribution of choice of answers for 3rd year students

is as follows: option "A" – 17.78% (n = 8), option "B" – 64.44% (n = 29) and option "C" – 17.78% (n = 8). In the group of graduates, there was no significant increase in the number of soft skills choices, comparable with the 3rd group (by 4.87%). However, if we compare with the 1st (34.18%) and 2nd (22.79%) groups, the difference is quite significant. The following indexes were recorded in the answers of the respondents of the 4th group: option "A" – 17.02% (n = 8), option "B" – 59.57% (n = 28) and option "C" – 23.41 % (n = 11). There was an increase in the number of students who believed that moral skills are crucial for the teachers' professional activities. Nevertheless, all the answers to the 6th question dominate in all groups of respondents who have chosen hard skills.

Answering to the question: "Due to what skills does the teacher interact with children?" (7th in the questionnaire), respondents of the 1st group (1st year students) mostly chose option "A) skills of innovative forms of work" – 79.17% (n = 38), which indicates that they have identified the priority of hard skills. The other two answers related to soft skills were distributed as follows: "B) skills of sensitivity" – 6.25% (n = 3) and "C) maternal child care skills" – 14.58% (n = 7). Radically different results were recorded in the answers of the 2nd group respondents, in which only 23.53% (n = 12) preferred option "A", and the others – 76.47% (n = 39) (total) chose soft skills – were 35.29% (n = 18) option "B" and 41.18% (n = 21) option "C". It is the skill of maternal care for children that has become important in the choice of students as one that contributes to successful teaching. This trend, which began in the answers of the 1st year students, persisted and strengthened in the questionnaires of the 3rd and 4th groups. Thus, option "A" was recorded among 3rd year students in 20% (n = 9), and among 4th year students only in 12.77% (n = 6), which indicates a decrease of hard skills importance and giving by senior students an advantage in choosing soft skills. The answers of the respondents of the 3rd group were distributed as follows: option "B" – 33.33% (n = 13), option "C" – 46.67% (n = 21), which in total is 80% (n = 36) who chose the types of soft skills as a priority. Accordingly, in the answers of the respondents of the 4th group this index increased: option "B" – 36.17% (n = 17), option "C" – 51.06% (n = 24), which is 87.23% (n = 41).

To the last (8th) question of the questionnaire, which was open: "Write your own version of what skills are required to be an ideal teacher of preschool institution", the answers of the respondents were distributed as follows. 1st year students noted that it is the ability to "find an approach to children", "have the skills of the organizational process", etc., which indicates the preference for hard skills. The answers of the 2nd year students recorded the following: "professional competence", "ability to organize children", "awareness of innovative methods of work", as well as a shift in their choice of soft skills: "communication", "tolerance", "creativity", "endurance and patience", "the ability to control their own emotions and behavior", "perception of the position of others". The

following answers became significant: “the uniqueness of the teaching profession lies in the fact that the structure of his/her professional competence includes *personal qualities*”; “an ideal teacher is the one who loves his/her pupils like a mother”. These answers of the respondents of the 2nd group testified to the growing awareness of their complex combination of professional skills and the identification of soft skills as important ones. According to the results of the 3rd year questionnaires, hard skills were indicated – “ability to approach children”, “devotion to the profession”, and the list of soft skills was supplemented with the following: “empathy”, “honesty”, “friendliness”, “openness”, “attention”, “ability to self-development”. Almost all questionnaires (97%) indicated that the ideal teacher is distinguished by “love for children”. Graduate students (4th group) pointed to the necessity for comprehensive development and noted the following soft skills: “sociability”, “sensitivity”, “humanity”, “generosity”, “respect for colleagues”, “ability to collaboration and teamwork”, “organizational skills”, “experience”, which testified to their awareness of success in close cooperation with a professional team. However, as in the questionnaires of previous groups, the development of “the ability to work with children’s teams” was noted. These results convincingly prove that it is important for students not only to master the content of subjects, but to master the skills necessary for the successful accomplishment of professional functions and effective teaching.

As the data represent only a limited sample of Ukrainian university students, the results cannot be summarized. However, there was a tendency to prioritize the skills of future professional activity in students of speciality “Preschool Education”. It proves that the vast majority (respondents of 2–4 groups) are aware of the importance of soft skills development in preparation for their own professional activities and they gave them an advantage while answering to questions in the questionnaire. This is due to the fact that with the increase of the scope of specialized subjects and internships, students have chosen exactly the skills that will promote their personal growth – soft skills.

Thus, the *peculiarities of the soft skills formation* through the prism of students’ view was that they, above all, are aware of their importance for professional duties and successful career growth, as well as prioritize them for their own teaching activities. The differences in the answers to the questionnaire of students of different years of study demonstrated the dependence on the amount of mastery of subjects in professional training and pedagogical internships (from the 1st – to 4th year) and in general their conscious attitude to the soft skills formation as the necessity for further professional activity.

Conclusions and Discussion

Research on the issue of acquaintance of the students of Ukrainian universities studying in the specialty 012 “Preschool Education” with the soft skills system and determining their importance in the process of professional training has revealed positive results. Significant is the fact that in answering a open question, respondents named the following skills: “communication, friendliness, openness, tolerance, creativity, humanity, sensitivity, sociability, empathy, highly developed personal qualities, etc.”, which are necessary for an ideal teacher of preschool institution. It demonstrates the importance of their understanding of the necessity for personal growth and improvement for future employment and successful career advancement.

Taking into account that soft skills are formed through direct communicative interaction, the following issues remain debatable: 1) what methods and forms of work with students should be used for their development; 2) how to check the level of their formation in students.

We see prospects for further research in making changes in educational and professional curriculum of the first (bachelor’s) level of higher education in terms of applying a number of interactive teaching methods to develop students’ soft skills, which are necessary as a complex component of professional readiness.

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КОНЦЕПТУАЛЬНАЯ МОДЕЛЬ СИСТЕМЫ ПОДГОТОВКИ КАДРОВ ВЫСШЕЙ КВАЛИФИКАЦИИ С ПРИМЕНЕНИЕМ ИНФОРМАЦИОННО-КОММУНИКАЦИОННЫХ ТЕХНОЛОГИЙ

Conceptual Model of Training Highly Qualified Personnel Using Information and Communication Technologies

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Abstract. *The article is devoted to the study of foreign theory and experience in designing a system of training highly qualified personnel using information and communication technologies and comparing them with domestic specifics in this area. In response to the need for training highly qualified personnel capable of solving research and pedagogical tasks in key areas for the development of the state, the purpose of this comparative study was to identify relevant and verified parameters for designing a conceptual model of the system for training scientific and pedagogical personnel in graduate school using ICT tools. The research is based on the analysis of domestic and foreign scientific and pedagogical literature devoted to the problems of training graduate students using ICT tools. To obtain empirical data, we applied the method of integrated observation in the design, administration and development of the postgraduate educational program; questionnaire surveys of graduate students, research supervisors and members of the state examination commission and in-depth interviewing of experts in the field of training highly qualified personnel with subsequent content analysis of the data obtained. As a result, we analyzed and systematized, taking into account the specifics of the use of information and communication technologies, such aspects of training highly qualified personnel as: theoretical, methodological and methodological provisions, personal, professional and regulatory requirements for graduate students and scientific supervisors, implementation and administration of the educational process in graduate school, including against the background of conditions of remote interaction, features of intermediate and final assessment of the formation of competencies of graduate students. The study opens up significant prospects for the practical application of the results obtained in the educational process.*

Keywords: *conceptual model, design of the educational process, graduate school, information and communication technologies (ICT) in postgraduate studies.*

Введение *Introduction*

Проблема подготовки кадров высшей квалификации в аспирантуре, обусловлена потребностью внесения научного и научно-педагогического вклада в современный процесс развития ключевых сфер жизнедеятельности общества и страны в целом. В этой связи, применение информационно-коммуникационных технологий (ИКТ) в процессе подготовки научно-педагогических кадров в аспирантуре выступает условием соответствия компетенций выпускника информатизации профессиональных сфер деятельности. Возникает противоречие между потребностью применения ИКТ в процессе подготовки научно-педагогических кадров и отсутствием систематизированных рамок и принципов такого применения ИКТ, фундированных как в результатах освоения образовательной программы, так и в необходимости инкультурации и социализации выпускника в профессиональном сообществе и в современном обществе в целом.

Исследование проблем специфики применения ИКТ в профессиональном образовании является сложной и многоаспектной проблемой, рассматриваемой многими отечественными и зарубежными специалистами в области педагогики, результаты которого отражены в многочисленных публикациях. Исследования таких учёных как Гриншкун В.В., Атанасян С.Л., Роберт И.В., Захарова И.Г., Стрекалова Н.Б., Mikropoulos, T.A., & Natsis, A. и др. отражают дидактические принципы, социальные и психолого-педагогические аспекты информатизации, особенности применения ИКТ в технологии педагогического процесса, подходы к построению структуры системы средств ИКТ. Однако следует подчеркнуть недостаточность освещения вопроса смысловой структуры, описывающей взаимосвязи запроса на применение ИКТ в процессе подготовки кадров высшей квалификации в аспирантуре, специфики его реализации и характеристик системы средств ИКТ, применяемой в подготовке аспирантов.

Таким образом, целью данного исследования является описание концептуальной модели системы подготовки кадров высшей квалификации в аспирантуре с применением средств ИКТ, учитывающей отечественный и зарубежный опыты в этой области.

Обзор литературы *Literature Review*

Современные исследования предлагают различные способы применения ИКТ в реализации профессионального высшего образования.

Гриншкун В.В. отмечает, что процесс информатизации направлен на обеспечение сферы образования теорией и практикой создания и использования современных информационных и коммуникационных технологий и средств, ориентированных на интеллектуализацию деятельности участников образовательного процесса (Grinshkun, 2004).

К настоящему времени предприняты исследования по систематизации средств ИКТ в образовательном процессе вуза (Атанасян С.Л., Захарова И.Г. и др.), отражающие специфику не только учебной, но и научно-исследовательской деятельности. Характеристики системы средств ИКТ, применяемой в качестве средства подготовки кадров высшей квалификации в аспирантуре за рубежом и особенности, учитываемые при её проектировании описаны нами ранее (Malyshev, 2020).

В технологии организации образовательного процесса в аспирантуре с применением средств ИКТ применяется ряд известных педагогике методов. Так, технология «сообщество исследователей» (community of inquiry– CoI) рассматривается в статье (Akyol & Garrison, 2011) как способствующая развитию критического мышления и научного типа коммуникации в условиях сетевого взаимодействия. Исследование (Choy, Delahaye, & Sagers, 2015) применяет метод «сообщество практиков» (Community of Practice – CoP), отражающий особенности взаимодействия людей, объединяющихся на базе общих интересов для повышения результативности своей профессиональной деятельности в результате этого взаимодействия – в целях разработки учебных групп в аспирантуре. Технология «технологическое педагогическое содержание знания» (technological pedagogical content knowledge – ТРАСК), описывающая взаимосвязь между преподавателем, обучающимся, содержанием образования и технологиями в условиях применения средств ИКТ, применяется при педагогическом проектировании смешанного курса подготовки аспирантов (Balladares-Burgos, 2018). Стрекалова Н.Б. рассматривает проблему управления качеством самостоятельной работы обучающегося в открытом интернет-пространстве, основанной на самостоятельной информационно-исследовательской деятельности, осуществляемой с применением сетевых технологий (Strekalova, 2017). Проблема формирования педагогически значимой коммуникации, опосредованной средствами ИКТ, рассмотрена в исследованиях Розиной И.Н., Gunawardena С. и др. (Rozina, 2005; Gunawardena, 1995). Существуют исследования, рассматривающие аспекты администрирования программ аспирантуры посредством ИКТ. Так, Пучкова А.П. и Дворяшина В.П. определяют направления совершенствования деятельности аспирантуры, обусловленные применением средств ИКТ при администрировании формализуемой (регламентируемой учебным планом) части программы

подготовки аспирантов (Puchkova & Dvoryashina, 2008). Технология итоговой аттестации аспирантов с применением электронного портфолио описана в исследовании (Sklyarova & Malyshev, 2020).

Текущее состояние изученности проблематики исследования определяет теоретико-методические рамки, необходимые в проектировании педагогического процесса и прогнозировании его результата. Вместе с тем, сохраняется имплицитный характер запроса на применение ИКТ в отечественном процессе подготовки кадров высшей квалификации, предполагающий систематизацию теории и методов в зависимости от данного признака.

Выявление потребностей научно-педагогического сообщества в ИКТ применительно к реализации процесса подготовки аспирантов и поиск подходов и способов их удовлетворения, посредством накопленного теоретико-методического опыта, позволит определить выверенные параметры концептуальной модели подготовки кадров высшей квалификации в аспирантуре с применением средств ИКТ.

Методология *Methodology*

В основе проводимого исследования лежат две методологические оси.

Теоретическая и методическая специфика организации процесса подготовки кадров высшей квалификации в аспирантуре с применением средств ИКТ была выявлена в результате проведённого нами ранее сравнительного исследования отечественного и зарубежного опытов в данной области, отражённых в опубликованных научно-педагогических исследованиях, связанных с данной темой. В результате исследования были выявлены характеристики, отражающие специфику применения ИКТ в подготовке кадров высшей квалификации в аспирантуре: теория и методика процесса организации обучения аспирантов, основные направления применения средств ИКТ, роль ИКТ в научном руководстве, специфика требований к обучающимся, особенности, учитываемые при проектировании электронной системы средств ИКТ, условия эффективности применения ИКТ, востребованность информатизации системы подготовки кадров высшей квалификации, основные термины и понятия.

Получение эмпирических данных было связано с целью выявления и дифференциации запроса на применение ИКТ в процессе подготовки кадров высшей квалификации. В этих целях были проведены глубинные интервью по проблеме применения ИКТ в образовательном процессе аспирантуры с экспертами, представляющими разные вузы Российской Федерации из

восьми городов. В интервью приняли шесть докторов наук, три кандидата наук и один эксперт без учёной степени – всего 10 человек. В их число вошли учёные, имеющие научные труды и публикации по рассматриваемой проблематике, научные руководители, руководители отделов аспирантуры и департаментов дистанционного образования. Интервью предусматривали 14 заранее подготовленных вопросов, продолжительность ответов составляла от 35 до 60 минут. Вопросы касались проблемы применения ИКТ в подготовке кадров высшей квалификации в аспирантуре и отражали такие темы, как целесообразность применения ИКТ, особенности применения ИКТ в аспирантуре (на фоне бакалавриата и магистратуры), области наиболее эффективного применения ИКТ, влияние последствий пандемии Covid-19 на диверсификацию применения ИКТ, роль ИКТ в успехе научного руководства, влияние ИКТ на образование значимых для процесса подготовки аспирантов связей, специфика требований к научным руководителям и аспирантам, условия применения ИКТ, условия эффективности применения ИКТ и др. Кроме того, было проведено анкетирование профессорско-преподавательского состава и аспирантов, участвующих в реализации программ подготовки научно-педагогических кадров в аспирантуре Православного Свято-Тихоновского гуманитарного университета. Со стороны профессорско-преподавательского состава в анкетировании приняли участие четыре доктора наук и одиннадцать кандидатов наук, со стороны аспирантов – 30 человек. Характер тематики вопросов был схожим с опросником интервью экспертов, однако акцент был сделан на образовательном процессе аспирантуры ПСТГУ – каким видят применение ИКТ в нём сотрудники и аспиранты. В частности, вопросы касались функций профильной кафедры в успехе подготовки аспирантов и роли ИКТ в их реализации, признаков удобной, необходимой и эффективной системы средств ИКТ, роли ИКТ в оптимизации и повышении эффективности существующего образовательного процесса и т.д.

Последующие содержательный анализ и систематизация полученных эмпирических данных, позволили выявить ряд областей целесообразного применения ИКТ в образовательном процессе аспирантуры и условий, влияющих на его реализацию.

Концептуальная модель системы подготовки кадров высшей квалификации в аспирантуре с применением средств ИКТ содержательно выраженная как смысловая структура взаимосвязи потребностей применения ИКТ, специфики процесса реализации процесса подготовки и системных характеристик была получена путём сопоставления результатов теоретического и эмпирического исследований.

Результаты исследования ***Research Results***

Результаты сравнительного исследования теоретической и методической специфики подготовки кадров высшей квалификации в аспирантуре с применением ИКТ в России и за рубежом позволили выделить и систематизировать основы организации образовательного процесса. Выявлено, что отдельные характеристики требуют сопоставления с эмпирическими данными, отражающими существующий запрос научно-педагогического сообщества в применении ИКТ и их функционале. Например, одним из условий эффективности применения системы средств ИКТ в образовательном процессе является модель принятия технологии (technology acceptance model – TAM), описанной (Yang & Kwok, 2017, p.52), которая построена на соотношении восприятия пользователем полезности, простоты использования технологии и целесообразности применения компьютера в решении поставленной задачи. В качестве другого существенного условия успешного применения ИКТ в образовательном процессе (Graham, 2013, p.42) выделяет технологию внедрения электронного обучения (Transnational Framework for e-Learning Technologies), состоящую из девяти стадий самоанализа образовательной организацией собственного образовательного процесса и определения областей наиболее эффективного приложения средств ИКТ. Кроме того, подходы и методы организации научного руководства и характеристики системы средств ИКТ, отвечающей специфике подготовки научно-педагогических кадров были наиболее подробно описаны в зарубежных исследованиях, что требовало отдельного анализа их соответствия отечественному опыту в этой области. Таким образом, в ходе исследования сформировалась потребность в экспертной оценке возможности и целесообразности применения ИКТ в процессе подготовке кадров высшей квалификации (ПКВК) в отечественной аспирантуре.

Вопросы, заданные экспертам в ходе интервью носили открытый характер и были рассчитаны на выявление структурных характеристик проблемы применения ИКТ в процессе подготовки научно-педагогических кадров. Определение характеристик и их показателей, позволил отразить запрос на применение ИКТ в образовательном процессе аспирантуры (Табл. 1). Сопоставление полученных результатов с выявленной ранее теоретико-методической спецификой определило концептуальную модель системы подготовки кадров высшей квалификации в аспирантуре (Рис. 1).

Таблица 1. Запрос на применение ИКТ в подготовке аспирантов
 Table 1 Request for the Use of ICT in the Training of Graduate Students

Характеристика	Показатель
Целесообразность применения	<ol style="list-style-type: none"> 1. Администрирование 2. Взаимодействие с научным руководителем 3. Коммуникация исследовательской или учебной группы 4. Научная работа (теоретическая, практическая) 5. Электронное портфолио аспиранта 6. Промежуточная и итоговая аттестация 7. Регулярная экспертиза исследований 8. Усиление интерактивного взаимодействия 9. Система обратной связи от экспертного сообщества
Способствование процессу подготовки	<ol style="list-style-type: none"> 1. При необходимости удалённого общения 2. Фиксация цифрового следа аспиранта 3. Организация свободного доступа к источникам 4. Мобильность, облачных технологии, личные сайты
Препятствование процессу подготовки	<ol style="list-style-type: none"> 1. Недостаточное качество инструментария онлайн-встреч 2. При отсутствии альтернативного способа взаимодействия 3. Затрудняет психологическое и эмоциональное взаимодействие, быстрый обмен мыслями 4. При отсутствии алгоритма взаимодействия 5. При всяком требовании, не имеющем прямого отношения к обеспечению научной работы
Условия, определяющие применение ИКТ	<ol style="list-style-type: none"> 1. Быстрота прохождения информации – доступ к ней 2. Безусловно – выпускник должен быть встроен в общество 3. При общей заинтересованности участников 4. Доступность средств ИКТ
Условия эффективности применения ИКТ	<ol style="list-style-type: none"> 1. Обоснованность применения средства ИКТ целью 2. Отсутствие дискомфорта, интерес к использованию 3. Обучение применению средств ИКТ 4. Учёт разработчиками потребностей пользователя
Специфика научного руководства при условии применения ИКТ	<ol style="list-style-type: none"> 1. Сохранение структуры взаимодействия 2. Наличие ИКТ-грамотности 3. Ключевая компетентность «правильно поставить задачу и правильно вести аспиранта к защите»
Требования к обучающимся	<ol style="list-style-type: none"> 1. Базовые навыки научной работы 2. Соответствие компетенций уровню высшего образования 3. ИКТ-грамотность
Характеристики системы ИКТ на базе образовательной организации	<ol style="list-style-type: none"> 1. Администрирование и информационно-методическое сопровождение образовательного процесса 2. Устройство по принципу внутренней социальной сети 3. Электронное портфолио 4. Коммуникация, хранение и обмен информацией 5. База конференций, журналов, библиотек, грантов, поисковых систем

Индивидуальный набор средств ИКТ	<ol style="list-style-type: none">1. Библиотечный ресурс в зависимости от специфики2. Набор инструментов поиска и обработки информации3. Электронное портфолио4. Средства и способы коммуникации научным сообществом
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Концептуальная модель отражает формирование структуры системы средств ИКТ, применяемой в подготовке кадров высшей квалификации в аспирантуре под влиянием запроса на применение ИКТ и специфики реализации образовательного процесса с их применением. Модули 1 и 2, составляющие Блок 1, выражают актуальные и перспективные потребности в ИКТ всех участников реализации программы подготовки аспирантов. Блок специфики реализации программы учитывает теоретические подходы, описанные в отечественной научно-педагогической литературе и педагогические технологии, применяемые за рубежом:

- Средовой подход, деятельностный подход, социальный конструктивизм, социализация человека, культурно-историческая теория развития личности и др.;
- Компьютерно-опосредованная коммуникация (computer mediated communication – СМС);
- Чувство общности (social presence);
- Сообщество исследователей (Community of inquiry– CoI);
- Сообщество практиков (Community of Practice – CoP);
- Содержание технологических педагогических знаний (technological pedagogical content knowledge – ТРАСК);
- Метод проблемного обучения (problem-based learning – PBL);
- Модель принятия технологии (technology acceptance model – ТАМ);
- Технология внедрения электронного обучения (Transnational Framework for e-Learning Technologies);
- Структура интерфейса научного руководства (supervision interface framework – SIF).

В результате, формируются характеристики системы средств ИКТ базу для которой составляет образовательная организация, обеспечивающая реализацию формализуемой части образовательной программы и предоставляющая научно-техническое обеспечение. Индивидуализация системы средств ИКТ достигается аспирантом в зависимости от специфики исследования и личностных характеристик. Связующим звеном двух систем является электронное портфолио, содержащее информацию об индивидуальных достижениях аспиранта, одновременно являющихся результатами освоения образовательной программы, подлежащих оценке со стороны образовательной организации.

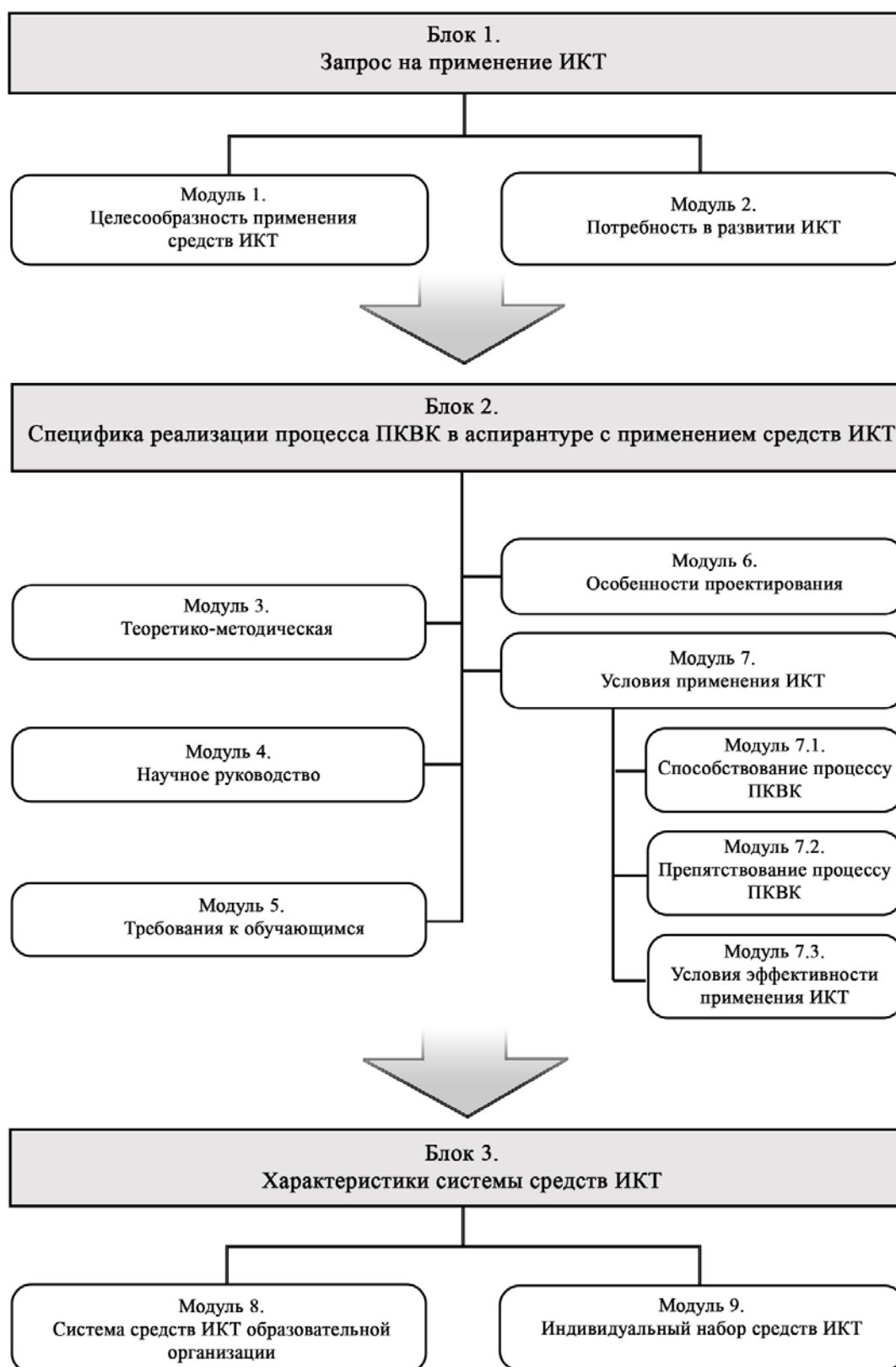


Рисунок 1. Концептуальная модель системы ПКВК с применением средств ИКТ
Figure 1 Conceptual Model of the System of THQP Using ICT Tools

Заключение *Conclusions*

В данной статье исследована роль информационно-коммуникационных технологий в процессе подготовки кадров высшей квалификации в аспирантуре. В основе методологии стояла задача выявления целей, факторов и условий применения ИКТ в образовательном процессе аспирантуры как описанных в зарубежной и отечественной научно-педагогической литературе, так и содержащихся в сложившемся опыте экспертного сообщества.

Эмпирическое исследование позволило выявить и привести к системному виду характеристики влияния ИКТ на образовательный процесс в отечественной аспирантуре. Это открыло возможность сопоставления практического опыта с теоретико-методическими характеристиками применения ИКТ в подготовке аспирантов, с полученными в ходе ранее проведённого обзорного сравнительного исследования отечественного и зарубежного опытов. В результате был получен необходимый набор данных для проектирования процесса подготовки кадров высшей квалификации в аспирантуре в части применения ИКТ.

Данное исследование подтверждает теоретико-методические результаты, полученные другими авторами упоминаемые в статье, поскольку выявленные экспертные данные также свидетельствуют о широких возможностях ИКТ как средства административной, информационно-методической и инструментальной поддержки традиционного образовательного процесса в зависимости от условий его протекания. Концептуальная модель системы подготовки кадров высшей квалификации в аспирантуре с применением средств ИКТ представлена в виде блок-схемы (Рис. 1), в которой блок запроса на применение ИКТ (Блок 1) обнаруживает специфику реализации образовательного процесса (Блок 2), которая, в свою очередь позволяет определить характеристики системы средств ИКТ для образовательного процесса отдельного аспиранта в отдельной образовательной организации (Блок 3).

В качестве перспективы исследования представляется целесообразным оценка эффективности предложенной концептуальной модели посредством проведения констатирующего и формирующего экспериментов в ходе образовательного процесса.

Summary

This article examines the role of information and communication technologies in the process of training highly qualified personnel in graduate school. The methodology was based on the task of identifying the goals, factors and conditions for the use of ICT in the educational process of postgraduate studies, both described in foreign and domestic scientific and pedagogical literature, and contained in the established experience of the expert community.

The empirical study allowed us to identify and bring to a systematic view the characteristics of the impact of ICT on the educational process in the domestic postgraduate school. This opened up the possibility of comparing the practical experience with the theoretical and methodological characteristics of the use of ICT in the training of graduate students, with those obtained in the course of a previously conducted review comparative study of domestic and foreign experiences. As a result, the necessary data set was obtained for designing the process of training highly qualified personnel in postgraduate studies in terms of the use of ICT.

This study confirms the theoretical and methodological results obtained by other authors mentioned in the article, since the identified expert data also indicate the wide possibilities of ICT as a means of administrative, information and methodological and instrumental support for the traditional educational process, depending on the conditions of its course. A conceptual model of the system of training of highly qualified personnel in postgraduate studies with the use of ICT are presented in the form of a block diagram (Fig. 1), which block a request for the use of ICT (Block 1) detects the specifics of the implementation of the educational process (Block 2), which in turn allows to determine the characteristics of the system of means of ICT in the educational process of the individual graduate student at a private educational organizations (Block 3).

As a research perspective, it seems appropriate to evaluate the effectiveness of the proposed conceptual model by conducting ascertaining and forming experiments during the educational process.

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THE ADVANTAGES AND DISADVANTAGES OF INCLUSIVE EDUCATION FROM THE PERSPECTIVE OF FUTURE TEACHERS

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Abstract. *In Latvia, inclusive education is relevant as seen in the past several decades, during which time society has developed a more comprehensive understanding of and made significant progress towards implementing inclusive education. Nevertheless, there is still a gap between the priorities of education policy and reality in educational institutions. The quality of education accorded to students is informed by the knowledge, understanding and experience of teachers in the implementation of concepts of inclusive education. The current study aimed at identifying the visions of prospective teachers (already working in schools) concerning inclusive education. To explore the experiences of future teachers, this qualitative study used narratives (i.e., written answers to open-ended discussion questions) of prospective teachers as a research strategy. The study team recruited participants at the University of Latvia, which included 61 students in the work-based teacher education study programme and 46 future pre-school and primary school teachers. Therefore, the current study offers insight into how comprehensive education is implemented in Latvian schools. The results reveal a positive attitude on the concept of inclusive education among most prospective teachers. However, they have concerns about the quality of its implementation, which come as a consequence of limited resources (human, time and financial) and the underdeveloped teachers' professional competence in the implementation of diversity solutions. Therefore, improving the study process of future teachers enhances the development of their competencies in the provision and promotion of solutions regarding inclusive education.*

Keywords: *implementation of inclusive education, comprehensive education, professional competence of teacher, experience of inclusive education in pedagogical practice.*

Introduction

All students require quality education regardless of their abilities and disabilities, yet it has been a challenge to offer students in Latvian schools such education for the past several decades. Notably, one of the most crucial principles in education is inclusive education. The concept of inclusive education is also linked to high expectations, societal ideals and a problematic, insufficient support situation in particular classroom environments. The latest research on the state of

inclusive education in Latvia indicates that its system is in an early stage of development. Targeted and systematic actions in this direction have been launched relatively recently; with several solutions having emerged that are not yet systemic (Beizītere, Grumolte-Lerhe, Ziemane, Valtensbergs, 2020). They include changes at various education systems' levels—from education policy to the practices of individual schools to a need for diverse resources. In the implementation of the approach of inclusive education in schools, the teacher's attitude, understanding and readiness to work within the inclusive education approach is of great importance. Introducing changes regarding implementing inclusive education can be done by new teachers trained in that area.

Accordingly, the current study document future teachers' perceptions regarding the concept of inclusive education. Additionally, the study investigates future teachers' experiences in using the concept of inclusive education to guide their delivery of educative content to students along with what they view as advantages or threats to the implementation of education of high standards. Therefore, identifying the main challenges in preparing teachers for inclusive education helps in promoting and developing their competencies.

Literature Review

Ideas of inclusive education started in the 20th century. Rapid developments such as the Salamanca Declaration (UNESCO, 1994) followed the adoption of the United Nations Declaration of Human Rights (UN, 1948). The Salamanca Declaration focuses on tailoring education systems on each pupil's needs. The understanding of the concept itself has also changed in the course development of society and politics. An inclusive education concept is a process for addressing all diverse educational needs, increasing opportunities for everyone to participate in learning, culture, and reducing the exclusion of the uneducated (UN, 2006; Thomas, 2013; UNESCO, 2017; Rozenfelde, 2017). Therefore, equality is one of the most important principles characterizing the concept of inclusive education. Equality is characterized by components such as fair treatment, dignity, and equal access to resources (Murray, Urban, 2012). It also covers social, cultural and ethical aspects (Allan, 2012).

Hindrances to equality in education are different national, cultural and historical experiences, educational goals, and availabilities of resources (Artiles, Kozleski, Waitoller, 2011). For equality in education to be achieved, a country must develop inclusive and equitable policies for reducing the disparities in the way education systems, forms of learning, learning environments and assessments of student achievement are now organized (UNESCO, 2017). Institutions that implement the principle of equality create environments that respect and value individual differences; they promote a school culture that reduces bias and

eliminates systemic inequalities. Arguably, students must not be taught the same thing for equal opportunities in education to be realized. It means that everyone has the same opportunities to learn. Booth and Ainscow developed the Inclusive Education Index, which allows schools to be assessed as inclusive institutions in three dimensions:

- building inclusive cultures,
- development of inclusive policies, and
- development of inclusive practice (Booth, Ainscow, 2002).

Creating an inclusive learning environment requires consideration of factors at all school levels: the real commitment and action of the school administration, the collective work of teachers of inclusive culture, the purposeful work of support teams, regular communication between teachers and parents, scheduled meetings to plan and assess the use of peer-centred teaching methods, parental involvement and support, the provision of an individual education plan for every special needs' pupil and a competent teacher to adapt the curriculum and teaching methods (Rose, Tilstone, 2003; Higgins, MacArthur, Kelly, 2009; Coughlan, Lister, Seale, Scanlon, Weller, 2019; McConlogue, 2020; Allan, Jørgensen, 2021).

Teachers are the most important factors influencing how students succeed in school. Teacher competence has a crucial role in achieving positive outcomes in inclusion education (Hattie 2009; Hanushek 2014). However, there are concerns that an inclusive approach in educational institutions is difficult to implement and that teachers are not well prepared and do not receive sufficient support.

This is a major challenge for educators seeking to create an inclusive environment in schools or to teach inclusively in a particular classroom (Allan, 2012). Teachers, for example, claim that they do not have suitable working conditions to deal with visa-inclusive education, which can contribute to teacher overload and burnout. A link exists between the emotional intensity of teacher burnout and the emotional intensity of receiving public support (Fiorilli, Albanese, Gabola, Pepe, 2017). This indicates that schools should have not only a support system for students but also for teachers.

Successfully implementing inclusive education concept requires diverse competencies of teachers. The European Agency for Special Needs Education has formulated the guidelines for preparing teachers for an inclusive classroom in their practice. They specify an inclusive teacher profile with four core values and competences: assessing learner diversity, supporting all learners, collaboration between and within teams and personal professional development (European Agency for Development in Special Needs Education, 2012).

The signs showing the possibilities of a teacher meeting the diverse needs of students are positive experience with diversity and positive attitude concerning inclusive attitude (Saloviita, 2018) According to H. Savolainen, O.-P. Malinen

and S. Schwab (2020) during pre-service teacher preparation, successful teaching experiences in an inclusive class may be a powerful way to improve efficacy and thereby shift the attitudes of prospective teachers in a more positive direction.

Currently, there is a growing demand for teachers support and professional development, which motivates teachers to participate in and develop inclusive schools and also enhancing their competence.

Methodology

This study was conducted to shed light on inclusive learning among students in Latvia by considering the perspectives of future teachers. Specifically, the research questions governing the study were:

- 1) What are the merits and demerits of inclusive education from the perspective of future teachers?
- 2) How do future teachers describe their experience and knowledge on inclusive education?

To address these research questions exhaustively, data were collected through online asynchronous discussions from education students who were already involved in teaching pupils in private and public general education schools. It is noteworthy to mention that one of the study participants was a teacher in a vocational school. The participants included 61 students in the work-based teacher education study programme and 46 future pre-school and primary school teachers at the University of Latvia. Future teachers were chosen because discussion relies on the ability and capacity of participants to provide relevant information. Importantly, the study was qualitative to allow the researcher to capture the exact sentiments of the future teachers regarding inclusive education. An explorative research design was employed by the study team to help understand future teachers' views regarding inclusive education in Latvian schools.

The qualitative data analysis software NVivo (Release 1.3) was used to organise and analyse the close-reading (line-by-line coding) of 257 asynchronous discussion board entries (34,615 words) based on driving research questions. NVivo was chosen because it met the requirements, i.e., it works well with most research designs and analytical approaches and ensures easy, effective, and efficient coding, which makes retrieval easier. (Bezeley, 2007). To avoid bias, inductive coding was used to find the appropriate codes that best represented key points in the study data. Under the inductive approach, all the coded discussion entries fit into three thematic categories with six subcategories: experience and understanding of inclusive education, advantages of inclusive education (subcodes: equality and equal participation, new experience and socialization, mutuality, and acceptance) and disadvantages of inclusive education (subcodes:

special students need special classrooms, work overload, unequal treatment). Some students' postings fit into two or more categories; these postings were coded as many times as they were represented. The data analysis was conducted from November 2020 to January 2021.

Limitations of the study design reliance on students's own descriptions of their perceptions and practice inclusive education experience. Moreover, the collected data from the included participants were not validated through other observable, objective assessments. Anonymity was used during the collection of data to protect participants' identity to mitigate potential bias. Data were collected from only one faculty of University of Latvia. Students working in different types of institutions, may have divergent perspectives about inclusive education or respond differently to an inclusive education experience than the participants in this study. Future research could explore the impact of future teachers professional experiences with diverse pupils on their perspective on inclusive education.

Research Results

Experience and understanding of inclusive education

The data collected from the involved subjects confirms the existence of controversy about Inclusive education in Latvia. Inclusive education revolves around bringing the support services to the child rather than taking the child to the services.

A majority of the responses showed negative attitude of the teachers involved concerning inclusive learning in Latvia. Equally, a majority of the participants also argued that inclusive learning in Latvia is only possible on paper but not physically doable. Some students expressed this controversial view (which was strongly supported by other prospective teachers) as follows:

What can be observed at the moment is the fact that the burden would be on the "ordinary" teachers, notwithstanding the already heavy workload, and "on paper", public officials postulate that Latvia implements inclusive education catering for the diverse needs of students. The truth is quite different in ordinary schools. (R:51)

The participants involved in the study felt that inclusive learning would do more harm than good to teachers and students, with higher chances of teachers being overworked and special needs students likely to miss out. Nevertheless, the few that had worked in schools implementing inclusive learning mentioned that they warmed up the concept, despite it being quite a task. They also categorically stated that Latvia lacks specially trained personnel to handle the pressure and keep learning in inclusive classrooms guided by appropriate classroom dynamics. This lack of support can be illustrated with a quote from some other students' opinions:

In Latvia, there is a lack of specialists and institutions that could explain how to recognize learning disabilities in general education institutions. Thus, the problem deepens and students continue to learn the subject according to the current methodologies. (R:14)

Reality: there are 30 students in the class (for all of whom the right, individual approach is desirable.) The teacher leads lesson one, has to prepare different tasks for one class with no additional resources, the lesson is 40 minutes, (...) that the teacher's paid salary does not cover (...) So, figuratively speaking, we want the horse to pull carriage that lack wheels. Yes, the strongest are able! But such circumstances should not be the norm! (R:26)

One thing is certain: inclusive learning in Latvia is likely to wear the teachers out if they are not given proper training. Angrily, one of the respondents stated, "In Latvia, in my opinion, teachers often have to be "born superheroes"—

HAVE TO KNOW, WORK, PREPARE, DO, GET, PROVIDE, RESPOND?? (R:26). This confirms some teachers lack necessary resources to help support engagements in inclusive learning.

Advantages of inclusive education

1) Equality and equal participation

The response by a majority of participants showed that inclusive education allows children of all races, social statuses, nationalities, genders, religions, political beliefs, health statuses, and places of residence to receive better education, which promotes equality for all. For example, a participant said:

Inclusive education emphasizes on granting all students equal rights notwithstanding their abilities interests, needs and capabilities. It also gives them the acquisition of quality education and, in the future, an opportunity to study at university, learn a profession, and become an independent member of society, which affects their quality of life. (R:17)

Another added, "Irrespective of the pupil's educational and development needs and abilities... they are entitled to receive a basic education" (R:38). Equally, a respondent mentioned that both "normal" and students with special needs are offered equal participation through inclusive learning, thereby leading to the enrichment of special needs students in the areas of self-esteem and self-confidence due to the same platform of learning, socializing and expressing opinions. This, in return, creates an environment of growth and enriched learning. In support of the argument, a participant said, "Everyone is given equal chance to take part in any subject taught in class" (R:43).

Special needs students or students with learning disabilities, through inclusive education, share a classroom with other children. This gives the children the opportunity to pursue and achieve their dreams as any other child. In support of this, one of the respondents stated, "Combating discrimination is only possible in ordinary schools implementing the approach of inclusive education creating

inclusive environment that further builds an inclusive system of education for all.” (R:52).

2) New experience and socialization

Inclusive learning has been considered foreign and bizarre to many, not only in Latvia but across the globe. This is because it is a new mode of education that deviates from the regular education system, wherein the “normal” children attend regular school while those with disabilities or special needs attend special schools. Therefore, its introduction has not only been a new experience to teachers but also to students. As a result, learners with distinct learning disabilities can socialize and even grow socially with other students. Additionally, through socialization facilitated by inclusiveness, students with disabilities can identify their own role models amongst other students, which can facilitate conversations, relaying information, and social and adaptive behaviour — a developmental aspect that is may be lacking or developing at a slower pace for special needs children when excluded. Based on the stated reason one participant said, “I believe that the advantages of inclusive education for the child are to feel safe and accepted” (R:9), while another added:

Special children can expand their circle of contact with people without developmental disabilities of different ages, which increases their levels of socialization and communicative skills. It promotes attention, responsiveness, and readiness to come to the rescue. Ordinary children learn to respect and appreciate their classmates, to see what is behind the external features and manifestations of disability. (R:22).

3) Mutuality and Acceptance

One of the most outstanding advantages of inclusive education in Latvia is that it brings about mutuality, especially for students with special needs. Mutuality can be defined as a feeling of fulfilment that is experienced by parties in a relationship. Mutuality can further be subdivided into trust, caring for each other and having a mutual understanding. Often, inclusive education brings about trust, care and mutual understanding amongst students. This is only possible when the students learn to accept each other’s differences and get past them. In favour of inclusive learning, one of the participants stated:

Inclusion means celebrating difference and diversity. It introduces a culture in which all people are equally valued, and all feel accepted. Inclusion and participation are necessary for an individual's socio-emotional development. (R:16)

Disadvantages of inclusive learning

1) Special students need special classrooms

For maximum benefit of the education system, special needs students need classroom settings adapted to meet their needs, which is a core disadvantage of implementing the concept of inclusive education. A notable occurrence is that

children with learning disabilities lag behind when receiving instructions in an inclusive classroom. The situation also slows down normal students in their learning since the teacher must constantly ensure the students with learning disabilities are at par with the regular students by repeating concepts. In special schools, the classes are small, with limited distractions and more one-on-one instruction. This creates an individualized learning environment, which brings out the maximum potential of students with disabilities. It is for this reason that a majority of the participants to the study conducted argued that inclusive education needs to have a better link with technical and human resources:

I can also say from my personal experience that I am afraid of the unknown and, of course, of inclusive education. Therefore, as a solution to successfully implementing inclusive education is appropriately preparing future teachers on inclusive education strategies as well as attracting teachers in practice. Attracting existing teachers with experience and competence help reduce teachers' concerns about their abilities in delivering contents in inclusive classrooms and demonstrating daily practical experience and practical work, thereby promoting attitudinal change. (R:53)

2) Work Overload

Regular school teachers are only trained to teach and impart knowledge to regular students. In contrast, teachers for special needs students are specifically trained impart knowledge to special needs students. Consequently, regular teachers in inclusive classrooms need to be trained to pass on knowledge to special needs students effectively. Hence, this teacher will dedicate needed time to help student with learning disabilities for them to be at par with the other students in class. Such means of engagement make the teachers be overworked. Along the same lines, one of the respondents stated,

The lesson is only 40 minutes long and a teacher must adapt materials, hold students' attention, which is a challenge in any case, and still be able to approach children with special needs individually, because if special needs students do not complete their work and gain needed competence, the assessment system will highlight the weakness of the teacher providing classroom instructions to students in an inclusive classroom. (R:1)

3) Unequal treatment

Inclusive education in Latvia is likely to bring about unfair treatment of children in an inclusive classroom. In view of this, one of the respondents emphatically stated,

Differentiated tasks in students raise concerns about unequal treatment - why does he only have to write seven sentences if I have 10? And for a 10-year-old at 8 a.m., there is a difficulty in explaining that "if you are able to perform better, you will be asked to do more." (R:36)

Equally, "it is not necessary to divide them separately only according to specific subjects, but to put all the divisions" in one bag and such groupings should be due to their abilities and interests in general" (R:36). To expound on this, special needs students are likely to be given more attention and taken care of by teachers, unlike regular students. This is likely to create segregation among the students, as some students might fail to understand why those with special needs receive less criticism, less homework or more attention.

Conclusions

Inclusive learning is a topic of discussion and research not only in Latvia but across the whole of Europe. Special educators, regular educators and administrators continue to have mixed feelings towards inclusion. What is certain among future teachers is that a successful, inclusive education practice in Latvia demands proper resources and training to facilitate a smooth transition. This way, teachers, students, and parents will maintain an optimistic view about it. Otherwise, inclusive learning might only remain on paper.

In conclusion, we can strive to support the inclusive education of all students along with the learning processes of future teachers, develop diverse teacher competencies to recognize students' special needs, use and adapt diverse teaching methods, develop emotional competence, and proactively seek help with compliance.

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A PARADIGM SHIFT IN HIGHER EDUCATION TEACHERS' TEACHING STYLE

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Abstract. *The shift in the educational paradigms, changing the conceptual foundations of studies, forces us to take a closer look at the ability of Lithuanian higher education teachers to establish in practice the new education paradigm modelled on the theoretical foundations of the reform. The study investigates the teaching styles of higher education teachers (N 297) in four universities of applied sciences and the correlation between teachers' teaching style, demographic factors and self-assessed didactic competence. The study findings led to the conclusions highlighting the following statements: although there is no prevailing teaching style, most college teachers work employing the interaction paradigm. The results also indicated that women show more support to learning paradigm than men; young teachers (25-35 years old) having assistant positions prefer the teaching paradigm more than teachers of other age and position groups; the representatives of technological sciences are more inclined to the teaching paradigm, while humanities – to interaction paradigm; the teachers who assess their didactic competence highly follow the interaction paradigm in their teacher-student relationship, and low - the teaching paradigm. Though the findings of this study allow capturing a larger shift towards the interaction paradigm, teacher continuing development programmes and support are necessary for higher education teachers. The further research is needed to deepen and extend the findings of this study as well.*

Keywords: *college teacher, didactic competence; educational paradigm, teaching style.*

Introduction

Lithuanian education reform marked the transition in the pedagogical system from traditional to open humanistic education (Targamazdė, 2010; Bruzgelevičienė, 2008). In current practice, this means changes in didactic competence giving up the behaviorist tradition of teaching and taking on the constructivist view of learning. Herein, the didactic competence is perceived as the interrelated components of a teacher's approach to teaching/learning processes, teaching/learning goals, methods, the student's role, and a teacher's work style. In this study, the teacher's work style, as one of the didactic components, is examined in more detail since "the behavior of the teacher

probably influences the character of the learning climate more than any other single factor” (Knowles, 1970 cit. in Yoshida, Conti, Yamauchi, & Iwasaki, 2014).

A limited amount of empirical research on education paradigm shift and teaching style transformations has been conducted in the country during the last decade. Teachers' ability to consolidate the new didactic approach in practice in general education was revealed in 2005 (Jucevičienė, Simonaitienė, Bankauskienė, & Šiaučiukėnienė, 2005). In higher education, a few studies focused on educational paradigm context as a prerequisite for the assessment of students' learning (Morkūnienė & Jucevičienė, 2010), and the university teachers' innovative activity when improving study programmes (Jezerškytė & Janiūnaitė, 2009). The didactic competencies of college faculty were examined from the reflective teaching/learning perspective (Bubnys, 2012). Broader literature review on teaching styles during the paradigm shift yielded mixed results: while learner-centred teaching has been advocated in higher education in recent years, teacher-centred teaching styles may be still dominant in active practice (Fang, 2012; Dever & Karabenick, 2011; Shaari, Yusoff, Ghazali, Osman, & Dzahir, 2014; Ahmed, 2013; Toyama & Yamazaki, 2020).

Currently, the need for didactic competence change is determined by the new education approach towards teaching and learning. Therefore, it is essential to explore the prevailing teaching style of college teachers in order to plan actions for teachers' didactic competence improvement.

Literature Review

In this study, the concept of the educational paradigm is perceived as a framework of key provisions and the ideas which are acknowledged by the pedagogical public and which guide research and practice in a field (Kunanbayeva, 2016). In other words, different perceptions of the pedagogical object – conception and a goal of education, an understanding of human growth and development, teacher role, and didactics in the classroom – presupposes different educational paradigms. One of the most important influences on paradigms is one's worldview, a set of constructed perceptions and ideas about reality (Huitt, 2019). According to Yoshida et al. (2014), teachers enter the teaching-learning transaction with a definite set of values, and these in turn influence the teacher's beliefs about the nature of the learner, the purpose of the curriculum, and the role of the teacher in the classroom.

The roles a teacher plays in the classroom, the relationship between teacher and students is defined as a teaching style. Different researchers use relatively different definitions of teaching style, emphasising inclination or even a custom that is used to convey information and skills in the classroom (Shaari et al., 2014), or carrying out instruction or organizing learning or the classroom environment

(Behar-Horenstein et al., 2006). In any cases, personal behavior is stressed when it comes to knowledge and information transfer (Alhussain, 2012).

When classifying educational paradigms with respect to teaching style, as part of the didactic process, researchers use teaching, learning, and interaction paradigms (Bruzgelevičienė, 2008). Each paradigm on its own way governs practices of education.

The teaching paradigm, which is derived from the behaviourist and social learning tradition (Huitt, 2019), means a process of conveying facts, abilities, memorizing and repeating them. Only the educator knows the purpose of teaching and acts according to it, because s/he is responsible for what the students will learn. Therefore, the teacher-centred teaching style means that the teacher is the expert and authority in presenting information (Alhussain, 2012). This style of instruction is formal, controlled, and autocratic in which the instructor directs how, what, and when students learn (Liu et al., 2006) and the students are considered as passive learners who must learn what to think. The teacher-centred style of instruction is viewed as a more traditional lecture style of teaching: the knowledgeable transmitting knowledge to the novice (Prescott, 2014).

At the centre of the learning paradigm, rooted in connectivism and social cognition (Huitt, 2019), is the student with his/her experience; the emphasis is placed on creating the most effective learning environments possible. Learner-centered teaching style involves the students having a high level of choice, being active in their learning, and having control of the learning. Relying on the literature about teaching styles, Liu et al. (2006) define learner-centered teaching style as a style of instruction that is responsive, collaborative, problem-centered, and democratic, in which both students and the instructor decide how, what, and when learning occurs. This style of teaching encompasses self-directed learning, which can take place “anywhere, anytime” and is very important for students nowadays. Prescott (2014) argues, that teachers who support self-directed learning allow students to acquire subject and strategy knowledge to complete the task independently. Liu et al. (2006) explain that, in learner-centered approaches, the construction of knowledge is shared, and learning is achieved through learners’ engagement with various activities. So, the teacher’s role within this paradigm is viewed as more of a facilitator rather than a presenter of knowledge (Prescott, 2014; Alhussain, 2012). In a broader sense of education, the idea of focusing on the learner rather than the teacher requires that teachers’ and learners’ roles be re-examined in the learning process (Liu et al., 2006, p.78).

The interaction paradigm, based on social and cognitive constructivist approaches to teaching and learning (Huitt, 2019) plays an intermediary role between teaching and learning paradigms. Its main idea is that effective learning requires interaction, cooperation and active construction of new knowledge and meanings. This approach can be described as “the student must be taught, but it

should be agreed how to do it” (Morkūnienė, 2010). It means, that the teacher and the student interact with each other and two-way information transfer prevails. In this case, the instructor is not only the information provider, but also the student’s supervisor and consultant, as well as the controller. On the other side, learners are not passive recipients of information, they actively construct their knowledge and skills based on the knowledge they already have, both formal and non-formal, by interacting with their environment. Jucevičienė et al. pointed out, that one of the goals of constructivist learning is to create shared meaning and understanding between the organizers of the learning process and the learners or among the learners in their group. Learners and educators work together to explore the links between new information and existing experience, creating a common understanding (Jucevičienė et al., 2005, p. 7-8).

As some authors noted, an awareness of teaching styles may gain a better understanding of how to improve the interactions with students while maintaining all contextual aspects of teaching, how to impact the classroom setting, activities assessment, and teacher/student interactions or to meet students' needs, as well as address any possible areas of weakness (Yoshida et al., 2014; Alhussain, 2012).

Methodology

The aim of this study was to investigate the didactic competence of higher education teachers, and namely, their teaching style, under the educational paradigm shift. For that, the study addresses the following research questions:

- What educational paradigm and teaching style based on it is entrenched in the practice of higher education teachers?
- What demographic factors, such as gender, age, position, and subject taught, determine higher education teachers’ inclination to one or another educational paradigm?
- How is the self-perceived didactic competence related to the paradigmatical teaching style?

The following hypotheses about the prevailing paradigm in teaching style, related to socio-demographical variables were formulated:

- 1) Women tend to choose interaction and learning paradigms more often than men.
- 2) University teachers who have a higher position (associate professors) stick to teaching paradigm.
- 3) Younger teachers (25-35) tend to rely on interaction paradigm.
- 4) Representatives of the exact sciences prefer teaching paradigm to interaction paradigm, whereas representatives of humanities choose interaction paradigm.

A self-administered online questionnaire was developed via the platform *apklausa.lt*. The instrument of the research comprised several parts, including self-assessment of didactic competence, teaching styles according to educational paradigms, and demographical information. Respondents were asked to rate their didactic competence on a ten-point scale (where 1 means “very bad”, 10 – “excellent”). The statements about teaching style were adapted from Jucevičienė et al. (2005) study taking into account the specificities of higher education. The statements consist of 8 items along three paradigms or subscales: 4 items for teaching paradigm (for example, “A good teacher is strict and demanding, does not change his opinion according to the students’ wishes”), 2 items for learning paradigm (for example, “Students’ wishes, suggestions, requests are guidelines for planning and improving the teacher's activities”) and 2 items for interaction paradigm (for example, “A teacher only conveys knowledge of the subject, and the student is responsible for his/her own learning and results”). Participants were asked to indicate the extent they agreed/disagreed to these statements measured on a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The Cronbach’s alpha value indicated good internal consistency of the statements on the teaching (.781), satisfactory – on interaction (.629) and law – on learning (.586) subscales.

The target population in this study were lecturers of Lithuanian universities of applied sciences (colleges). A total of 297 lecturers from four Lithuanian higher education institutions participated in the survey. The demographic characteristics of the sample are presented in Table 1.

Table 1 Demographic Variables of Participants

	Variable	N
Gender	Male	68
	Female	229
Age	25-35 years	24
	36-46 years	177
	47-57 years	71
	58 years and more	25
Position	Associate Professor	73
	Lecturer	207
	Assistant	17
Field of science of the taught subject	Natural sciences	29
	Technological sciences	84
	Medical and health sciences	35
	Agricultural sciences	5
	Social sciences	118
	Humanitarian sciences	26

The research data were processed using SPSS 22.0. Descriptive statistics were used to analyse the demographic characteristics of the participants and the scores of their teaching styles in respect of paradigms. Then, the non-parametric tests of Mann-Whitney U (for two unrelated samples) and Kruskal-Wallis (for few unrelated samples) were applied to find differences between groups in relation to gender, age, a position held, and teaching subject.

Results

For descriptive statistics of the statements that belong to different paradigms, the 5-point scale was transformed into 3-points by combining two adjacent values (for example, “strongly disagree” and “disagree” were merged into “disagree”). Based on the results in Table 2, the interaction paradigmatic statements have the highest mean scores while statements belonging to the teaching paradigm – the lowest ones.

Table 2 The Descriptive Statistics of the Paradigmatic Statements

Statement	N	Mean	SD	% of disagreement	% of agreement
Students' wishes, suggestions, requests are guidelines for planning and improving the teacher's activities	297	3.96	.763	5.4	89.5
The teacher and the student work together to develop, discuss and follow their own rules for coexistence and learning	297	3.98	.988	7.4	79.1
The teacher, who do not makes a compromise with students and who knows his/her value and place, has always been and will be respected	297	3.05	1.207	47.2	50.9
The teacher transfers the knowlege of the subject taught and the student is responsible for his/her own learning	297	3.43	1.364	36.4	56.6
The student applies to the teacher only when s/he encounters an insurmountable problem or to discuss the obtained results	297	3.12	1.316	41.1	49.1
The teacher formulates the tasks and requirements while the student carries out. It's a time-proven relationship	297	2.65	1.039	49.5	25.9
A good teacher is strict and demanding, without changing his opinion according to the wishes of the students	297	2.22	1.106	70.1	24.6
The student should always feel a slight fear when interacting with the teacher. That promotes respect and attitudes to learning	297	1.67	0.758	87.2	2.4

Further, 8 statements were transformed into three groups of teaching styles and differences among these groups were analysed. The results are presented in tables 3-6. The statistical differences were found between men and women (Table 3): male teachers significantly more than female teachers were inclined to teaching and interaction styles of work. Female participants supported the learner-centred style (learning paradigm) in the teacher–student relationship significantly more than males. Thus, it is possible to state, that the first hypothesis is only partially proved, as men support interaction paradigm more than women.

Table 3 The Teaching Style of College Teachers by Gender

Paradigm	Gender	N	Mean Rank	Mann-Whitney U Test	p
Teaching	Female	229	142.06	6197.500	< .01
	Male	68	172.36		
Interaction	Female	229	141.49	6065.500	< .05
	Male	68	174.30		
Learning	Female	229	155.24	6356.500	< .05
	Male	68	127.98		

The results in Table 4 suggest that assistants, who are the youngest and the lowest category of university teachers, accepted the statements belonging to the teaching paradigm, thus the second hypothesis has not been proved. Concerning the remaining two paradigms, no statistically significant differences were found.

Table 4 The Teaching Style of College Teachers According to the Position

Paradigm	Position	N	Mean Rank	Kruskal Wallis Test	p
Teaching	Assoc. prof.	73	179.82	21.622	< .001
	Lecturer	207	134.06		
	Assistant	17	198.62		
Interaction	Assoc. prof.	73	166.51	5.930	> .05
	Lecturer	207	145.14		
	Assistant	17	120.82		
Learning	Assoc. prof.	73	148.16	1.676	> .05
	Lecturer	207	151.35		
	Assistant	17	123.82		

The statistical differences were found among the age groups (Table 5). The youngest teachers (25-35 years) statistically more agreed with the teaching and with the learning paradigms' statements, while the teachers between 36 and 46 years old – with the interaction paradigm statements. The third hypothesis was rejected.

Table 5 The Teaching Style of College Teachers by Age

Paradigm	Age	N	Mean Rank	Kruskal Wallis Test	p
Teaching	25-35 years	24	219.31	28.418	< .001
	36-46 years	177	151.06		
	47-57 years	71	114.68		
	58 and more	25	163.52		
Interaction	25-35 years	24	108.77	11.564	< .01
	36-46 years	177	159.83		
	47-57 years	71	144.14		
	58 and more	25	124.76		
Learning	25-35 years	24	231.46	53.737	< .001
	36-46 years	177	161.77		
	47-57 years	71	100.56		
	58 and more	25	117.00		

The field of science, in which the subject is taught, had a significant effect on participants' attitudes concerning the teaching style (Table 6). The research findings proved the fourth hypothesis. The representatives of technological sciences statistically preferred teaching paradigm, and the representatives of agricultural and humanitarian sciences – interaction paradigm, while no statistical differences were found in the learning paradigm.

Table 6 The Teaching Style of College Teachers by Subject Taught

Paradigm	Field of science	N	Mean Rank	Kruskal Wallis Test	p
Teaching	Natural sciences	29	52.03	109.015	< .001
	Technological sciences	84	220.48		
	Medical and health sciences	35	130.04		
	Agricultural sciences	5	159.00		
	Social sciences	118	138.13		
	Humanitarian sciences	26	99.15		
Interaction	Natural sciences	29	55.95	91.263	< .001
	Technological sciences	84	131.48		
	Medical and health sciences	35	110.29		
	Agricultural sciences	5	254.90		
	Social sciences	118	175.80		
	Humanitarian sciences	26	219.52		
Learning	Natural sciences	29	154.14	5.699	> .05
	Technological sciences	84	139.58		
	Medical and health sciences	35	135.87		
	Agricultural sciences	5	197.40		
	Social sciences	118	158.81		
	Humanitarian sciences	26	137.52		

The participants assessed their didactic competence high enough ($M = 7.97$; $SD = 1.43$). The statistically significant differences were found between two groups: the college teachers, who assessed their didactic competence as satisfactory (3-4 grades), were more inclined into teaching paradigm (Kruskal-Wallis test=36.368, $p < .001$) and those, who assessed their didactic competence very good (9-10 grades), were more inclined into interaction paradigm (Kruskal-Wallis test=17.746, $p < .001$).

Discussion and Conclusions

The findings of this study highlight that there is no clear dominant teaching style, most college teachers work sticking to an interaction paradigm. Compared to the similar study of secondary school teachers which was carried out in 2005, the university teachers of 2020 demonstrate greater acceptance of interaction paradigm. A previous study found that secondary school teachers were largely driven by impact (or teaching) paradigm, less often – by interaction paradigm, and there were no traits of a learning paradigm-based teaching style (Jucevičienė et al., 2005, p.2). Although this study examined teachers of applied universities, an overall assessment of the national context may indicate a larger shift towards the paradigm of interaction. Previous research performed in other countries suggests that instructors still use traditional, teacher-centered styles in university settings and the learner-centered approach is not widely practiced in higher education (Liu et al., 2006). Still, recent research findings demonstrate a variety of styles (Alhussain, 2012) or the tendency of learner-centered teaching preference rather than teacher-centered teaching (Prescott, 2014). In Lithuania the findings of a study performed in 2012 underline the fact that the reflective practice of applied university teachers might be assessed as sufficient, at the same time there was revealed the weak areas of teaching activity based on the interaction paradigm (Bubnys, 2012).

The statement that there is no dominant paradigm is based on the following arguments. Firstly, the descriptive statistics revealed a preference for the interaction paradigm, and diminishing support for the teaching paradigm statements. Meanwhile, statistically significant differences between groups indicate preferences for both interaction and teaching paradigms, and no statistically significant differences were found between groups concerning the learning paradigm, in terms of subject occupation, subject taught. Secondly, although statistically significant differences were found between the groups, some groups have high acceptance of all paradigm statements, for example, the mean rank of agricultural sciences is high for all paradigm statements, and young teachers (25-35 years old) have a high mean rank for opposite teaching and learning paradigms. This might indicate that the statements describing the

different paradigms were not so well understood by the respondents. Therefore, the study should be repeated with more accurate paradigm descriptions and a larger sample. The correlation of paradigm statements with the sociodemographic characteristics of college teachers revealed that teaching style significantly depends on such demographic variables as gender, age, position, subject taught. A learner-centered teaching style is more acceptable for women than for men, where the teacher is more a facilitator of the learning process. Similar findings were found in Nelson Laird et al. (2007) study: women tend toward active and interactive learning environment that are associated with a learner-centered approach, to a greater degree than men.

Quite unexpected was to find that young teachers (25-35 years old) and assistants (age and position are often related) follow the teaching paradigm more in their practice than teachers in other age groups. Perhaps it can be hypothetically stated that the teaching paradigm and teacher-centered teaching style are more “convenient” for young teachers who lack experience. The next age group of teachers (36-46 years old) is most inclined to support the beginnings of interaction. Somewhat surprising is such a sharp turn in approaches over a relatively small age difference. We have not found similar studies that could confirm or refute our insights or explain such “twists and turns” of attitudes. Therefore, we would think that further and deeper research might be perspective in this direction.

It is known that different fields of science have different worldviews. This is also demonstrated by our study findings. The distinctive tendency of the representatives of technological sciences is to rely on the teaching paradigm, the humanities on their turn prefer the interaction paradigm. These tendencies can be explained by the natural differences of these sciences: the technological sciences focus more on order, rules, strict, clear structures, and the humanities rely on communication, understanding, and value. Belonging to a field of science also presupposes certain patterns of behaviour and interaction in the classroom.

A correlation was found between self-assessment of didactic competence and teaching paradigm/style: teachers who value personal didactic competence highly follow the interaction paradigm in their work, and those who think that their didactic competence is low prefer the teaching paradigm. This suggests that we need more teacher training and support programs in higher education to facilitate change in teachers' didactic practice.

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GAMIFICATION IN TEACHING THEORETICAL LINGUISTIC DISCIPLINES

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Abstract. *Gamification in the learning process is a well-known and, at the same time, an entirely new teaching tool. Today, a number of gaming techniques can be attributed not only in the real classroom, but also in the virtual learning environment. In both cases, games have significant motivating potential. On the other hand, prospects for the modern world development require getting both theoretical knowledge and practical skills, and games provide all the opportunities for getting them.*

Traditional team games, as well as contests between individuals, are widely used in learning process at universities. Moreover, there are various types of up-to-date platforms for creating and introducing online games such as Kahoot!, Quizlet, Plickers, Classcraft, etc. However, it should be noted that all the listed platforms and techniques are used primarily in teaching practical disciplines (e.g. Practical English) while for theoretical courses, traditional teaching methods and teacher-centered approaches continue to prevail. We believe that various techniques of gamification (both real and virtual) will increase the level of students' motivation while studying theoretical courses. Thus, such disciplines as Research Techniques in Linguistics, is a very complicated course for the 3rd year BA students; so in order to motivate them, different games were introduced. In our research, we used a questionnaire aimed at finding out how the introduction of games enhances students' motivation to study this discipline.

Also, the experiment which lasted for 1 semester with the students whose major is "Foreign Philology", showed that the application of different games a) motivated students and activated their schemata; b) facilitate mastering complicated theoretical concepts; so gamification should be considered as an effective tool in teaching theoretical disciplines.

Keywords: *Gamification, online platforms, Quizlet, Research Techniques in Linguistics, team games.*

Introduction

The application of games in the learning process has a very long history. It may be considered as both a traditional and innovative teaching technique, especially nowadays, when a number of gaming technologies can be attributed not only to the interaction between students in a real classroom (in this case, various types of team and individual games can be used), but also to a plethora of games on cyber-platforms also having significant motivating potential.

Traditional team games and contests that take into account students' individual achievements are widely used in the educational process nowadays. Moreover, there are various types of up-to-date platforms, such as Kahoot!, Quizlet, Plickers, Classcraft, etc. whose importance have been realized by most of the teachers under the pandemic condition. However, it should be noted that all the listed games are used primarily in the process of teaching practical disciplines, while in the case of theoretical courses, traditional methods of teaching continue to prevail. The author of the given research believes that various types of gamification (i.e. person-to-person interaction, cyber games etc.) will motivate students to study theoretical courses as well. For instance, gamification is considered as an effective tool in teaching such theoretical courses as Research Techniques in Linguistics.

Literature Review

The term *gamification* was invented by the digital media industry, but it means “using game design elements in non-game context” (Deterding et al. 2011, 9). Gamification is the application of game elements in non-gaming situations, that is, to convert useful activities into games (Deterding et al., 2001).

Thus, F. F.-H. Nah et al. (2014) identified eight game design elements that are used extensively in the educational and learning contexts. Those elements are: *the point system* which “functions as a measure of success or achievement”, and it is also stated here that “points can also be considered as credits in an academic environment”; *levels/stages system* “used in various game designs to give players a sense of progression in the game”; *badges* “recognized as a mark of appreciation or task accomplishment during the process of goal achievement” and used to maintain learners' motivation; *leaderboards* keeping the learners motivated; *prizes and rewards*; *progress bars*; *storyline* which “refers to the narrative or story in the game”, and a *feedback* which should be frequent, intensive, and immediate to engage learners.

The purpose of most of the games is to combine extrinsic and intrinsic motivation to increase the involvement of participants – like techniques such as scoreboards and personalized feedback. As Kapp (2012) states, gamification can be used to promote learning because many of the elements of gamification are based on educational psychology and are techniques that designers of instruction, teachers, and professors have been using for years. Items such as assigning points to activities, presenting corrective feedback, and encouraging collaboration on projects have been staples of many educational practitioners. In other words, gamification is presenting non game-like tasks as more game-like. Another beneficial feature of gamification is that games are not tied to the physical classroom and usually they can be played whenever the teacher and the student

wants. However, this approach is controversial as some specialists support the idea of teachers giving instructions and controlling the game process, while others encourage the idea of allowing students to play games during their free time. Anyways, teachers' roles can not be excluded, because instructions which teachers give before the game are very important. Thus, games are supposed to be played during lessons with teachers being present before, during and after the gamified learning process. Harviainen et al. (2013) underline the fact that gamified learning should not lead to learning in a way that teachers become an external observers and they highlight that teachers' contribution is crucial when a gamified learning experience is planned and divided into stages. Saying simply, the use of games should be pedagogically meaningful and planning it appropriately requires a lot of time. Fui-Hoon (2014) also stated the meaningful integration of games into teaching and emphasizes careful planning and goal setting especially with informal games, games that were not designed for educational purposes.

The importance of gamification is becoming more and more obvious in the Kazakhstani context as well. Thus, Ostrovskaya (2017) highlighted that by means of gamification "the development of Kazakh students will take place through the introduction of active forms of education, which provide students with the opportunity to develop their functional literacy in independent way, with a great desire to develop communication skills together with their peers, and be creative in solving problems" (Ostrovskaya, 2017). The concept of gamification is to teach language through games thus making the learning process more engaging and comprehensible. Unfortunately, not all schools and universities in our country are equipped enough to implement gamified learning in the teaching process. That is why most teachers tend to stick to traditional teaching methods such as: drilling, using objects or just giving handouts. Sometimes, even in equipped classes, teachers continue to ignore digital tools because of lack of experience or knowledge in using computers, mobile phones and the Internet. Otherwise, gamification ultimately promotes learning by allowing students to monitor their own progress; students can control their own learning and repeat tasks wherever and whenever they want, and students can choose the amount of time they can spend reviewing materials. Some students can be encouraged by class recognition on the award board. Competition and rewards help to involve learners' attention to technology-related games.

Research Design

As the purpose of this research paper is to identify whether gamification is effective or not in teaching theoretical subjects such as Research Techniques in Linguistics, so a mixed design method seemed to be the most appropriate. To

reach the aforementioned aims we conducted surveys at the end of the experiment and made observations of students' behavior while conducting the experiment. One of the most important problems is that the researchers should examine the results from different perspectives by adding not only students' opinion concerning motivational potential, but also their ideas about the effectiveness of games in a theoretical discipline study. Initial qualitative data were inspected through the questionnaire (see the Diagrams below).

Research Questions

The researcher will try to answer the following research questions:

1. Is gamification more effective than traditional teaching methods?

The result is going to be reached by implementing gamification in one group – experimental, and maintaining the existing method in the other group – the control one. By the end of the experiment, the researchers will be able to find the differences, compare the results and identify whether gamification is a more effective method than other methods.

2. How can online platforms be implied in teaching theoretical disciplines?

Research Population

As it was stated before, the experiment was conducted with Foreign Philology students (43 third year students exactly, at the age between 20 and 23). There were 2 groups, experimental (22 students) and controlling (21 student),

Research Results

Educational games can facilitate the learning experience and the use of games in the classroom is very beneficial for students (Kiryakova, Angelova, Yordanova, 2014). Students may give up because of the failure, but due to the concept of games, students can react differently. In other words, games encourage students to learn better and succeed in the game process. Vesa (2017) mentioned in their study that educational games are able to meet at least three types of learners' intellectual needs (namely, cognitive, emotional and social needs), thus creating a positive emotional experience. Cognitive advantages include the development of problem – solving and critical thinking skills. In order to win and pass to the next level, students have to complete tasks successfully. The rewards provided at the end of each game lead to increased motivation. Another beneficial effect of gamification is that students learn to control emotions. In order to win, learners cope with losing, improve language skills and obtain new learning techniques. Immediate feedback helps to identify mistakes and improve them thus

increase motivation to win. However, if students fail in a traditional classroom, it is difficult to turn negative emotions into positive.

Gamification in Teaching Research Techniques in Linguistics: Game-Contest

In our opinion, if theoretical subject is studied in English, gamification can serve as a multifunctional tool that

- allows to increase students' motivation and shows that theoretical courses are not just a "baggage of knowledge", but also have undoubted practical applicability;
- provides opportunities for developing language skills in English for Specific Professional Purposes;
- is considered as a necessary part of the Classroom Management.

Also, in this case the predominance of student-centered approach is quite obvious, so it is beneficial for students.

Implementation of game-contest in teaching Research in Linguistics can be described as follows:

Stage 1. Managing sub-groups for game-contest.

Stage 2. Developing scenario for conducting game-contest. Undoubtedly, mainly seminar or self-study classes are conducted under the guidance of the teacher. At the same time, contest can be used while presenting new material, i.e. in lectures.

At the second stage of developing training material, the teacher should take into account such factors as:

- level of theoretical knowledge in the field of subject;
- level of language competencies;
- psychological atmosphere in each group/team;
- personal characteristics of students.

Typically, game-contests between randomly organized teams give teachers the opportunity to check how well the main concepts of Research Techniques are mastered and to provide an emotional background, to motivate students, to develop creative presentation of theoretical material.

Here are some questions suggested for the game-contest between several teams:

1. *Which of the research techniques examines a small number of units across a large number of variables and conditions?*
2. *... investigates patterns and sequences of growth and / or change as a function of time?*
3. *Name the step which is common for all the research methods*

4. *Which method doesn't involve total experiment?*
5. *The developmental research consists in...*
6. *Four basic differences among the Corpus-based or Corpus-driven approaches are...*
7. *Name the essential feature of a Corpus-based approach...*
8. *Four basic steps for formulating research questions are...*

These questions, which we propose for the first stage of the game, require both quick responses (as the speed is also assessed), and correct answer as well as creative approach (since the theoretical concepts should be mastered). Also, in order to provide the correct and complete answer, students should establish clear logical links between terms, definitions and peculiar features of every particular concept (e.g. corpus-based approach, developmental research etc.) Within the first stage, time for reflection is limited, the team that gives faster and more accurate answer gets more points.

The second stage of the game is aimed at eliciting more detailed responses, which requires a developed language competence in both oral and written speech (it is required from the team members to give a written outline of the answer in advance), and full mastery of concepts from the sphere of the theory of literature, e.g.:

Provide your own examples of: historical research/descriptive research/ any main-research question/causal-comparative research.

Similar stages of the game were suggested in the course of the experiment and in the analysis of concepts related to practical application of various research techniques:

1. *Provide your own examples which illustrate the opposition between Intuition and Corpus...*
2. *List the rules related to the choice of research design. How can you apply them in your own research?*
3. *Name the data collection strategies. Which of them will be the most appropriate for your research?*
4. *How will you provide the credibility while collecting data?*

Apart from that, there are some practical tasks in the contest: Analyze the following extract from Historical research / Descriptive research viewpoint; what kind of questions will you formulate in order to write an article?

Gamification via Online Platform

As it was highlighted by methodologists, a variety may be considered as a sign of good teaching. So, while choosing this or that technique, the teacher defines the objectives of a certain lesson. In our case, the use of such programs as Kahoot!, Plickers and Quizlet in teaching Research Techniques facilitates

students' perception. After all, as we said above, traditional methods of teaching is not always effective. Otherwise, university instructors do not often use the programs mentioned above, as it is not always possible to cover all the research problems and aspects with one program. Moreover, those programs require careful preparation of both teachers and students. Thus, the most important thing in using Quizlet is to elaborate the appropriate content for the Quizlet cards to activate students' schemata. In this case, instead of learning theoretical concepts by heart, students will grasp all the details.

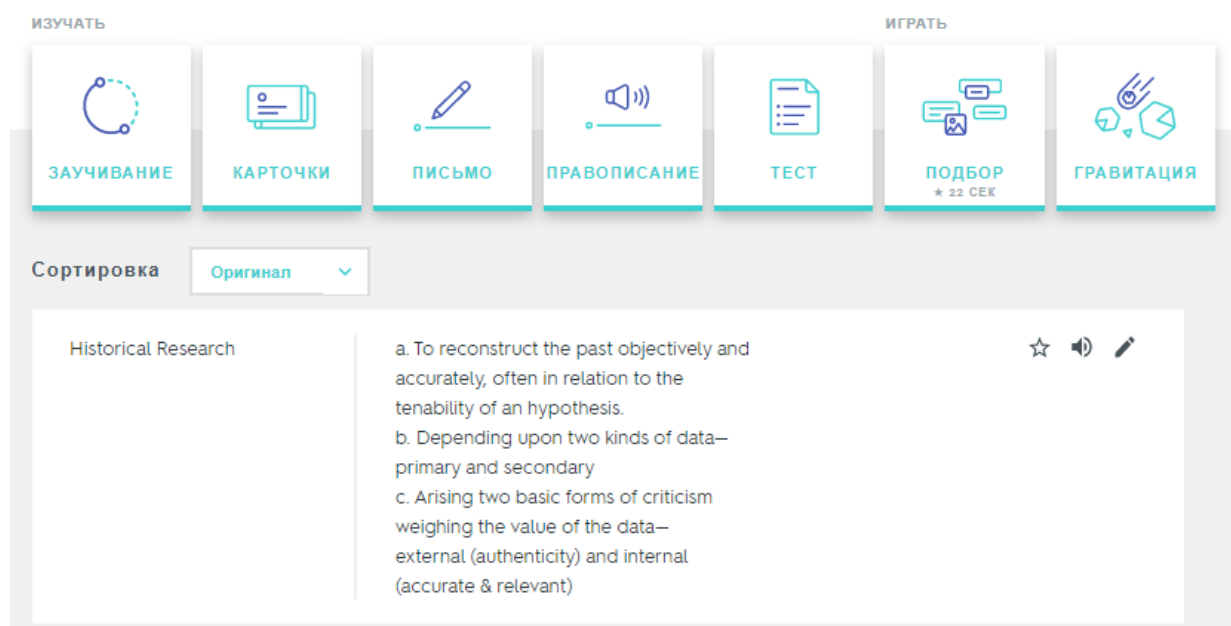


Figure 1 Quizlet Cards for Research Techniques in Linguistics

Instead of drilling exercises and memorization, doing a variety of tasks, e.g. matching exercises in the form of game, seems to be much more beneficial for students as it will be shown below. Also, there are specific tools for counting students' results, control and statistics, which helps to track students' progress. That is why those games can be used not only in the classroom, but also for extracurricular work. The functions of gamification are also diverse: wide opportunities of the Quizlet, Kahoot and similar programs allow students to understand and conceptualize main ideas of the course.

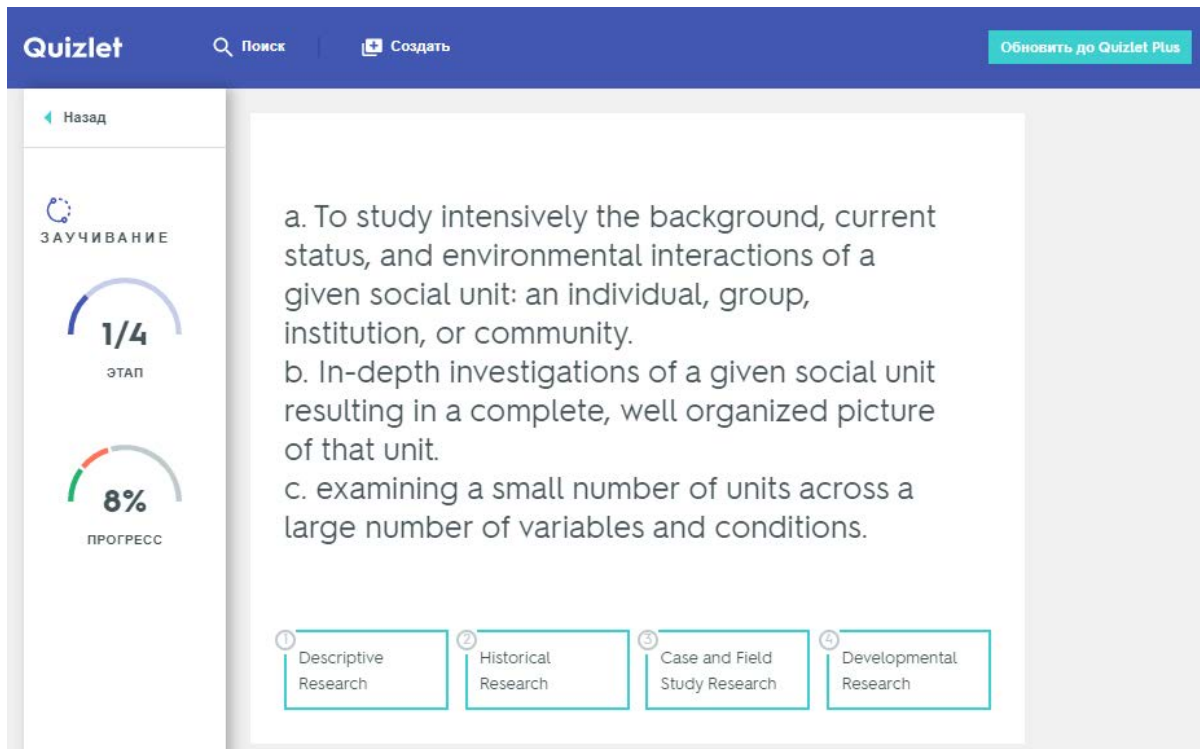


Figure 2 Applying Quizlet for Conceptualization

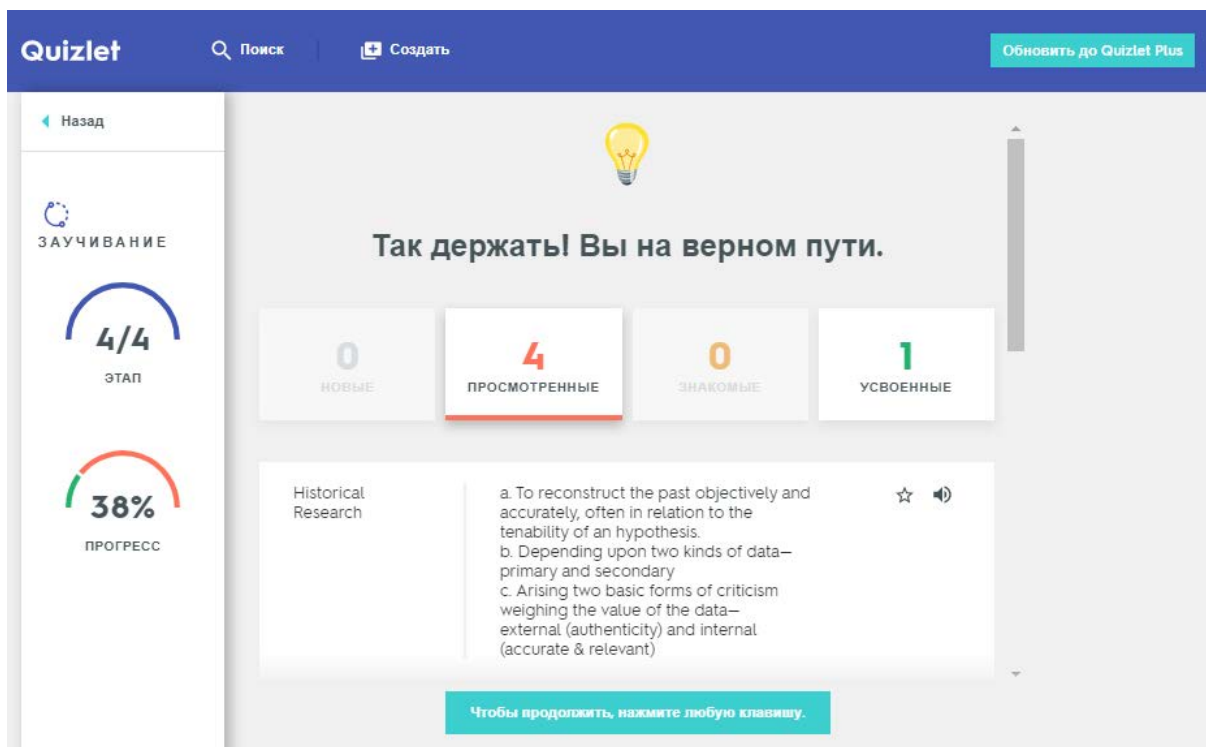


Figure 3 Shows Motivating Character of Program's Response

In the case of mistakes, the program automatically shows the correct option/answer; therefore, students get the opportunity not only for self-control, but also for mastering material that has not been understood yet and learned sufficiently. The fact that the material is represented in the form of a computer game also motivates students, since modern learning is impossible without the use of computer technology.

Gamification in the Teaching of Theoretical Discipline through the Eyes of Students

Based on the results of our experiment (it was conducted during one semester for the specialty "Foreign Philology"), a survey was conducted. The questionnaire was aimed at finding out how the introduction of gaming technology enhances the motivation of students in the study of theoretical discipline (Research Techniques in Linguistics). The results of the questionnaire are presented on the following diagrams:

Figure 4 shows the use of gaming technology helped me in mastering complex theoretical concepts.

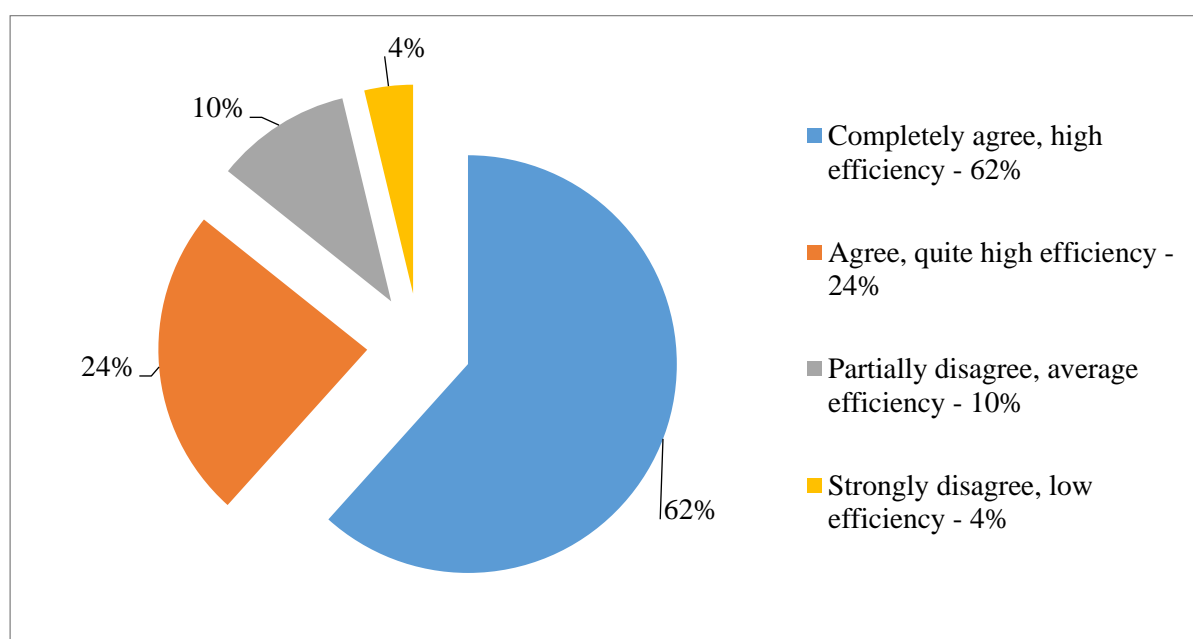


Figure 4 Mastering Theoretical Concepts

Figure 5 show the use of gaming technology has made the subject emotionally attractive.

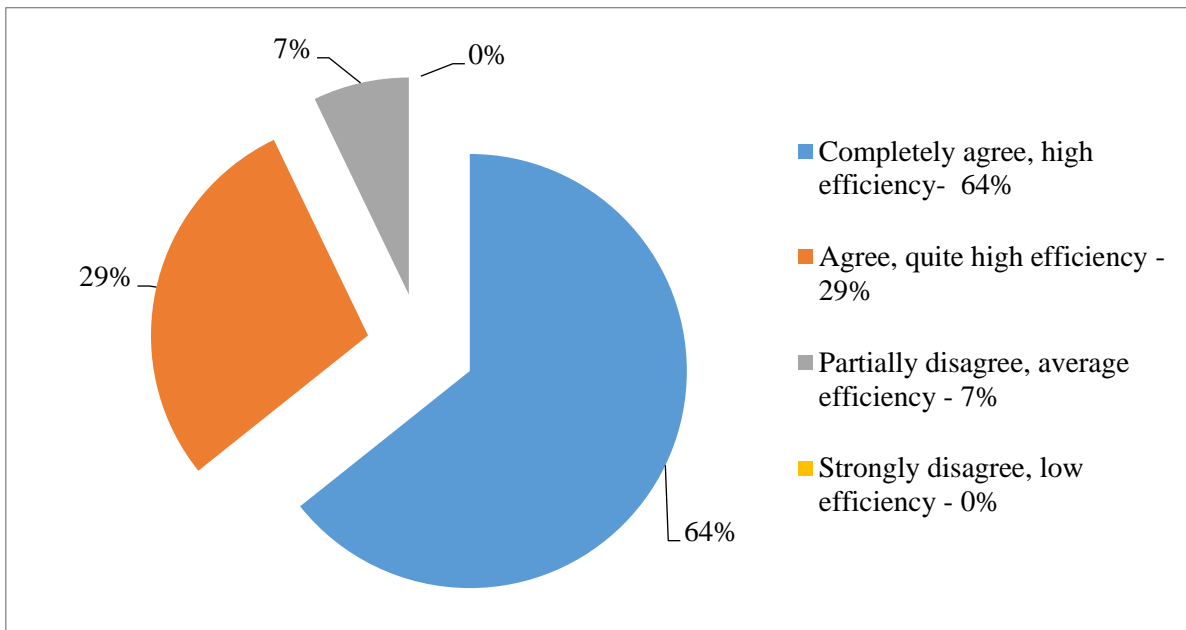


Figure 5 Emotional Attractiveness

Figure 6 shows the use of gamification allows you to develop analytical skills

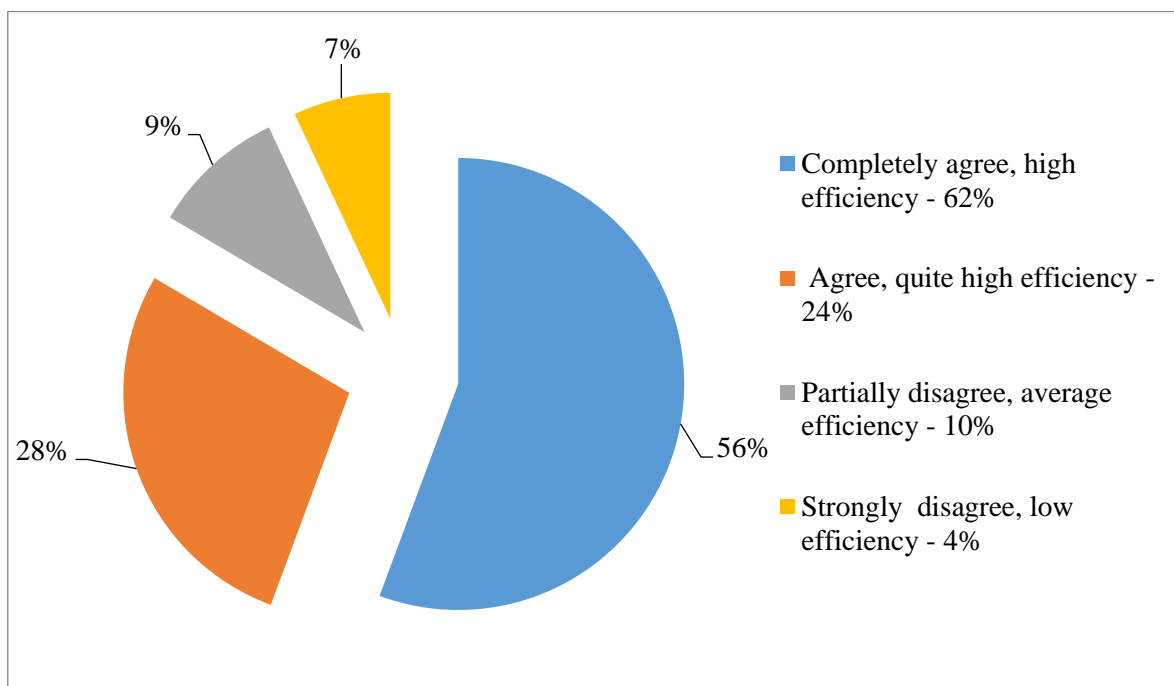


Figure 6 Development of Research Analysis Skills

The results of the survey showed that the students appreciated not only the emotional attractiveness of the use of gamification, but also the opportunities that are provided for mastering theoretical concepts in the process of using them. Thus,

64% fully agree with the fact that the introduction of games into the structure of the class significantly enhances its emotional attractiveness; 29% believe that the efficiency is high enough; The negative answer is not chosen by students at all. The possibility of mastering complex theoretical concepts was evaluated somewhat differently, since a small part of the students expressed disagreement (4%). At the same time, the percentage of those who positively evaluated this possibility is also significant (62% of the respondents rated it highly, 29% rated efficiency as high enough). Similar results were obtained in reference to the development of research analysis skills (7% of the respondents expressed their disagreement with the statement about the possibility of developing these skills through the gamification, while 56% expressed high efficiency in the use of gaming technologies in this aspect). In general, the students appreciated the possibilities of gamification used in the teaching of theoretical disciplines, noting also the creation of a positive emotional atmosphere and a motivating effect. Moreover, Figure 7 shows differences between the midterm exam results of experimental and controlling groups.

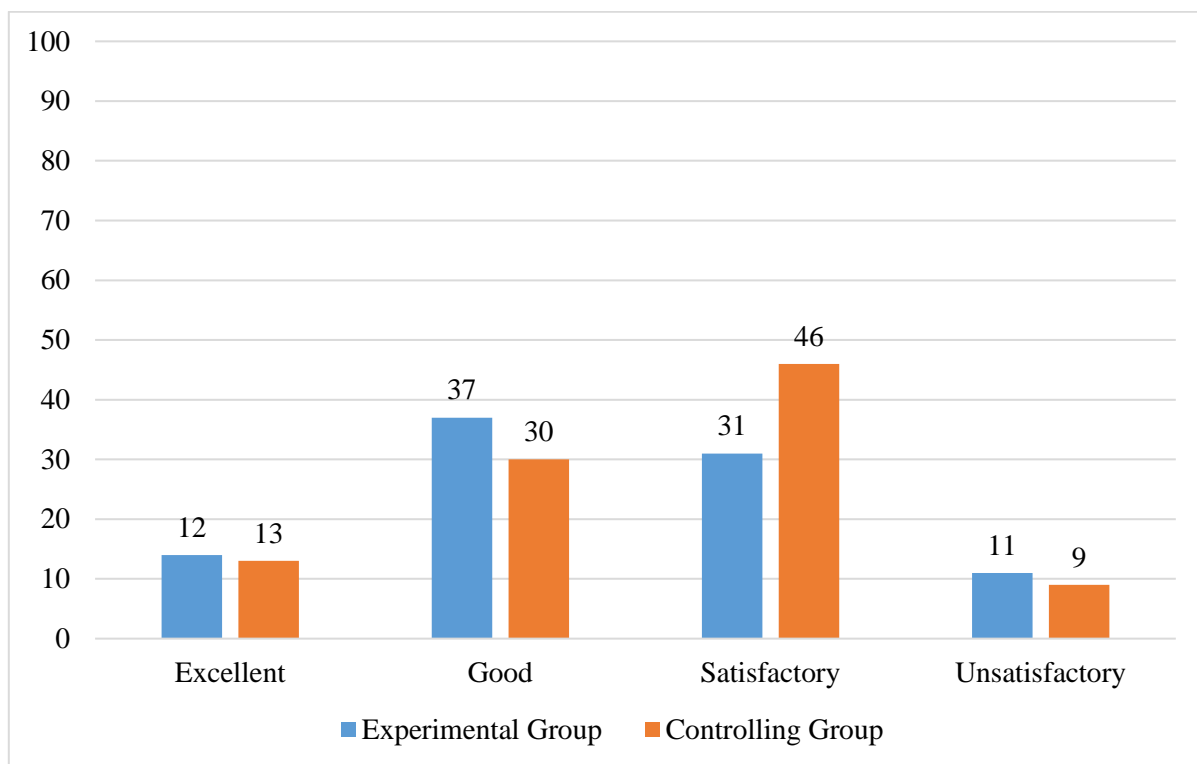


Figure 7 Midterm Test Results in Experimental and Controlling Group, %

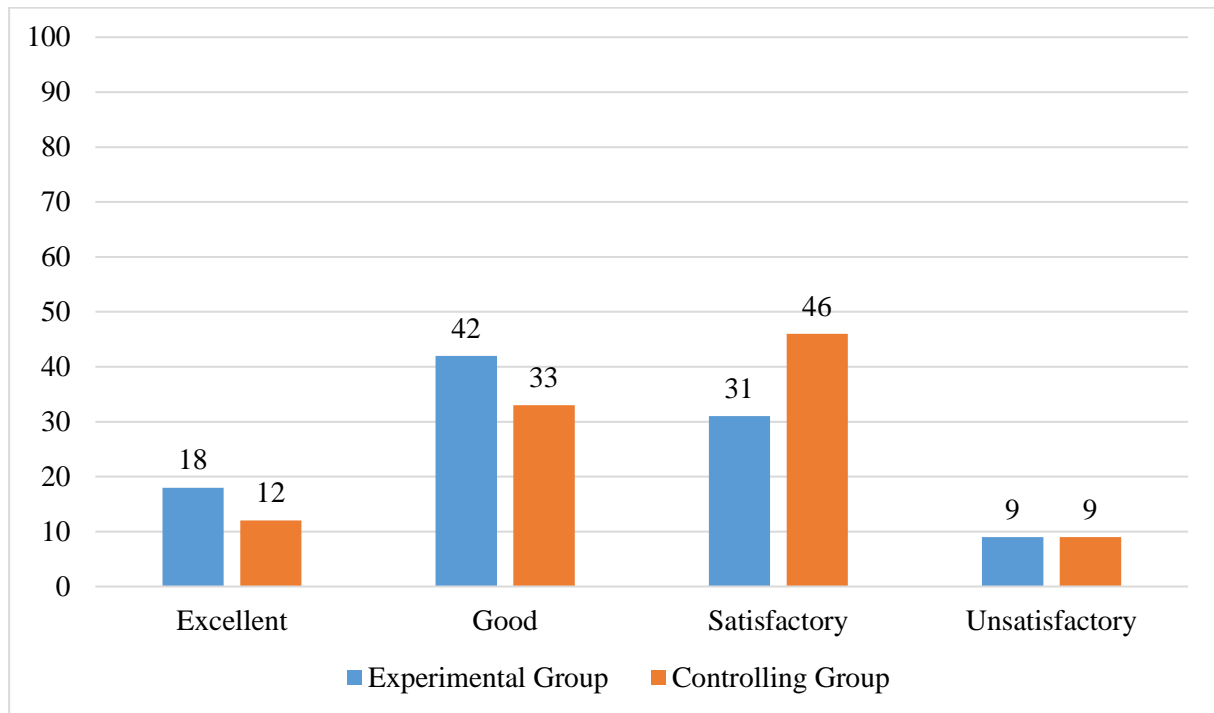


Figure 8 Final Exam Results in Experimental and Controlling Group, %

Thus, the differences between two diagrams represent the progress in both groups; on the other hand, Figure 7 shows that results of the midterm test were to some extent better in controlling group than in the experimental one, whereas final results (Figure 8) demonstrate a considerable progress of experimental group. In our opinion, the general trend represented on the diagrams indicate the efficiency of gamification in teaching theoretical discipline.

Conclusion

Although the definition of gamification in educational context is not a new phenomenon, the use of both interpersonal interaction and digital games to support the learning process is a recent development, many scientific works were held on that topic.

Thus, gamification in the study of the research techniques also has significant motivating capabilities; they are adapted to the perception of a modern student and allow replacing the mechanical repetition and memorizing with an engaging game where the interactive "partner" is a game training program.

In general, in contemporary higher education system, while teaching theoretical subject (e.g. Research Techniques in Linguistics) games are used in the following cases:

- As independent technologies for mastering the concept, topic and even the division of the subject;
- As an element of a more general technology;
- As a lesson or part of it (introduction, control);
- As an element of out-of-class work to popularize the course.

So, an element of competition is introduced into study, therefore the didactic task has been completely transformed.

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ДЕТАЛИЗАЦИЯ И ОБОБЩЕНИЕ МОТИВОВ К НАУЧНЫМ ИССЛЕДОВАНИЯМ СТУДЕНТОВ ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЙ

Detailing and Generalizing the Motives for Scientific Research of Students of Higher Educational Institutions

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Abstract. *In the article, the authors paid attention to the issues of identifying and detailing the motives of students of higher educational institutions for scientific research during their studies. Based on the generalization of the opinions of the authors who participated in the development of this problem, and the results of their own research, the authors of this article at the initial stage of the study analyzed and summarized the conclusions of scientists about the totality and detail of the above-mentioned motives. Further, the authors of this article justified a holistic set of interrelated motives that encourage students to engage in scientific research in addition to their current academic and other activities. In the process of studying the motives, the authors identified factors that represent a generalized grouping of motives for students' scientific research. Grouped motives, considered as motivational factors, can generally be considered as forces that encourage students to engage in the type of activity under consideration, namely: scientific research.*

The motivation factors that the authors reasonably propose to consider as determining the motivation of students for research activities are: the need for self-realization; reflection; social utility; professional interest; remuneration; social interaction; satisfaction from the process and the result. Each of the factors is justified and logically connected with the corresponding motives. This grouping is presented in tabular form and, as mentioned earlier, contains the rationale for the elements included in it.

The identified factors and related motives can serve as a basis for the development of a survey material to assess students' motivation for research activities.

Keywords: *motivation; motivation factors; motivation for scientific research; motives; scientific research.*

Введение *Introduction*

Вопрос отношения студентов к любой дополнительной деятельности, кроме учебной, несомненно представляет интерес, так как в настоящее время пребывание студентов в учебном заведении направлено не только на получение знаний, умений и навыков, но и на формирование их мировоззрения, выявление новых для них способностей, формирование новых потребностей, самореализацию и самоактуализацию. В большей степени на раскрытие не востребуемых и часто неизвестных самому студенту способностей влияет его участие в научных исследованиях, которые коррелируют с учебным процессом или непосредственно с ним не связаны.

Но для того, чтобы заинтересовать студентов в участии в научных исследованиях необходимо выявить какие конкретно мотивы движут ими при решении вопроса о включении в этот вид деятельности, понимаемый как определенного рода активность личности. Поскольку на данную тему проводилось уже некоторое количество исследований, продемонстрировавших иногда противоречивые результаты, авторами данной статьи поставлена цель – обобщить мотивы, выявленные известными авторами, и результаты собственных исследований, сформировать систему мотивов, сгруппированных в виде факторов, позволяющих дополнить сведения, полученные при изучении вопроса мотивации студентов к научным исследованиям.

Обзор литературы *Literature View*

Следует отметить, что вопрос мотивации студентов к научно-исследовательской деятельности уже поднимался в одном из исследований авторов данной статьи, результаты которого были опубликованы ранее. В частности, авторами были обстоятельно проанализированы точки зрения российских и зарубежных авторов, вследствие чего было определено, что под мотивацией к научным исследованиям студентов понимается их внутреннее побуждение к поведению определенного типа, выполнению определенных функций в рамках научно-исследовательской деятельности (Notchenko & Dyatlov, 2020; П'ин, 2012; Weiner, 1972).

Само понятие мотива, представляется достаточно сложным и многогранным, как следует из наблюдений, обобщений и выводов, сделанных одним из известных российских ученых в этой области Е.П. Ильиным (П'ин, 2012). В данном исследовании под мотивами студентов

к деятельности в сфере научных исследований мы будем понимать стремление к удовлетворению определенной потребности, в основе которой лежит специфическое умозаключение по осознанию этой потребности (Notchenko & Dyatlov, 2020).

В настоящем исследовании нас интересует не просто результаты анкетирования студентов, проведенных авторами (этот материал подробно представлен в вышеуказанной статье), но в большей степени вопрос выявления мотивов студентов к научным исследованиям, а также их состав и взаимосвязь.

Актуальность и важность такого исследования подчеркивают, как зарубежные, так и российские авторы. В частности, зарубежные авторы Р. Герреро, Е. Овьедо, Д. Мехия, М. Халлак видят в вовлечении студентов в научные исследования инструмент мотивации к образовательному процессу. То есть, с точки зрения упомянутых авторов, мотивируя студентов заниматься научными исследованиями, мы тем самым пробуждаем в них заинтересованность к процессу обучения. Исследуя влияние участия в научных семинарах на студенческое сообщество, авторы пришли к выводу, что такого рода мероприятия оказывают положительное воздействие на отношение студентов к участию в научных мероприятиях в целом (Guerrero, Oviedo, Mejia, & Hallack, 2015).

Российские авторы В.В. Балашов, А.В. Пацула, Р.В. Ленков, Е.А. Гайдукова, изучая проблему мотивации студентов к научной деятельности, отмечают важность данного типа мотивации с точки зрения преемственности поколений в научной сфере, а также настаивают на необходимости обеспечения устойчивой связи образовательного процесса с научной деятельностью студентов. Этими авторами выявлена неодинаковая значимость для студентов мотивов к участию в научно-исследовательской деятельности и факторов их формирования в зависимости от гендерного признака и направленности осваиваемых образовательных программ. Кроме того, авторами установлен преимущественно познавательный характер мотивации научной деятельности студентов (Balashov, Patsula, Lenkov, & Gaydukova, 2016). К подобному выводу пришел и авторский коллектив в составе Т.А. Шульгиной, Н.А. Кетовой, К.А. Холодовой, Д.А. Северинова. Проведя исследование, авторы пришли к выводу, что наиболее сильным стимулом, побуждающим студентов к познанию за пределами учебной программы, является интерес к новизне. Однако вышеназванные авторы установили, что акценты мотивации студентов зависят от личностных ценностно-содержательных задач, решаемых в определенном возрасте на протяжении обучения в высшем учебном заведении (Shul'gina, Ketova, Holodova, & Severinov, 2018).

Следует заметить, что данный вывод противоречит результатам исследований других авторов, например, Н.А. Абрамовой, которая в ходе проведенного опроса выявила, что доминирующим мотивом научной деятельности является получение дополнительных баллов для аттестации, как формулирует этот мотив сама автор (Abramova, 2018).

Учитывая дифференцированный характер результатов исследований, проведенных разными авторами, рассмотрим методические подходы к выявлению мотивов научно-исследовательской деятельности.

Обратимся к разработкам, представляющим существенный интерес в исследуемом вопросе, в частности, обоснованным в диссертационных работах, и выделим в них некоторые особенности. Так, авторская методика Ю.С. Медведевой и Т.В. Огородовой предусматривает ознакомление опрашиваемых с четырнадцатью утверждениями о том, для чего, по их мнению, нужно заниматься научными исследованиями, например, чтобы чувствовать себя полезным для общества, получать достойную оплату труда, иметь хорошие условия работы и др. Опрашиваемым предлагалось заполнить матрицу, выбрав между двумя последовательно сгруппированными утверждениями то, которое они считают наиболее важным. После этого автором диссертационного исследования Ю.С. Медведевой было предложено применить следующие шкалы: «Социальная полезность», «Материальное благополучие», «Комфорт», «Профессиональный уровень», «Карьера», «Творчество», «Общение», позволяющие выявить основные мотивы научной деятельности студентов (Medvedeva, 2015).

На наш взгляд, каждая шкала, отражающая определенные мотивы научно-исследовательской деятельности является, безусловно, интересным и важным научным результатом. Но исследования, проведенные другими учеными, позволяют сделать вывод о том, что проблема выявления мотивов, побуждающих студентов к научной деятельности, требует более широкого подхода. В частности, Т.В. Разиной, были разработаны два варианта методик мотивационной деятельности, предполагающих довольно объемное анкетирование испытуемых (70 вопросов). Кроме того, Т. В. Разиной предложена авторская трактовка шкал мотивации научной деятельности, позволяющая судить о мотивации с различных точек зрения: внешней мотивации; мотивации конкуренции; мотивации достижений; мотивации безопасности; внутренней мотивации; ценностной мотивации; познавательной мотивации; мотивации как антимотивации и косвенной мотивации. Автор данного подхода также выявила корреляционные связи между шкалами своей методики «Мотивация научной деятельности» и теста «Мотивационный профиль» Ш. Ричи и П. Мартина (Razina, 2016). Перечень подобного рода исследований может быть существенно расширен с учетом работы, проведенной авторами данной статьи, но анализ и обобщение

многообразия методик ограничен рамками представления материала для публикации.

В целом, исходя из рассмотренных выше результатов научных разработок, содержащих методики выявления и оценки мотивов к научной деятельности, можно сделать вывод о необходимости проведения дальнейших исследований в данной сфере. Кроме того, для прикладного использования в вузах инструментов мониторинга динамики мотивации студентов к научно-исследовательской деятельности, целесообразно применение более понятных, четко выстроенных и наглядных с точки зрения результатов подходов к выявлению мотивов студентов к научным исследованиям.

Методология *Methodology*

В процессе проведенного исследования были использованы методы анализа и обобщения точек зрения различных авторов на предмет исследования – мотивацию студентов к научно-исследовательской деятельности. Кроме того, были использованы методы сравнения, научной абстракции, системного анализа.

В связи с этим можно сказать, что авторы осуществили преимущественно кабинетное исследование. Полевое исследование заключалось в том, что авторы при разработке своего подхода основывались не только на положениях предыдущих публикаций на эту тему, но и на результатах интервью, проведенного с 48 студентами, которые осваивают образовательные программы в области экономики, что позволило более точно выявить реально движущие ими мотивы и сгруппировать их определенным образом. При этом интервьюирование проводилось в форме беседы, в период которой фиксировались свободно высказываемые мнения.

После фиксации мнений студентов высказывания, обозначенные как мотивы, были объединены без утраты их смысла по признаку общности высказываний с точки зрения их содержания. В результате мы получили искомый перечень мотивов. Следует отметить, что мотивы к научным исследованиям, высказанным студентами, не противоречили перечням мотивов, отраженных в исследованиях многочисленных авторов, наиболее типичные из которых были приведены в данной статье и в более ранних статьях авторов настоящего исследования. Далее озвученные студентами мотивы, а также мотивы, выявленные в исследованиях других ученых, были объединены в группы. Признаком группировки являлись сходная природа и механизм формирования мотивов, а также его проявления в активности опрашиваемых.

Результаты исследования ***The Results of Research***

Учитывая цели, поставленные в данном исследовании, авторами был разработан подход к пониманию мотивации студентов к научным исследованиям, обобщающий ранее разработанные представителями научного сообщества подходы и методики, а также результаты собственного интервьюирования студентов.

В частности, «Потребность в самореализации», как фактор мотивации к научно-исследовательской деятельности, отмечается многими авторами, чьи мнения приведены ранее, а также в более ранних разработках авторов данной статьи (Notchenko & Dyatlov, 2020). Самореализация в научной сфере имеет свои особенности, а именно тесную связь со стремлением к познанию. Таким образом, мотив познания мы отнесем к фактору «Потребность в самореализации». Как показывают результаты интервьюирования студентов экономических специальностей, для многих, имеющих склонность к успешной учебе, более полному получению профессиональных знаний, важно наиболее продуктивное использование времени, которое они могут использовать для этой цели. И в этом случае занятия научными исследованиями могут быть отмечены как значимый мотив, который можно назвать как «мотив продуктивного использования времени». Многие студенты в процессе обучения приобретают знания, изучая дисциплины из учебного плана или занимаясь самообразованием, которые они не могут применить в стандартных рамках учебного процесса, поэтому к потребности в самореализации отнесен «мотив использования и развития знаний». Но самореализация – это не только деятельность в одиночку. Большинству студенческой молодежи свойственно не только стремиться к широкому кругу общения, но и реализовать свои лидерские качества. В сфере науки это также возможно, так как научные исследования часто проводятся коллективно, а коллектив нуждается в лидере, руководителе. Поэтому к рассматриваемому фактору также отнесем «мотив реализации способности организовывать труд других людей».

Второй фактор «Рефлексия», предлагаемый авторами статьи, упоминается в разных вариациях и под разными названиями у многих авторов, изучающих данную проблему. С точки зрения участия в научных исследованиях фактор «Рефлексия» может означать, что у человека формируется мотив осознания собственной значимости, если он участвует в научно-исследовательской деятельности и это побуждает его заниматься ею далее. В этом контексте важен также мотив роста потенциала знаний и навыков, осознание которого, как правило, оценивается людьми, как положительное, что можно считать характерным и для сферы науки.

Фактор, названный «Социальная полезность», предполагает, на наш взгляд, наличие одного мотива, но часто определяющего не только смысл, ради которого индивид будет заниматься научной деятельностью, но и полезной для общества деятельностью вообще, то есть мотива приносить пользу обществу. Подтверждение тому рост интереса к волонтерскому движению и другим социально полезным видам деятельности в студенческой среде. И наука в этом смысле – не исключение.

Целесообразность выделения фактора «Профессиональный интерес» обусловлена тем, что уже поступая в высшее учебное заведение, студент предполагает, что после окончания он будет искать возможность практического применения полученных знаний. Поэтому если студент осознает, что участие в научных исследованиях позволит ему в будущем достигать более высоких результатов, то он будет иметь стимул в них участвовать. К мотивам, раскрывающим данный фактор, следует отнести, в первую очередь, упоминаемый многими авторами и, в частности, Ю.С. Медведевой «мотив достижения», под которым подразумевается мотив к достижению высоких результатов, то есть выполнению работы на высоком качественном уровне (Medvedeva, 2015). Далее отметим, что стремление к будущим профессиональным успехам невозможно без осознания, что в условиях конкуренции на рынке труда владение навыками, которыми могут не обладать конкуренты, может дать возможность получить желаемое вакантное рабочее место. В связи с этим мы выделили «мотив приобретения навыков, которых нет у большинства людей», как самостоятельный мотив, имеющий также некоторое значение для студентов с точки зрения соревновательности, конкуренции в любой сфере как, например, спортивной, так и в сфере иных достижений, например, в науке. Для полного раскрытия содержания вышеназванного фактора, на наш взгляд, целесообразно добавить «мотив расширения возможностей выбора профессии», который логически вытекает из всего вышесказанного.

Фактор «Вознаграждение» не раз отмечен как значимый для студентов многими авторами, исследованию мнений которых уделено внимание в труде авторов данной статьи ранее (Notchenko & Dyatlov, 2020) и отмечено выше в данной статье. Поэтому его обоснование как такового и мотивов, его раскрывающих, не требует обширных умозаключений. Примечательно лишь, что студенты понимают вознаграждение не только в виде преференций в учебе, но и как непосредственно материальное вознаграждение. Поэтому к мотивам, взаимосвязанным с данным фактором отнесем «мотив материального вознаграждения», «мотив дополнительных преимуществ при аттестации», «мотив поощрений в виде поездок на научные мероприятия», «мотив ослабления контроля посещаемости занятий». Добавим также к этому фактору «мотив карьерных достижений в

будущем», понимаемый как моральное вознаграждение за труд в сфере науки уже в данное время, то есть в период обучения, как бы «отложенное» на будущее вознаграждение.

В данной статье уже упоминалось, что общение, социальное взаимодействие чрезвычайно значимо в студенческой среде, что отмечает отдельно в своей диссертации Ю.С. Медведева, настаивая также на том, что с годами значимость мотивов, связанных с общением снижается по мере взросления индивида (Medvedeva, 2015). Поэтому мы выделили в качестве отдельного и чрезвычайно значимого фактор «Социальное взаимодействие», который связан с такими мотивами, как «мотив приобщения к научному сообществу, аффилированности», «мотив работы в коллективе», «мотив достижения известности, повышения авторитета», «мотив общения с единомышленниками, в том числе на научных мероприятиях». Нельзя сказать однозначно, что именно в научной сфере возможна реализация вышеназванных мотивов, но для студентов, имеющих определенный характер, темперамент, способности, научная сфера может стать почти единственной областью, где он будет ощущать себя нужным, услышанным другими людьми, имеющим авторитет.

Фактор «Удовлетворение от процесса и результата» включен в предлагаемый перечень по той причине, что индивиду вообще свойственны гедонистические устремления в разных сферах. И достижения, полученные в сфере науки, могут так же ассоциироваться с успешным результатом, как и в учебе, творчестве, спорте. Получение удовлетворения, как известно, может быть как от самого процесса какой-либо деятельности, так и от получения ожидаемого результата от данной деятельности. Поэтому мотивы, раскрывающие суть данного фактора, мы назвали «мотив удовольствия от процесса проведения научных исследований» и «мотив удовлетворения от достигнутого результата».

Учитывая и обобщая все вышесказанное, в результате проведенного исследования авторами статьи была разработана группировка факторов, отражающая их совокупность, и соответствующих им мотивов студентов вузов к научным исследованиям (табл. 1).

На наш взгляд, в данном подходе, в основе которого лежит глубокая проработка результатов научных исследований ученых, имеющих определенные достижения в данной предметной области, и сбор информации в виде мнений студентов в процессе интервьюирования, отражены современные представления студенческой молодежи о важности, значимости для них и даже необходимости участия в научных исследованиях, проводимых, в первую очередь, в образовательных учреждениях, в которых они обучаются.

Таблица 1. Факторы мотивации к научным исследованиям
Table 1 Factors of Motivation for Scientific Research

№ п/п	Фактор мотивации	Мотивы
1	Потребность в самореализации	мотив познания
		мотив продуктивного использования времени
		мотив использования и развития знаний
		мотив реализации способности организовывать труд других людей
2	Рефлексия	мотив осознания собственной значимости
		мотив роста потенциала знаний и навыков
3	Социальная полезность	мотив приносить пользу обществу
4	Профессиональный интерес	мотив достижения высоких результатов
		мотив приобретения навыков, которых нет у большинства людей
		мотив расширения возможностей выбора профессии
5	Вознаграждение	мотив материального вознаграждения
		мотив дополнительных преимуществ при аттестации
		мотив карьерных достижений в будущем
		мотив поощрений в виде поездок на научные мероприятия
		мотив ослабления контроля посещаемости занятий, успеваемости
6	Социальное взаимодействие	мотив приобщения к научному сообществу, аффилированности
		мотив работы в коллективе
		мотив достижения известности, повышения авторитета
		мотив общения с единомышленниками, в том числе на научных мероприятиях
7	Удовлетворение от процесса и результата	мотив удовольствия от процесса проведения научных исследований
		мотив удовлетворения от достигнутого результата

Выводы *Conclusions*

Предложенная авторами совокупность мотивов, объединенных в группы, названные факторами мотивации, раскрывает весь спектр мотивов, которые способны побудить современных студентов не только углублять свои знания, формировать умения и навыки в рамках образовательного процесса, но и раскрывать свои способности в сфере науки. И хотя привести студента в научную среду могут самые разные соображения, основанные на отдельных мотивах или их совокупности, главное состоит в том, что

вовлечение в процесс научных исследований способно значительно обогатить жизнь студента новыми достижениями, новым самоощущением, позволит более уверенно чувствовать себя на профессиональном пути.

Данная совокупность взаимосвязанных мотивов также может служить основой для разработки анкетного материала, применяемого для проработки как теоретических аспектов мотивации студентов к научным исследованиям, так и практических положений, позволяющих руководству вуза организовывать проведение мероприятий, ориентированных на раскрытие и развитие способностей студентов, создание необходимых для этого возможностей и условий.

Summary

The study of the theoretical material allowed the authors to conclude that the importance of students' participation in scientific research is very high. Thus, the participation of students in scientific research, on the one hand, contributes to the acquisition of new knowledge and skills, and, on the other hand, can itself be a means of increasing interest in the educational process. But the most important thing is that familiarization with science is a way to self-realization, to form an attitude towards oneself as a person who is able to generate new "Knowledge", and not only as a consumer of educational material.

Taking into account the concept of motive proposed by the authors of the article, on the basis of studying the theoretical material and interviewing students, a grouping of motivational factors was developed, including a certain number of motives that reveal them. The result of this study can be used to further study the significance of the motives of specific groups of students at a certain time and in a certain place.

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ВОСПИТАНИЕ ПРАКСЕОЛОГИЧЕСКОЙ КУЛЬТУРЫ СТУДЕНТОВ АГРАРНОГО УНИВЕРСИТЕТА В ПРОЦЕССЕ ПРОФЕССИОНАЛЬНОЙ ПОДГОТОВКИ

Education of the Praxeological Culture of the Students of Agrarian University in the Process of Professional Training

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Abstract. *On the basis of scientific sources analysis, the characteristic features of praxeological culture of the student at Agrarian University have been revealed. The author has studied the main proceedings which are the basis for the construction of the theoretical foundations of the student's praxeological culture education. There has been proved that the student's praxeological culture is determined by the total level of culture of the people who are involved in Pedagogical University activities, their cultural traditions arising from the standards of conduct, their attitudes being expressed in practical actions, in motivations of everyday activity, and their educational strategies.*

The article describes the rationale for the education of praxeological culture in the process of teaching the discipline "Praxeological culture of a specialist" for students of the specialties «Agronomy», «Management», «Agro engineering». The content of students' training is revealed through the values, principles and technologies of establishing communicative, professional relations in various industrial situations. To achieve this goal, interactive methods and the GROW coach technique were used; for the statistical analysis of the results of experimental work, the Fisher criterion is used. It is shown that experimental exercises and trainings contribute to the effective formation of praxeological culture and professional competence, future specialists of the agro-industrial complex, as evidenced by monitoring and evaluation of the success of training and development of students. According to the results of

the experiment, it can be noted that knowledge of praxeological culture will help future specialists to establish contacts in a team, increase mental activity, and increase the level of creativity of young people.

Keywords: *education, formation of praxeological culture, future agrarians.*

Введение ***Introduction***

Высшее образование занимает ведущее место среди факторов, которые способствуют экономическому росту общества. Прогрессивный рост любого государства зависит именно от профессионализма специалистов, задача которых возложена на высшую школу. Сегодня высшее образование приобретает новые черты и расширяет свое функциональное назначение. В ч. 1 ст. 5 Закона Украины «О высшем образовании» указано: «Высшее образование – совокупность систематизированных знаний, умений и практических навыков, способов мышления, профессиональных, мировоззренческих и гражданских качеств, морально-этических ценностей, других компетенций, полученных в учреждении высшего образования (научном учреждении) в соответствующей области знаний по определенной квалификации на уровнях высшего образования, по сложности выше, чем уровень полного общего среднего образования ... » (Law of Ukraine «On Higher Education», 2014). Образование – один из наиболее эффективных способов приобщения к науке и культуре. Именно во время получения образования человек формирует духовные ценности. Получение образования является процессом трансляции культурно оформленных изменений его поведения и деятельности, а также постоянных форм общественной жизни. Основные абстракции процесса воспитания и образования – формирование жизненных культурных компетенций, что лежит в основе праксеологической культуры.

Исследования показали, что на сегодня в первоочередной из которых есть приведение содержания образования в соответствие с направлениями образовательной политики государства (Lakatosh, 2019; Oliinyk, 2020). Прежде всего, воспитание праксеологической культуры представляет собой совокупность способов, стратегий и методов, обеспечивающих переход от формулирования проблемы к конкретным действиям по их решению. В процессе овладения профессиональной компетентностью особое внимание следует уделять психологическим аспектам цели образования, умению принимать решения и планировать свою деятельность (Korshunova, 2018; Oliinyk, Shvets, 2017; Solonenko, 2014), а также воспитанию и формированию праксеологической культуры.

Обзор литературы

Проблема воспитания праксеологической культуры студенческой молодежи еще не нашла достаточно широкого освещения в педагогической теории и практике. Однако в педагогике созданы научные труды, которые могут быть фундаментом для развития теоретических основ праксеологической культуры студентов высших учебных заведений. Так, в работе Т. Глуховой, А. Малый, А. Кирилаш «Психолого-педагогические аспекты самосовершенствования личности специалиста» (Glukhova, Maly, Kirilash, 2007), авторы отмечают, что основным содержанием профессионального роста будущего специалиста является самообразование.

Авторами акцентировано, что наиболее важными компонентами профессионального роста личности являются:

- системное мировоззрение и модельное мышление;
- профессиональная творческая деятельность;
- праксиологическая, рефлексивная и информационная достаточность;
- компетентность деятельности, общения и саморазвития;
- конкретно-предметные знания (Glukhova, Maly, Kirilash, 2007).

Праксеологическая (гр. *Praktikos* – деятельный) культура основывается на порядке, рациональности, планах, тщательном контроле за их выполнением, оценкой результатов деятельности студентов. Главной фигурой является преподаватель, влияние которого на студента происходит через должностные полномочия и глубокие знания. Он приобщает студентов к выполнению профессиональных обязанностей еще в период обучения в университете. Все это обеспечит высокую эффективность в дальнейшей работе.

По мнению Эдгарда Штейна, праксеологическая культура – это «набор приемов и правил решения проблем внешней адаптации и внутренней интеграции будущих работников, правил, что оправдали себя в прошлом и подтвердили свою актуальность» (Shane, 2002). Ученый определяет праксеологическую культуру как «совокупность основных убеждений, сформированных самостоятельно или разработанных определенной группой по мере того, как они учатся решать проблемы адаптации к внешней среде и внешней интеграции – которые есть очень эффективными и считаются ценными» (Shane, 2002). Украинские ученые теорию Э. Штейна считают базовой при изучении теории управления и менеджмента. По мнению Э. Шейна, познания праксеологической культуры начинается с «поверхностного» уровня или «слоя», предусматривающий изучение передовых методов и технологий, способов управления и коммуникации. То есть, на этом уровне студенты изучают азы своей профессиональной

деятельности, – это комплексный пакет образовательных компетенций, который объединяет в себе следующие модули: управление земледелием, управления животноводством, основы экономических знаний и менеджмента, ИКТ, знания иностранных языков. Второй уровень праксеологической культуры Э. Шейн называет «Организационной идеологией», где особое значение отводится преподавателю, который направляет, корректирует поведение студентов, а также воспитывает и закладывает основы праксеологической культуры будущего специалиста. Третий, наиболее «глубокий» уровень включает использование полученных практических знаний и навыков в процессе профессиональной подготовки а также в реальных условиях производства, изучение и анализ ошибок и получение практического опыта (Shane, 2002).

Ученый Д. Коул (Cole, 1989) предложил типологию праксеологической (организационной) культуры в зависимости от типа совместной деятельности. При этом, автор делает акцент на том, что праксиологическая культура является определяющим фактором специфики кадрового менеджмента. Он выделил четыре типа культур в организации, самая главная по его мнению – праксеологическая культура, в которой определение целей, выбор направлений деятельности рассматривается как средство повышения экономической эффективности, увеличение прибыли.

Так, проанализировав работу Д. Коула, можем сказать, что праксеологическая культура студентов учебных заведений определяется культурой каждого сотрудника университета, независимо от его должности или профессионального статуса. Практиологическая культура определяется суммарным уровнем культуры тех людей, которые вовлечены в деятельность аграрного университета, их культурными традициями, обусловленными стандартами поведения, их установками, выражающихся в практических действиях, в мотивациях повседневных поступков и в образовательных стратегиях.

Интересной есть теория Ирины Сайтарли (Saitarli, 2014), которая считает праксеологическую культуру – культурой межличностных отношений и морально-этических норм. Автор рассматривает некую систему морально-этических принципов: нормы морали, правила этики, правила поведения и общения, поведенческие и коммуникативные образы, на которые могут ориентироваться люди в процессе социального взаимодействия. Основу праксеологической культуры составляет опыт человеческого общения и взаимодействие на уровне микрогруппы (Saitarli, 2014). В связи с этим, принципы и методы праксеологии могут применяться для анализа поступков, нравственного выбора, принятия решений, нормативно-ценностных аспектов сотрудничества и взаимодействия вообще. Практиологический подход в данном случае означает осмысление

деятельности человека в процессе межличностных отношений с точки зрения их результативности, выявления действий, которые мешают эффективному сотрудничеству, выяснения и устранения барьеров эффективного взаимодействия, изучения возможностей, потенциала и неиспользованных резервов, выработка предложений по повышению эффективности деятельности на каждом этапе подготовки и реализации деятельности: определение цели деятельности (определение главных, второстепенных, начальных, промежуточных, конечных целей); прогнозирования результатов деятельности; планирование будущих действий; подготовка к будущей трудовой деятельности; анализ, сопоставление, сравнение поставленной цели и полученных результатов.

В соответствии со стандартами высшего образования Закона Украины «О высшем образовании» (Law of Ukraine «On Higher Education», 2014), одним из важных факторов совершенствования образовательного процесса в вузе является оптимизация профессиональной подготовки будущих специалистов, в частности аграриев, к эффективному выполнению профессиональной деятельности. Основой такой подготовки является формирование у будущих специалистов аграрной сферы готовности к продуктивной профессиональной деятельности, предусматривает праксеологическую составляющую и базируется на воспитании праксеологической культуры в процессе профессиональной подготовки.

Изучение вопроса специфики праксеологической культуры и ее влияния на профессиональную деятельность, лежит в основе педагогического эксперимента.

Материалы и методы *Materials and Methods*

Педагогический эксперимент проходил в течение 2019-2020 годов на базе Винницкого национального аграрного университета. В эксперименте участвовали 187 студентов агрономического, инженерно-технологического, факультетов и факультета менеджмента.

Исследование включало следующие этапы:

1. Теоретический анализ интерактивных методов, направленных на воспитание праксеологической культуры.
2. Установление исходных данных (октябрь 2019).
3. Текущий педагогический контроль (декабрь 2019, март 2020).
4. Итоговый педагогический контроль (май 2020).
5. Анализ проведенного исследования (июнь 2020).

Для получения необходимой информации использованы общенаучные методы теоретического уровня исследования, а именно: анализ программ

обучения, научных и методических источников, педагогическое моделирование, педагогический эксперимент, педагогическое наблюдение.

На формирующем этапе эксперимента была проведена апробация сконструированной модели праксеологической культуры студентов учебных заведений с помощью интерактивных методов. Для реализации поставленной цели были использованы интерактивные методы и коуч техника GROW (Модель GROW). Для статистического анализа результатов экспериментальной работы используем критерий Фишера.

Текущий педагогический контроль предусматривал работу со студентами Винницкого национального аграрного университета в процессе изучения спецкурса «Праксеологическая культура специалиста». В эксперименте принимали участие студенты таких специальностей: «Агрономия», «Менеджмент», «Агроинженерия». Конечно, речь идет не о формальном их изучении – главным здесь является духовное принятие человека, как высшей ценности. Задачами спецкурса предусмотрено формирование у студентов таких компетенций: *словесно-коммуникативных* (правильное формирование и высказывания собственных мыслей, знание и понимание профессиональных текстов, культура речи, регулирование отношений в коллективе); *социокультурных* (знание морально-этических норм и правил различных народов); *профессиональных* (проведение исследований в области агрономии, технологии переработки продукции сельского хозяйства, которые охватывают проблемы экологически чистых продуктов питания, использование передового опыта, связанного с развитием сельского хозяйства, использование эффективных приемов управления).

С целью проверки педагогического эксперимента разработаны диагностические материалы:

1. Для проверки знаний по праксеологической культуре разработана авторская анкета, на основе которой создан электронный тест в системе дистанционного обучения Moodle. Вопросы анкеты «Оцените, пожалуйста, насколько важны при формировании праксеологической культуры личные качества в процессе профессиональной подготовки (отметьте «+», начиная с 1, их значимость для вас: где 5 – наивысшая значимость) представлены в таблице 1.

2. При преподавании спецкурса, с целью проверки когнитивного и коммуникативного компонентов, применялись интерактивные методы обучения, в частности экспериенциальные упражнения и тренинги, которые создавали возможность эмоционально переживать и анализировать собственный опыт с целью его дальнейшей трансформации.

**Таблица 1. Значимость личных качеств при формировании
праксеологической культуры студентов аграрных университетов в процессе
профессиональной подготовки**

**Table 1 Significance of Personal Qualities in the Formation of Praxeological Cultures of
Students of Agricultural Universities in the Process of Training**

<i>Личные качества</i>	Шкала оценивания				
	1	2	3	4	5
самостоятельность					
инициативность					
открытие нового опыта, новых идей					
рационализм действий					
эффективность в делах					
трудолюбие					
творчество					
уверенность в себе					
ответственность за результаты					
самоконтроль					
образованность					
активность					
познание					
свобода					
взаимодействие в коллективе					
материальная обеспеченность					
работа					
здоровье					
нравственные ценности					
культура общения					
доверие					

Вышеупомянутое указывает на то, что диагностический материал составлен таким образом, чтобы каждый из компонентов имел равный вес в общей структуре формирования праксеологической культуры студентов учебных заведений с помощью интерактивных методов.

Результаты и исследования ***Results and Research***

Воспитание праксеологической культуры студентов аграрных высших учебных заведений с помощью интерактивных методов осуществляется в следующих направлениях: *мотивация* – мотивация на самостоятельное овладение знаниями, активность исполнительность; инициатива; *когнитивность* – получение новых знаний, совершенствованием профессиональных умений и навыков; познание, исполнительность;

личностное развитие – личные качества (нравственные ценности, творчество, моральные ценности, самостоятельное овладение новым опытом) *коммуникация* – взаимоотношения в коллективе, культура общения.

На основе рассмотренных выше направлений выделено четыре компонента праксеологической культуры: мотивационный, когнитивный, личностный, коммуникативный.

В соответствии с ними были разработаны критерии, показатели и инструменты определения повышения уровня праксеологической культуры студентов учебных заведений с помощью интерактивных методов. Дидактические материалы спецкурса «Праксеологическая культура специалиста» перенесены на электронные носители, обеспечена поддержка дисциплины соответствующим курсом в системе дистанционного обучения Moodle; подготовлено видео- и аудиофайлы с мультимедийными презентациями для проведения различного вида экспериментальных упражнений и тренингов.

Особое внимание уделялось формированию праксеологической культуры с помощью интерактивных методов: проектно-поискового, дискуссий, ролевых игр, анализа ошибок, брейнсторминга, тренингов. Достаточно продуктивной стала известная коучинговая техника GROW, автором которой является британский бизнес-тренер Дж. Уитмор (Модель GROW). Название техники является акронимом (grow англ. – рост) четырех английских слов: Goal (цель – ранжирование целей по важности и срочности, на ближнюю и долгосрочную перспективу); Reality (реальность – ориентация по текущим обстоятельствам); Options/ Opportunity (выбор – стратегия и альтернативные варианты действий); Will/ What Next (свобода – требования, рациональный выбор: что делать, как, кто это будет делать).

В основе техники лежит определенная последовательность постановки эффективных вопросов. Сначала выясняется цель, к которой стремится студент. Постановка цели также имеет свою технологию, которая обозначается акронимом SMART (англ. – умный, сообразительный). Элементы этой аббревиатуры, образованные первыми буквами английских слов, которые представляют собой определенные правила постановки цели: конкретность (specific) измеримость (measurable) достижимость (attainable) релевантность (relevant) ограниченность конкретным сроком (time-bounded).

Конкретность цели обеспечивается поиском ответов на вопрос: «В каком направлении мы хотим работать? Чего мы хотим достичь? Какова наша долгосрочная цель?». Измеримость предполагает наличие критериев и показателей (измерителей), которые позволили бы определить, достигнута

ли поставленная цель, и в какой степени. Достижимость цели определяется с учетом уровня подготовленности и личностных ресурсов студента. Речь идет о принципе установки планки целей.

Сущность принципа заключается в том, чтобы цель обеспечивала мобилизацию сил студента, выводила его из зоны комфорта и переводила в зону развития. С другой стороны, цель не должна быть завышенной, иначе это может привести к фрустрации и снижению усилий. Актуальность цели означает ее согласованность и соотношение с другими целями и задачами студента (жизненными, личными, производственными и т.д.). Обязательным элементом постановки цели является ее ограничение по времени.

Следующим этапом техники GROW является анализ реальной ситуации, в которой находится студент, личные знания, опыт. Третий этап – определение вариантов действий, которые может выбрать студент для достижения поставленной цели: «Что может помочь нам в решении поставленной задачи? Каким способом мы будем делать?». Завершает технику GROW группа вопросов о стимулировании воли к действию: «Что поможет достичь цели? Насколько сильный мотив? Какова самоорганизация и правильно ли мы управляем временем для достижения цели?».

Проверка знаний студентов проведена на основе авторской анкеты и показала, что важнейшими личностными качествами при формировании праксеологической культуры студенты выделили: инициативность как важное качество – 85%, изучение новых технологий – 74%, культура общения – 71% опрошенных студентов. На рис. 1 представлены результаты ответов студентов.

Сравнительное распределение студентов (в процентах) по уровням сформированности праксеологической культуры на констатирующем и формирующем этапах эксперимента представлены в табл. 2.

Таблица 2. Сравнение уровней праксеологической культуры студентов аграрных учебных заведений на констатирующем и формирующем этапах эксперимента
Table 2 Comparison of the Levels of Formation of Praxeological Culture of Students of Agricultural Educational Institutions at the Ascertaining and Formative Stages of the Experiment

Экспериментальная группа	Уровень праксеологической культуры					
	Низкий		Средний		Высокий	
	к	ф	к	ф	к	ф
	44,3	23,5	43,3	56,7	12,4	19,8

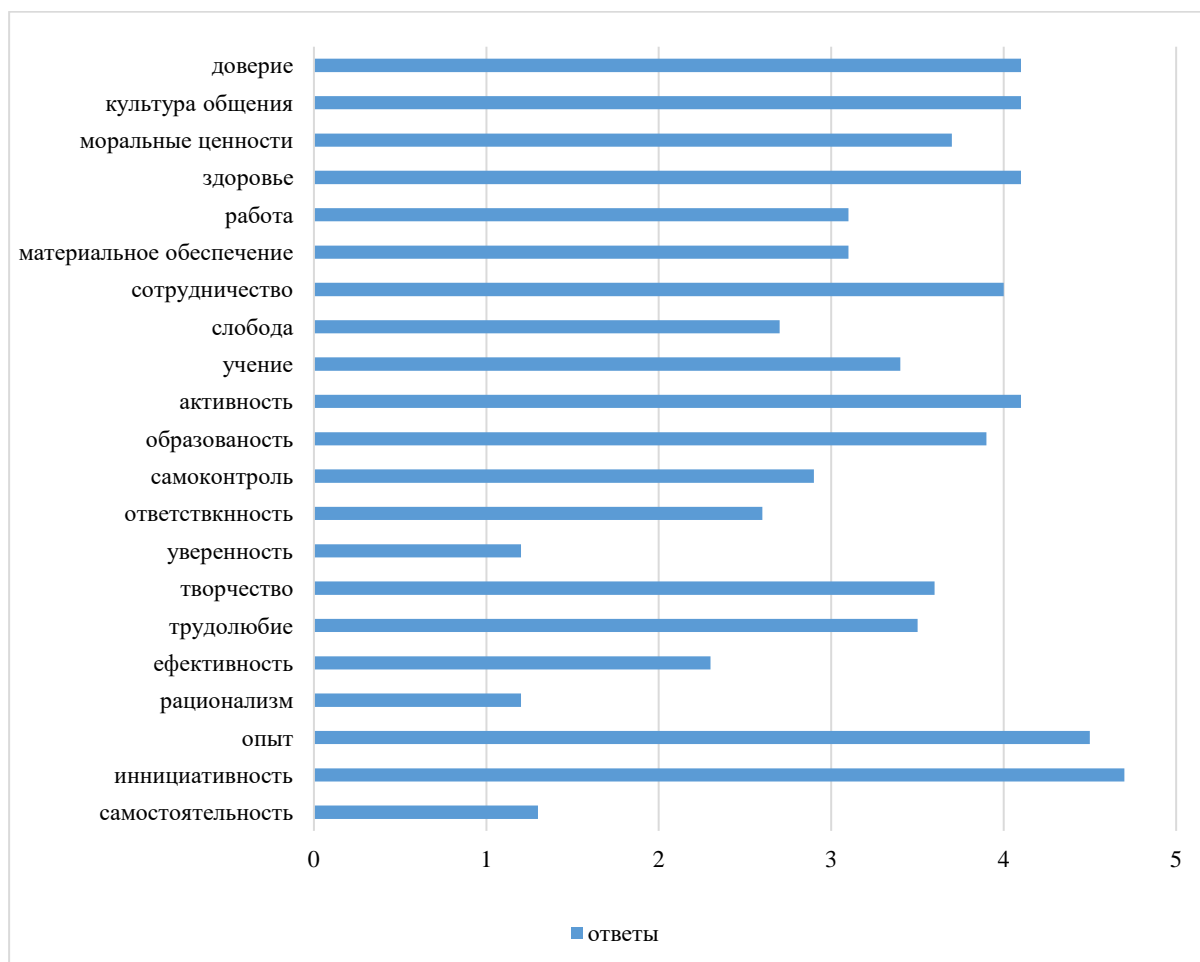


Рис. 1. Результаты ответов студентов по значимости личных качеств при формировании праксеологической культуры студентов аграрных университетов в процессе профессиональной подготовки

Figure 1 The Results of Students' Answers the Importance of Personal Qualities in the Formation of Praxeological Culture of Students of Agricultural Universities in the Process of Training

Итоговое оценивание показало, что из 187 студентов, изучавших вышеуказанный спецкурс, 37 (19,8%) соответствовали высокому уровню, 106 (56,7%) – среднему, а остальные – 44 (23,5%) низкому уровню формирования праксеологической культуры. По сравнению с исходной оценкой, в данной группе произошли существенные положительные изменения: число студентов с высоким уровнем выросла на 7,4%, со средним – на 13,4%, При этом число студентов, имевших низкий уровень уменьшилась на 20,8%. Достоверность результатов экспериментально-исследовательской работы доказано с помощью методов математической статистики путем вычисления дисперсии для определения F-критерия по формуле 1. (Кувверьялг, 1980):

$$\sigma^2 = \frac{\sum f(x_i - \bar{x})^2}{N}, \quad (1)$$

где f – количество студентов;

$(x_i - \bar{x})^2$ – разница между значением в баллах (5, 4, 3, 2);

N – количество студентов, где вычисляется дисперсия.

Достоверность полученных результатов установлено путем сопоставления показателей эмпирического критерия Фишера для категории групп (F_{emp}) с показателями теоретического F -критерия (F_{krit}) (Кыверялг, 1980, с. 278). При условии, что число степеней свободы находится в пределах от 60 до 120 (это 102 (105) 1 = 101 (104)), то показатель F_{krit} имеет значения от 1,7 до 1,3.

Сравнительный анализ исчисленного эмпирического показателя критерия Фишера показал, что для экспериментальной группы F_{emp} находится в пределах 1,7-1,3, подтверждающего достоверность полученных результатов.

Выводы *Conclusions*

По итогам исследования можно сделать вывод, что статистический анализ показателей перехода студентов на более высокий уровень сформированности праксеологической культуры показывает, что процесс формирования праксеологической культуры студентов проходит более эффективно с помощью интерактивных методов.

Следует отметить, что произошли существенные положительные изменения: число студентов с высоким уровнем выросла на 7,4%, со средним – на 13,4%, При этом число студентов, имевших низкий уровень уменьшилась на 20,8%. Достоверность полученных результатов установлено путем сопоставления показателей эмпирического критерия Фишера для категории групп (F_{emp}) с показателями теоретического F -критерия (F_{krit}).

Внедрение в образовательный процесс спецкурса «Праксеологическая культура специалиста» поможет повысить уровень праксеологической культуры в процессе профессиональной подготовки студентов аграрных учебных заведений.

Эффективность воспитания у студентов праксеологической культуры в процессе профессиональной подготовки, в том числе использование техники GROW, позволит учесть разносторонние аспекты образовательной

деятельности студентов: их цели, ресурсы, реальные возможности, разные подходы к усвоению учебного материала, мотивацию и тому подобное. Успешность усвоения курса будет способствовать также применению обратной связи и мониторинга процесса. Однако, в образовательных программах высших учебных заведений не отводится специального времени для овладения студентами праксеологической культурой – знания о ней студенты, как правило, получают самостоятельно.

Это приводит к неумению налаживать контакты в коллективе, безынициативности, снижению умственной активности студентов, снижает уровень творчества молодежи.

Следует отметить, что результаты эксперимента могут зависеть от индивидуальных особенностей студентов-аграриев, их склонности к предметной, профессиональной деятельности. Поэтому научный интерес представляет также сравнение результатов экспериментальной работы студентов педагогических специальностей, что представляется перспективой наших дальнейших исследований.

Summary

The article is based on the analysis of normative documents used in the process of the professional training of future students of agrarian universities, the article presents the features of upbringing the praxeological culture. The authors reveal the main shortcomings in the effectiveness of the professional training of students of agricultural universities, which need urgent correction. Among the generalized skills of student youth, according to the authors, the following skills are important for the upbringing of the praxeological culture of future specialists in the agrarian sphere: to set goals for students with the help of a clear statement of thought; understand professional texts; regulate human relations in the field of agricultural activities; to conduct research in the field of agronomy, technologies for processing agricultural products, which cover the problems of organic food; focus on results and find effective solutions to issues related to agricultural development; use effective management techniques. The analysis of experimental work given by the authors proves that their proposed methods of formation of praxeological culture of future specialists of farmers indicates the optimization of the process of training and contributes to the effective formation of professional competence of agro-industrial complex workers.

These skills are important for the professional development of future agricultural specialists, which should be reflected in the construction of a holistic theory of the education of praxeological culture among students of agricultural universities.

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CRITICAL THINKING IN HIGHER EDUCATION STUDY PROGRAMS: CASE STUDY

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Abstract. *Social work in its essence has direct relation with critical thinking what is expressed in the Global definition of social work. It is one of the professions which need immediate reaction to unexpected changes in uncertain situations; therefore, it is relevant to discuss critical thinking contribution to the development of social work profession and its presence in social work education. The aim of the article is to discuss importance of critical thinking in higher education and to present data of case study, which reveals how critical thinking is expressed in social work education. Case study was done in country's one university. Descriptions of all social work study programs subjects' descriptions were analysed using quantitative and qualitative content data analysis. The analysis of social work study programs at selected university revealed that critical thinking is more expressed in master level than bachelor level social work study programs and it is more described as domain- specific then domain-general, is mentioned in learning outcomes and assessment and very rarely – study methods. The case study identified the gap between formality and reality. Theoretically critical thinking should be part of social work study programs; however, it is wide possibilities for enhancing critical thinking manifestation in the reality of teaching and learning.*

Keywords: *competences, critical thinking, higher education, social work study programs.*

Introduction

Importance of critical thinking in higher education is emphasized in international and national policy documents (UNESCO, 2009; The European Higher Education Area, 2012; OECD, 2016; World Economic Forum, 2016; Council of the European Union, 2018; Lietuvos Respublikos Seimo nutarimas, 2012) and various research (Elen et al., 2019; Indrašiene et al., 2018; Indrašiene et al., 2019; Indrašiene et al., 2020; Kazlauske, 2020; Penkauskiene et al., 2020). In classical critical thinking theoretical approach, it is described as “a liberating force in education and a powerful resource in one's personal and civic life” (Facione, 1990, p.3).

Critical thinking becomes very important in dealing with complex, uncertain, evolving and urgent situations when rapid changes call for timely reactions which should be addressed by making sustainable decisions. Social work is one of the professions which need immediate reaction to unexpected changes in uncertain

situations; therefore, it is relevant to discuss critical thinking contribution to the development of social work profession and its presence in social work education.

The aim of the article is to discuss importance of critical thinking in higher education and to present data of case study, which reveals how critical thinking is expressed in social work education. Country's one university was chosen for case study. It was conceptualised and designed according to Elen & al. (2019) framework - one of the leading documents about critical thinking in higher education which declares that in order to support the development of critical thinking, it has to be a goal of education and to manifest at three levels: institutional, teaching program and course. The last two levels are presented in the article by discussing qualitative and quantitative data of descriptions of all social work study programs and study subjects at that university.

Critical Thinking in Social Work Higher Education – Theoretical Approach

Emphasis on critical thinking and its expansion in research started from Delphi project when American Philosophical Association commissioned forty-six experts in critical thinking teaching, research, assessment in natural and social sciences, education, and philosophy to participate in the two years project. According to their consensus statement in executive summary, critical thinking is understood „to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based” (Facione, 1990, p. 3). Six cognitive core skills of critical thinking were defined in the document: interpretation, analysis, evaluation, inference, explanation and self-regulation. Later on, this initial consensus evolved, split in various approaches, perspectives, theoretical schools (Indrasiene et al., 2019), but always was defined as essential tool of inquiry.

Since Delphi project plenty of studies about critical thinking in higher education were done, mentioning chronologically few but not all most known: Siegel, 1988; Barnett, 1997; Halpern, 1998; Paul & Elder, 2001; Andrews, 2007; Badcock, Pattison & Harris, 2010; Lim, 2011; Ku, Ho, Hau & Lai, 2014; Liu, Frankel & Roohr, 2014; Davies, 2015; Loes & Pascarella, 2017. Connection of critical thinking and social work education was investigated at less extend but still various research could be named: Plath, English, Connors & Beveridge, 1999; Coleman, Rogers & King, 2002; Gibbons & Gray, 2004; Heron, 2006; Sheppard & Charles, 2014; Mathias 2015; Sharma 2015; Samson 2016; Sheppard, & Charles, 2017; Samson, 2018; Sheppard, Charles, Rees, Wheeler, & Williams, 2018. Investigations at national level (Gudzinskiene, 2006; Rimienė,

2006; Ubartaite-Vingiene, 2007; Tolutiene & Domarkiene, 2010; Penkauskiene, 2016; Indrašienė et al., 2018; Penkauskiene et al, 2020) analysed critical thinking on more general level, paying little attention specifically to the critical thinking in social work education.

Social work in its essence has direct relation with critical thinking what is expressed in the Global definition of social work. In its core mandate it is written that „the development of critical consciousness through reflecting on structural sources of oppression and/or privilege, on the basis of criteria such as race, class, language, religion, gender, disability, culture and sexual orientation, and developing action strategies towards addressing structural and personal barriers are central to emancipatory practice where the goals are the empowerment and liberation of people” (<https://www.ifsw.org/what-is-social-work/global-definition-of-social-work/>). And it is once more emphasized in Principles saying that “constructive confrontation, deconstruction and change may be facilitated through a tuning into, and an understanding of particular cultural values, beliefs and traditions and via critical and reflective dialogue with members of the cultural group *vis-à-vis* broader human rights issues” (<https://www.ifsw.org/what-is-social-work/global-definition-of-social-work/>). It is obvious then that social work education needs to include not only learning professional skills but also core cognitive critical thinking skills using information from different sources and respecting the dignity and diversity of vulnerable people (Samson, 2016). Sheppard & Charles (2017) add that professional social worker could successfully cope with challenging situations only using intellectual endeavors and critical thinking in searching for solutions in a complex and multifaceted environment.

Methodology

Case study was chosen to use in research. Usually case study is described as an empirical inquiry that investigates a contemporary phenomenon within its real time context (Rubin & Babbie, 1993) and is chosen in order to understand and explain specific cases, when case could be described as having clear boundaries (Creswell, 2014). Sampling university for inclusion in the case study these criteria were applied: social work study programs implemented at bachelor and master levels, social work study programs are suggested for full time and part time studies, study programs accredited not earlier than two years, there is open access to a full study program description. At selected university at the moment of the research in 2020, there were four study programs awarding degree in social work: 1 bachelor (full-time and part time) and 3 master (1 full-time and 2 part-time) level (see Table 1).

Table 1 Social Work Study Programs

Acronym	SWB	SWM	SWChRM	SWChYM
Level	Bachelor	Master	Master	Master
Duration in years	4 full/5part time	2 part time	2 part time	1,5 full time
Study language	national	national	national	English
No of subjects	46	18	14	15

Bachelor (SWB) and one master (SWM) level study programs were of generalist social work, two other master level study programs (SWChRM, SWChYM) were specialised and prepared graduates to work with specific vulnerable groups. One master level study program was taught in English, all the rest in national language.

In total there were 93 study subjects in all study programs: 46 in bachelor and 47 in master level study programs. Descriptions of all study subjects constituted the final array of sampling. Search key word „kritin*” was applied for screening all study subjects’ descriptions. Then descriptions were read by researcher for checking if „kritin*” is used to describe critical thinking or another item. Only these study subjects’ descriptions which had connection with critical thinking were left for analysis: 29 in bachelor and 31 in master study programs.

In the next step qualitative and quantitative content analysis were applied for the analysis of study subjects’ descriptions. Quantitative content analysis aims to provide numerically based summary of a chosen message set, it summarizes rather than reports all details concerning a message set (Neuendorf, 2017) while qualitative content analysis allows to understand the meaning behind the data (Maxwell, 2008). In data analysis process, firstly, using quantitative content analysis, share of study subjects with critical thinking was calculated according to study years and semesters, obligatory and elective courses. Secondly, using qualitative content analysis, it was searched in what structural parts of study subject description and how (in what wording) critical thinking is mentioned.

Critical Thinking in Social Work Study Programs’ Descriptions – Findings

Quantitative data analysis of bachelor level study program shows that the biggest share of study subjects with critical thinking is in the 4th study year (70.00%), the lowest – in the 2nd year (46.15%). The 1st and the 3rd years are similar, having 53.33% and 57.14% respectively. Looking more specifically to subjects’ share in semesters, the critical thinking is most often found in the seventh (83.33%), the fifth (62.50%) and the first (54.14%) semesters. It could be assumed that critical thinking in the seventh semester as final semester before writing thesis, and in the first semester which includes more general then

professional study subjects, could be reasonable. However, there is no clear explanation why the fifth semester has so strong emphasis on critical thinking. Further research interviewing program's developers, teachers and students would probably clarify the situation. Another finding is that critical thinking is more expressed in the obligatory (56.52%) than in the elective (37.50 %) more general education courses what leads to the assumption that critical thinking in social work study program manifests more as domain-specific than domain-general what supports ideas of McPeck (1990), Garside (1996), Moore (2011), Tiruneh et al. (2016) who assume that critical thinking better could be learnt in the context of a specific study field.

Qualitative data analysis showed that critical thinking is expressed in learning outcomes, study methods and assessment (Table 2).

Critical thinking is mentioned in assessment (in 15 study subjects) and learning outcomes (in 11 study subjects) more often than in study methods (in 8 study subjects), however, there is difference in describing learning outcomes and assessment or study methods. If learning outcomes encompass more content information, critical thinking in assessment and study methods is described in standard stencil way. Assessment of making critical remarks is the main choice of study subject descriptions' developers. Assessment of the formulation of critical comments and insights, self-critical approach is mentioned episodically. In all except one study subjects where critical thinking is mentioned in study methods - critical thinking stimulating study methods – is used. The exception is one study subject which applies the method of critical analysis of intolerance.

Presentations of learning outcomes provide more understanding about critical thinking. The most prevailing critical thinking competence is evaluation (of the phenomena of reality, scientific and philosophical thought, social discourses, knowledge, theoretical approaches and their strengths and weaknesses, real practical situations, goals and measures of welfare policy) what is close to Ennis (1987), Beyer (1987) definitions which emphasis the evaluation of assumptions, causes and opinions. Then follows analysis (of situations, critical processes', scientific information) which is described in Facione (1990), Halpern (1998), Beyer (1987), Siegel (1988) sense. Reasoning is mentioned in one study subject's description. There are several cases in which critical thinking as such - ability to think critically - is mentioned. In all learning outcomes critical thinking is defined as cognitive skills in its classical understanding (Facione, 1990).

Table 2 Critical Thinking in Bachelor Study Subjects' Descriptions

No.	Description	Type
1.	To develop the ability to critically evaluate the phenomena of reality, scientific and philosophical thought, social discourses, knowledge. The method of critical analysis of intolerance is applied The provision of critical remarks is assessed.	Learning outcomes Study methods Assessment
2.	To evaluate critically social work theoretical approaches, their strengths and weaknesses	Learning outcomes
3.	Ability to reason/to think critically	Learning outcomes
4.	To critically evaluate the theoretical approaches of social work, their strengths and weaknesses, to evaluate the provision of critical remarks	Learning outcomes
5.	Critically and constructively identify, analyse and solve situations of legal and social significance, critically evaluate and correctly solve real practical situations in social work	Learning outcomes
6.	The aim is to develop the student's critical thinking	Learning outcomes
7.	The ability to critically evaluate the goals and measures of welfare policy	Learning outcomes
8.	Development of critical analytical thinking	Learning outcomes
9.	Critical processes' analysis	Learning outcomes
10.	Ability to think critically	Learning outcomes
11.	Ability to analyse critically	Learning outcomes
12.	Critical analysis of scientific information. Methods that stimulate critical thinking are applied.	Learning outcomes Study methods
13.	Critical thinking stimulating study methods are used	Study methods
14.	Critical thinking stimulating study methods are used	Study methods
15.	Critical thinking stimulating study methods are used	Study methods
16.	Critical thinking stimulating study methods are used Making critical remarks	Study methods Assessment
17.	Students are given critical thinking stimulating tasks. The formulation of critical comments, the formulation of critical insights, making critical remarks.	Study methods Assessment
18.	Critical thinking stimulating study methods are used Making critical remarks	Study methods Assessment
19-29	Making critical remarks	Assessment

Differences in critical thinking description in learning outcomes, study methods and assessment partly could be explained by structure and requirements of template. Study subject description usually has a standardised template and there is no much freedom of wording, however, choosing and including critical thinking in assessment and study methods should be reasoned and justified. There are very few study subjects which include combination of study methods and assessment or study methods and learning outcomes and only one which demonstrates cohesion of learning outcomes, study methods and assessment.

Quantitative data of master level study programs is presented in Table 3.

Table 3 Share of Subjects with Critical Thinking (%)

	SWM	SWChRM	SWChYM
1 year	81.82	66.67	75.00
2 year	57.14	40.00	100.00
1 semester	100.00	60.00	100.00
2 semester	50.00	75.00	57.14
3 semester	66.67	50.00	100.00
4 semester	0.00	0.00	Not applicable
Obligatory courses	66.67	Not applicable	75.00
Elective courses	83.33	Not applicable	66.67

Research data shows that bigger share of study subjects with critical thinking is in the 1st study year (SWM – 81.82%, SWChRM – 66.67%) in the study programs taught in national language. Master level social work study program taught in English put bigger emphasis on critical thinking in the 2nd year – all study subjects (100.00%) include critical thinking. Such situation could be explained by different duration of studies as study program in English is more intense and is implemented in 1.5 years. Data shows that study program taught in English by local and foreign teachers for national and international students in itself has a bigger emphasis on critical thinking thus allowing to assume that international dimension is a stronger prerequisite for critical thinking then local national context. The difference also is seen in the obligatory and the elective courses' shares. There are more elective study subjects with critical thinking in study program taught in national language (83.33%), but more obligatory study subjects with critical thinking in study program taught in English language (75.00%).

The same as in bachelor level study program data analysis showed that critical thinking in master level study program is expressed in learning outcomes, study methods and assessment differently. Critical thinking in relation with study methods is mentioned only once in the study subjects of all three programs. Critical thinking in assessment is included much more often in study programs taught in national language and only in rare cases in study program taught in English which contrary to others put a very big emphasis on critical thinking in learning outcomes.

Out of six cognitive skills defined in Delphy report (Facione, 1990) two of them are mentioned in all three programs. The most dominating skill is analysis, at less extend but also in all programs evaluation skill is included. Interpretation, inference, explanation and self-regulation are absent in study subjects' descriptions.

As was said earlier, teachers should follow template, however, examples of qualitative data show that teachers could describe and emphasise critical thinking in specific sentences in outcomes (for ex., critically analyze modern social work theories theories), study methods (for ex., stimulating critical thinking) and assessments (for ex., the provision of critical comments is assessed). In comparison with bachelor level study program in master level study programs critical thinking is more often mentioned in assessment than learning outcomes.

In summary, content analysis of social work study programs at selected university revealed that critical thinking is more expressed in master level than bachelor level social work study programs and it is more described as domain-specific than domain-general. It is mentioned in learning outcomes and assessment and very rarely – study methods. Analysis and evaluation as cognitive critical thinking skills are clearly inscribed in learning outcomes: evaluation dominates in bachelor and analysis in master level study programs. Assessment usually is presented in very general and abstract terms. Inconsistency of the content in study subjects' descriptions allows assuming that including critical thinking in social work study programs is more coincident than conscious endeavour.

Conclusions

Even the importance of critical thinking is emphasised in international and national education policy documents, however its manifestation in study programmes is not so obvious.

The case study identified the gap between formality and reality. At the study program level there is no clear description of critical thinking as integral part of the studies. At the course level there are some descriptions of critical thinking as an important learning outcome, however, more vaguely explaining how they can be realized. Further investigation is needed for the discussion about critical thinking at the institutional level – is there a clear mission statement recognising critical thinking as an important goal.

Theoretically critical thinking should be part of social work study programs; however, there are wide possibilities for enhancing critical thinking manifestation in the reality of teaching and learning.

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PROGRESSIVE WAY OF THINKING ABOUT CONTEMPORARY EDUCATION - PERSONAL DISCUSSIONS

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Abstract. *The article presents personal reflections related to the adaptation of education in terms of current social challenges. Selected teaching postulates will be presented in relation to the current experiences and needs of the education system in the period of pandemic restrictions. The questions included are intended to make the reader reflect and public debate on the innovative changes that await contemporary didactics. In addition, the article will present the elements of own research related to the observation of cognitive activity using QEEG electroencephalographic studies. The analysis of cognitive activity is a key element in the assessment of didactic effectiveness. Due to the wide scope of scientific research, only selected sources of the author's publications will be indicated, in which the topic has been presented in detail.*

Keywords: *education, didactics, QEEG encephalographic research, effectiveness of education, cognitive processes.*

Introduction

The evaluation of each of the scientific sub-disciplines is based on constant changes resulting from current research conducted in its area. An important element is also forecasting its development directions based on past experiences and observations of the present. An example is the current pandemic situation related to the sudden and unpredictable COVID-19 virus spreading all over the world. In terms of educational practice and the functioning of education not only in the country but also around the world, its further direction of reorientation can be predicted. In my work, I will quote a number of statements by the authors to date in numerous scientific publications and I will try to relate them to the current challenges in terms of, for example, the effectiveness of education.

Discussion

The present period is often referred to as the period of development of civilization based on lifelong learning, knowledge-based society, globalization or

computerization. The role of education is therefore to prepare a young person for lifelong learning. Knowledge is not given to us once and for all, it is redesigned with the progress of science and technology, with cultural and social changes, and with the development of the personality of the individual. As Pawłowski (2004) recalls, the personal qualities necessary for active functioning in the information society are: openness to the world, its curiosity, innovation, courage to think and act, social activity, broad knowledge and the ability to apply it, the ability to complete education throughout life, responsibility for words and deeds. In terms of education or broadly understood pedagogy, it is extremely important to precisely define its educational and upbringing challenges. One of the forms of this practice is lifelong learning. However, it will not be focused only on learning to be or learning to act, but also learning to know (Zarzecki, 2008). In addition, it can be observed that the main beneficiary of it is also an increasing group of people aged 40+, which proves that today's realities of professional work force people to continuous training. Thus, there is a need to update previously acquired information, for example through the exchange of daily work tools - this is primarily information technology based tools. The aim of these recommendations is to contribute to the development of high-quality education by supporting and complementing the efforts of Member States to develop initial education and training systems that provide all young people with the means to develop key competences. It is mainly about the ability to communicate, solve problems, logical thinking, leadership, creativity, motivation, the ability to work in a team and the ability to learn (Huk, 2007). Communication skills should be understood not only in relation to interpersonal skills, but most of all the ability to use online tools enabling participation in continuous didactic activity. The problem of transition from stationary activity to distance learning forces a rapid change in communication technology through the use of new forms of communication (Prauzner, 2018). In the field of vocational education, the widespread automation and computerization of production processes causes an increase in the demand for highly qualified employees, but at the same time a fairly large reduction in the number of employees. The results of research in the field of university education to date clearly show that the decisive role of teaching methods in shaping competences, both hard and soft, is overlooked. The methodology of general education indicates that the actual course of the education process - its meaning, value, goals and effectiveness - depends on the appropriate selection and application of education methods. The didactic value of modern online learning tools is gaining immense importance, especially in the current pandemic situation. An extremely important question arises, which takes on practical significance and reflects the real dimension of the role played by the computer in the didactic process - not only at the basic level, but as an operative tool supporting solving complex didactic and scientific problems. If these problems have occurred so far

to such a noticeable degree, then a question arises about the quality of education that excludes learning in a group and only using only the virtual form of acquiring practical and social skills. There is no doubt that the method of remote participation in classes is perfect for transmitting the theoretical content of the material, at work with the use of computer simulations, but the question arises about practical skills, the remote transmission of which will still be based on virtual participation in classes (Prazner, 2016). Remote learning based on human-computer interaction is therefore a perfect example when the student works alone based only on the entrusted teaching materials and a computer. This situation can therefore be identified with the commonly practiced method of distance learning at the polytechnic level. Computer simulations used during classes can be used not only in a stationary laboratory, but also in distance learning with free online access to simulation software. Therefore, the quality of education (effectiveness) must be assessed on the basis of current teaching practice, nowadays more and more carried out online. The QEEG encephalographic research method, the assumption and preliminary results of which will be presented later in the paper, may be useful in assessing this effectiveness.

Methodology

In terms of the effectiveness of education with the use of IT tools, research is carried out at the Laboratory of Experimental Research Biofeedback of the Jan Długosz University in Częstochowa. The research uses the Mitsar EEG 202 measuring apparatus. The QEEG research will provide significant quantitative data enabling the graphical interpretation of the brain activity during the student's work with a computer (working with a simulation program). This is research focused on polytechnic education among students of engineering studies. EEG electroencephalography is a non-invasive method of measuring the activity of the human nervous system. Brain mapping (QEEG - quantitative - that is, "quantitative" EEG), ie the quantitative measurement of electrical impulses on the surface of the human scalp, allows for a more precise observation of any changes in brain activity, taking into account their location. Therefore, we are dealing here with an assessment of the student's involvement in creative work at a computer workstation without the active participation of the teacher. Recording brain activity by measuring extremely low amplitude tensions recorded on the surface of human skin also has its drawbacks. This method enables the registration of changes in small voltage potentials thanks to the installed sensors. With regard to the cognitive process, however, we are interested in more complex mental activities, i.e. processes resulting from the complex cooperation of various areas of the brain. Taking into account the resulting differences in the structure and functioning of the brain in every human being, it can be noticed that the observed

cognitive activity can be registered in different parts of the brain (Sadowski, Chmurzyński, 1989). Therefore, the indicator of the occurrence of a given variable will be not so much the topology of a given wave (related to elementary activities), but its occurrence, course and time of formation (Fig. 1).



*Figure 1 A Simplified Diagram of the Waves Occurring during the Research
Source: Own Study Based on Thompson, 2003 et al.*

The reflection of the work of neurons in the form of recorded impulses can be interpreted by a specific cognitive activity taking place in the brain and by the normal motor activity of the body. The element of observation is the course of selected wave frequencies that indicate the active work of the examined person:

Beta waves with a frequency from 12 to about 36 Hz, with an amplitude below 30 μ V. They illustrate the involvement of the cerebral cortex in cognitive activity. Generating a Beta wave is associated with wakefulness, vigilance, external orientation, and logical thinking, problem solving and attention. This wave will be seen while listening to the spoken text and while solving problems. The wide range of Beta can be broken down into smaller frequency ranges that correspond to a greater degree to the different ways in which the cerebral cortex functions (Thompson, 2012, p. 73). We observe these waves with inspiring energy, accompany action, characterize logical and analytical thinking, and intellectual commitment. A person is then conscious, focused on receiving external stimuli with the help of his five senses: sight, hearing, touch, taste and smell.

Waves (12-15Hz) of the so-called SMR, low Beta, known as the sensory rhythm, arises when receiving information from the five senses. Responsible for relaxing with external attention and problem-solving. Man is relaxed in this state, but ready to observe the world. Too low SMR levels accompany attention deficits.

Beta1 waves (16–20 Hz), the so-called Beta average, are associated with concentration on one issue, with external orientation (sometimes at frequencies above 20Hz). If a person is faced with the need to solve, for example, a mathematical problem, we will notice that first the amplitude of the activity will increase around 17 Hz, and at the same time the amplitude of the Theta and low Alpha (8–10 Hz) will decrease (Thompson, 2012, p.74). This bandwidth correlates with the cognitive activity characteristic of active problem solving (intense mental effort). Mastering a new activity requires more Beta waves than doing it once it is mastered (Thompson, 2012). The higher the frequency, the greater the creative stimulation and abstract thinking, the attention is focused on the problem. We focus on performing tasks, then new ideas for solutions are born. Tasks are performed quickly and easily, the human being works with full attention. In this state, nerve impulses flow at lightning speed. A person can pursue ambitious goals, achieve intellectual heights. It accompanies the instant generation of new ideas. It enables the presentation, quick analysis and organization of information and any other activity where a fresh, fast-acting brain is needed, a key tool for our success.

Waves (18–36Hz), so called high Beta or Beta2 - a stressful wave of anxiety accompanies us during intense mental work. It is associated with increased emotional tension, because its emission accompanies the release of adrenaline responsible for the state of readiness of the body. For the above studies, it was judged rather undesirable.

Gamma waves. Sheer rhythm (38–42Hz). It has been observed that this rhythm is important for the learning process. It can be related to the type of attention that is characteristic of the act of combining different aspects of an object to form a single concept. It is referred to by some clinicians as the consolidation rhythm and is believed to be associated with peak performance state (Thompson, 2012, p. 74). Sheer's rhythm is associated with the high attention and focus in solving problems. This frequency is difficult to measure in EEG studies because of human muscle artifacts (Thompson, 2012). They are also the only frequency group found in any part of the brain. This is why it is assumed that when the brain processes information in different parts simultaneously, it uses waves at a frequency of 40 Hz. The Gamma wave is related to the processing of associative information (Krawczyk, 2018; Wietrzykowski, 2010). Its occurrence has also been noticed in extreme states of emotions and experiences.

Results of Research

QEEG research was conducted on a randomly selected group of students in the 2019/20 academic year. Students were asked to perform an engineering project in the simulation software of their choice. The QEEG test consists in active registration and observation of the brain during work, therefore, due to the quantitative limitations of this method, the research was conducted only on a group of 50 people. An example of such a test while working with simulation software is shown in Figure 2.



Figure 2 QEEG Testing while Working with the Simulation Program [own study]

After the end of the study, the first step was to remove the so-called artifacts, i.e. disturbances of various origins (Fig. 3).

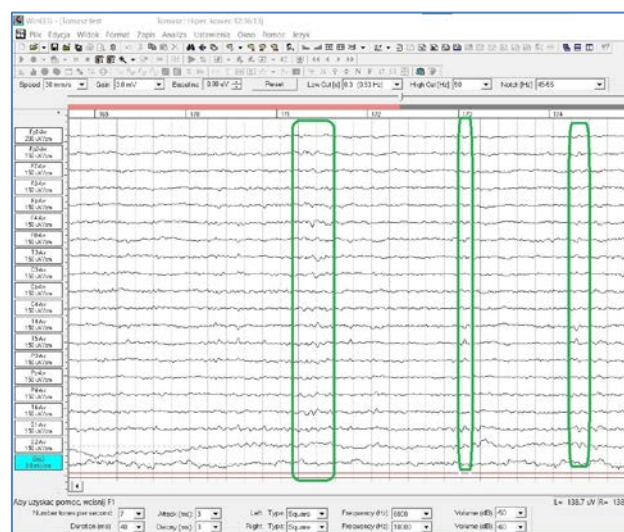


Figure 3 Initial Analysis of Recorded Data, Removal of Artifacts (green) [own elaboration]

The recorded data were cleaned as precisely as possible from disturbances originating both from the power grid and the biological activity of the tested person generating disruptive indications from, for example, body movement, etc. executing a of 50 minutes. At that time, the researcher indexed the various stages of work in the program, while observing on the preview screen at what stage of work the student is. The final results are presented in numerous so-called maps of brain activity, which can be translated into Figure 4.

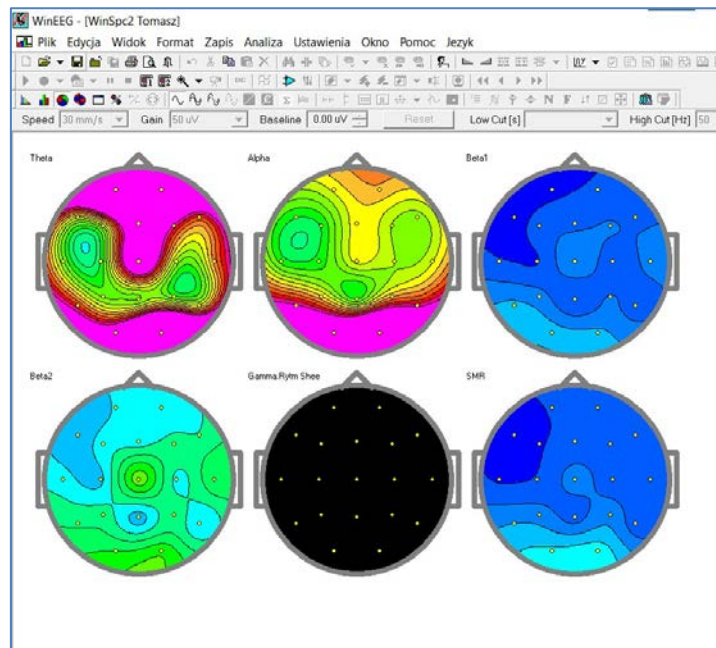


Figure 4 Sample Map of Brain Activity [own elaboration]

In the above case it can be seen that the activity of the brain is limited to the activity of the anterior and posterior parts of its structure, and in addition, the signal amplitude indicates the dominance of Theta and Alpha waves. So, to simplify, we deal with the lack of typical didactic activity, the brain in this state is only absorbed in abstract thinking and observation. These are the frequencies accompanying a person, e.g. during meditation, dreams, free observation of an image. Thoughts are inconsistent, logical connections disappear. Nevertheless, such a moment occurred in practically each of the respondents, especially at the beginning of work. It seems right, because in the first phase of work, a person is focused only on observing the workplace, observing the surroundings and then the image on the computer screen. Only at a later stage of the research, research activity was noticed in more than 67% of the respondents, observed on the basis of an increase in the amplitude of the time courses for the Beta 2 and SMR frequencies. At the same time, at the same time in over 50%, significant activity of Beta1 waves was noticed, which may indicate a stressful situation related to

the development of a mathematical model in the program. Unfortunately, this frequency very often occurs in people who have difficulties in correctly assessing their work, it occurs as a frequency that has a rather negative effect on the stabilization of the work of the mind, but it cannot be completely avoided. Moreover, in the mentioned case the Gamma frequency is practically imperceptible, unfortunately it is very often difficult to register due to its nature of the course, therefore its registration has been limited by software. Then, the data was ordered and additionally supplemented with the description resulting from the observations. Information sheets of people who participated in the research were analyzed, in which there questions were related to illnesses, injuries and medications taken. Obviously, the results of the research provided much more information, but it is impossible to present them in such a limited scope of publications, which is why I refer the reader to a number of other publications and scientific monographs issued by the author, indicated in the bibliography of the work.

Concluding Remarks

The studies conducted so far indicate that the presented EEG method, or rather QEEG, is perfect for assessing human activity under given working conditions (Prauzner, 2020). Numerous studies were conducted during the work of engineering students in the implementation of technical projects with the use of deterministic simulation programs (Ptak, Prauzner et al., 2012-20). In addition, selected factors accompanying the tests that could have a significant impact on the reliability of measurements with the Mitsar apparatus were determined (Prauzner, 2020). As research shows, thanks to the use of this method of observation, it can be noticed that cognitive activity depends not only on interpersonal features influencing the interest in the subject, but it shows that the composition of software use is extremely important. Elements such as legibility and understanding of concepts representing specific program functions, used iconographic signs, their arrangement and the logic of representation for the user are extremely important in the efficient use of the software. Of course, there are more of these elements, but the observation of brain activity at each stage of the work indicates that the user shows greater cognitive activity, and sometimes on the contrary (Prauzner, 2015-19). The presented research method is an alternative method to commonly conducted pedagogical research based on the evaluation of didactic activity, through a statistical analysis of the student's grades. However, from the point of view of psychology, we know perfectly well that each person has different interpersonal predispositions to specific activities and chooses the method of learning individually. This is due to the different structure of our brain, which for us is still an area that has only been discovered scientifically. The

concept of individuality in science, a personality directing the pace of education, results from reasons that are often unintended by us. The current education system imposes a certain standardization of education, which, in my opinion, is not able to correctly assess the effects of a student's work. In history, you can find examples when now respected and capable people were critically assessed by the education system of that time. Therefore, I hope that the introduction of the EEG method in the field of pedagogical research may be a constructive element in the newly developing subdiscipline of pedagogy and neurodidactics.

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PSYCHOLOGICAL ANALYSIS OF PARADIGMS OF DEVELOPMENT OF MODERN HIGHER EDUCATION

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Abstract. *The article presents a theoretical and methodological analysis of modern educational paradigms and presents axiological vectors of higher education development. The authors identify four basic educational paradigms: cognitive informational, personal (humanistic), competence based and cultural (humanitarian). It has been found that, unlike instrument-oriented learning, which provides the translation, reproduction and assimilation of knowledge, skills, technologies (cognitive informational and competence paradigms) and therefore is secondary to the processes of personality development, education should firstly be focused on development of a holistic personality, ensuring its nature and uniqueness (personal and cultural paradigms). It has been proven that at the theoretical level there has been a drastic narrowing of the semantic field of scientific and pedagogical reflection: the focus is on the production of the amount of knowledge, programmed social behaviour, technologies of activity of the future specialists. It has been shown that higher education institutions are more and more inclined to provide pragmatic education, and training professionals-functionaries. It is determined that the reform of modern education should be based on the idea of integrity, which actualises the problem of careful reflexive and methodological support of the modern higher education system and the development of specific humanitarian educational technologies.*

Keywords: *Education, educational paradigm, cognitive informational paradigm, personal paradigm, competence paradigm, cultural paradigm.*

Introduction

The search for new approaches to enhance the compliance of higher education with the requirements of the twenty-first century has become a leading feature of the current stage of its development. The importance of research in this

sector is determined by the high social importance and perspective of national higher education development in the context of Ukraine's accession to the European educational space.

That is why the problem of clarifying and concretising the educational paradigm of higher education, identifying the main characteristics of the modern educational process through consideration of education in a broad socio-cultural context is quite acute today.

The development of education is based on broad philosophical ideas and is filled with philosophical content. The philosophy produces the creation of new educational concepts, setting the direction of scientific search, acting as a methodological basis for the development of new educational theories.

The formation of a new conception of education in the early 21st century is associated with the emergence of a new philosophical picture of the world based on recognition of its openness and self-organization. The philosophy of education examines development of a person in a cultural environment and how educational system can (and should) contribute to this process.

Therefore, the **aim** of the study is to analyze existing educational paradigms in a philosophical context, which will help to identify the main axiological vectors of higher education development.

Research methodology. The authors have done an interdisciplinary analysis and thorough theoretical and methodological reflection of modern scientific discourse of paradigms in modern education development, its essential values, as well as its systematic consideration in the context of modern paradigmatic changes, based on the review of psychological and psychological literature.

Literature Review

Hereinafter the educational paradigm will be interpreted as a set of established meaningful characteristics that determine the essential features of educational activity models and interaction between participants of the educational process.

The problem of finding a new educational paradigm is particularly relevant within the framework of the philosophy of education. It is worth noting that in philosophical literature the traditional understanding of educational process has been criticised as a kind of “social inheritance”, a process of ascending on the “civilisation ladder”, focused on “production” of people with predetermined qualities. Psychologists and educators also unanimously agree on the fact that educational process is often described as a process of technical production according to officially recognised and pre-known criteria and models.

In modern philosophy the orientation on overcoming the Scientian position to stop the negative processes in education is clearly outlined. Philosophers are

concerned about rapid devaluation of the apex values. Thus, analysing value orientations of modern education, philosophers emphasise the ability to awaken the “human” in a person (their spirituality, desire for self-knowledge, self-development) as the most important criterion for its effectiveness (Gusinsky, 2000; Kagan, 2007).

While studying educational paradigms, E. Gusinsky and Y. Turchaninova came to the conclusion that the diverse educational values can be divided into two main groups: (1) the value of preserving the existing order of things and (2) the value of its transformation (Gusinsky, 2000).

Research Results

Interdisciplinary analysis and profound theoretical and methodological reflection resulted in stating that the understanding of the concept of “education” is being narrowed, which is a serious obstacle to the implementation of the essential values of education. This led to a systematic examination of higher education in the context of contemporary paradigm changes and a profound immersion into the analysis of philosophical, sociological, cultural, psychological and pedagogical sources.

Thus, in general, it can be stated that the discussion, which has been developed around the values of modern education reflects the clash of four educational paradigms: cognitive informational, personal, cultural and competence related. Each of these paradigms reproduces only part of the reality adequately and focuses its attention on what can be considered the result of education.

The cognitive informational (cognitive, traditional) paradigm reflects the necessity of transferring the maximum amount of all knowledge and skills accumulated by the mankind to a personality. It interprets orientation of the educational process in a certain way, directing teachers to subject programs, fixed results, etc. Therefore the desires, personality needs, as a rule, are not taken into account. This paradigm is based on a powerful tradition dating back to Aristotle. Psychologists have already evaluated the cognitive informational paradigm of education as maladaptive for the individual.

It is generally known that the traditional model of education is too static, monologue based, and oriented towards the disciplinary distinction of knowledge in the form of relatively autonomous, closed systems of information retention, which should be “embedded” into students’ heads. This model is largely closed and virtually incapable of development, and therefore becomes increasingly inadequate to the modern realities of the global change process. The consequence of this is not only the fragmentation of reality perception, but also its deformation, which in the conditions of post-industrial information society does not allow

people to respond adequately to the ecological crisis, leads to the devaluation of moral norms and values.

The personal paradigm is concentrated on the emotional and social development of the person. The essence of a personally oriented paradigm of education lies in considering a person to be a complex self-organised system, in recognising the uniqueness, self-worth of each human and the vector of their development; in shifting of educational goals from the informatisation of a personality to creating conditions for their self-determination and self-development; in development of a subjective position of a teacher in the educational process, which should provide personal meaning to learners' activities, create space for manifestation and development of their individuality, and give freedom of choice. Personality oriented technologies are of particular importance because they emphasise the value of an individual, produce a positive attitude towards people and oneself, indicate the need for partnership in relationships, imply the development of spiritual qualities of an individual, respect and care for each person, empathy, ability to co-exist, naturalness and openness of relationships as a significant indicator of personal development (Rodgers & Freberg, 2002).

Thus, the humanisation of education, on the one hand, is a condition for harmonious development of an individual, the enrichment of creative potential, the growth of essential forces and abilities, and on the other hand – a process aimed at development of an individual as a subject of creative activity. At the same time, the humanisation of education is an important characteristic of lifestyle of educators and students, which involves establishing genuine human relationships between them in the learning process.

At the same time scientists are looking for and developing cultural models of education (Asmolov, 1996; Bondarevskaya, Ivanova, & Osmolovskaya, 2005). The main function of these models is the humanitarian one, which is to preserve and restore human ecology, physical and spiritual health, the meaning of life, personal freedom and morality. Within the cultural paradigm a teacher has to be focused on the main task – development of a child's personality. This paradigm dictates that achievement of completeness and integrity of the worldview goes far beyond pragmatic cognitive pedagogy. Its main task is In upbringing of a spiritual person.

E. Bondarevskaya notes: "Education must be filled with cultural meanings. The cultural meanings of education are supposed to be human" (Bondarevskaya, Ivanova, & Osmolovskaya, 2005, p. 116). Thus, she puts meaning-making, holistic understanding, and personal knowledge on the first position in education. Education is intended to create a space for cultural development, a field for interaction of ideal (cultural) and real sensory forms. The main and the most essential tasks of modern education lie in helping a person to make a dialogue

with other cultures, people, in comprehending and feeling their values, in listening to own inner voice, in realising oneself, the meaning of one's own existence and in definition of one's own place in culture, and, therefore, in life.

The competence paradigm grows from the cognitive informational one. However, unlike the last one, there is an awareness of the impossibility and meaninglessness of the infinite dissemination of information passed on to future generations. The expected result of the educational process is not presented by a system of knowledge and skills, but by a set of key, declared competencies without which the activity of a modern person in the intellectual, social, political, communicational, informational and other spheres becomes impossible. The competence paradigm is aimed at enhancing the practical orientation of education; training a well skilled and mobile person, who owns not a set of facts, but methods and technologies needed for obtaining them.

We believe education must reproduce a coherent entity of culture and activity, a person in its existential and ontological fullness. Unlike instrument-oriented learning, which provides translation, reproduction and assimilation of knowledge, skills, technologies (cognitive informational and competence based paradigms) and therefore is secondary to the processes of personality development, education must firstly be focused on the development of a coherent person, ensure their identity and uniqueness (personal and cultural paradigm). If higher education excludes the spiritual and moral essence of a person and is focused only on transferring of the maximum amount of knowledge and assimilating of technologies, it does not ensure the professional success of a specialist and inevitably leads to a socio-cultural and personal identity crisis.

In our view, within the system of cognitive informational and competence based paradigms, a person is perceived not in his/her identity and integrity, but through the filter of functionally defined parameters – success, discipline, behaviour, etc. Therefore, the cognitive informational component of education must be instrumental in its core value – cultural, value-meaning development of an individual.

While analysing the crisis state of modern education, M. Kagan notes that it primarily occurs because of neglecting of holistic and systemic structure of the human psyche, which existence and functioning in the process of education is ensured by implementation of five major activities:

- 1) “cognitive, the aim of which is to obtain the information about the object by the subject; the highest form of it is science in all its modifications, from mathematics to psychology;
- 2) value-oriented, the aim of which is the object’s awareness of the subject’s value; the highest form of it is ideology in all its various modifications, from religious to aesthetic;

- 3) transformative, the aim of which is to change the object by the subject; the highest form of it is material, practical and spiritual-ideal activity resulting in creation of a new cultural object from natural, social, human given material...;
- 4) communication as an interpersonal interaction, the aim of which is to achieve the unity of subject and object while maintaining the subjective uniqueness of each (it can be an interpersonal or an intergroup dialogue, when a social group, for example a creative team or a nation, acts as an “aggregate entity”, and an intrapersonal dialogue, when personalities are polysubjective and their consciousness serve as an arena for internal dialogue;
- 5) artistic perception of the world, in which all four homogeneous activities mentioned above are syncretically merged in mythological consciousness and in the perception of a child, and later syncretically mutually identified in art” (Kagan, 2007, 228).

Current education does not ensure functioning of all five activities, focusing only on development of cognitive and analytical abilities of an individual. First of all, this is ensured by the implementation of cognitive informational and competence paradigms. Spiritual life is reduced to the ability to learn and develop useful rational functions.

According to E. Fromm, any educational paradigm can be correlated with one of the modes of human existence – “to be” or “to have”. Modus “to have” involves the change of external to human circumstances and alienated activity aimed at changing these circumstances for the sake of mastering things, the unrestrained consumption of them, and power over them. Possession is also the perception of one’s inner world as a subject matter. In education, this is reproduced as an orientation towards “having more knowledge”, because those enriched with knowledge are more likely to gain material things. Consumption of knowledge, according to E. Fromm, in fact, turns out to be an empty occupation, since there is no internal activity, which, does not necessarily have to be expressed externally (Fromm, 2017, 118).

Modus “to be” implies a person’s self-change, internal, spiritual-personal self-growth, and inalienable activity, aimed at being open and involved in the world. In education, this is reproduced as a focus on “knowing more deeply”; on comprehending holistic world and oneself in this world based on cognitive interest; on exploring phenomena through giving them a personal meaning. Such “meaningful teaching”, according to K. Rogers, is not focused on the external result, but rather on a sense of health and creative harmony of the inner and outer harmony of a person with oneself, with other people and with the world in general (Rodgers & Freberg, 2002).

Thus, the dialectic of education is expressed not in some completed knowledge base of an individual, but in openness to the development and self-creation. The inherent openness, and orientation towards someone or something leads an individual to finding the meaning of own existence. The principle of openness is one of the basic principles of cognition. A well-known Ukrainian philosopher and psychologist V. Romenets states: “The openness of a person lies not in the fact that he/she can be opened as a turtle, but in the fact that he/she opens her/himself, spreading to the entire world that is accessible to him/her. This world comes into him/her as a certainty. He/she opened it, not from the outside, but from the inside” (Romenets, 2006, 23). Open knowledge is theoretical, empirical, sensual, intuitive, and rational, based on an array of authoritative data.

Philosophers point out that today there is a growing conflict between the utilitarian technocratic view of education on the one hand, and the need for a democratic society to provide opportunities for individual human development on the other; between the recognised need for personal growth in the education system and the widespread need for knowledge transfer; between the demand for learning freedom and the rigid framework of the traditional system.

The challenge the educational sphere faces in the 21st century is the understanding of the synergetic theory and related key thesis about the open nature of any social system, in particular, the educational one. Therefore, unlike all previous “scientific paintings”, in the synergistic picture of the world, the starting point is variability, processivity, the formation of a new whole – that is, everything that characterises the processes of self-organisation that take place in nonlinear environments. Self-organisation reveals the essence of the process more precisely and more fully, since the reaction to external influences depends not only on the magnitude of this influence, but also on the inherent properties of the system (Kagan, 2007).

Taking into account the synergistic principle of self-organisation of open systems expands the possibilities of analysis of education modeling, creates the most optimal conditions for its systematic understanding. Indeed, today, like never before, there is a need for a holistic view on education, with an emphasis on the dynamics and mechanisms of self-organisation of the subjects of the educational space, the unity of education and upbringing, the education of a holistic creative personality. At the same time such universal human values as freedom and creativity are the most important values of modern education. Freedom, as an opportunity to act in the absence of external direction, and creativity, as a human activity to create new qualities, knowledge, meanings, become the basic axiological dimensions of education.

Thus, in the context of the synergistic paradigm methodology, the center of research and modeling of educational systems shifts towards internal mechanisms of development. In addition, the essence of the individual, who is included in the

holistic system of education is examined through the lens of synergistic vision. In fact, synergetics illuminates the spontaneity of self-unfolding of the individual's inner content.

It is important to emphasize that, from a synergistic point of view, meaning and context cannot, in principle, be submitted to the student in a pre-made form, given from the outside, but requiring internal self-organisation. Therefore, it can be argued that the synergistic foundations of education require creation of a new, open system of education, where a person reveals themselves. Synergetics poses the need for development of a new paradigm of education, which allows to move from the process of giving students a certain minimum of knowledge, to master the educational standard, to their immersion in the problem of human relations with nature and society.

Therefore, if we are to consider the phenomenon of education in a broad socio-cultural context, then education is always and in each case means the possibility to reveal own essential forces of an individual. This possibility is realised by an individual in search of the sense of being. Thus, there is another fundamentally important point in the analysis of educational intents. "To be a man, – writes W. Frankl, – means to go beyond oneself ... the essence of human existence lies in his/her self-transcendence" (Frankl, 2020, 51).

Indeed, in the context of the transition to the information society, when "information becomes more and less meaningful" (Baudrillard, 2004, 121), the task of education is to create the conditions for the realisation of a person's desire for getting a meaning, its identification and comprehension. In this case, it is not just about adapting to existing social experience, reproduction of knowledge, but about developing one's own existential position in the process of education (Baudrillard, 2004).

A. Asmolov draws attention to the fact that in general, today there are two basic paradigms in education – "informational, command, and semantic, creative. When we choose one of these paradigms we choose the future, the culture we want to live in – totalitarian or humanistic, the culture of Utility or the culture of Dignity" (Asmolov, 1996, 676). In his opinion, education, which is pragmatically focused on a model of a specialist, forms a depleted one-sided personality; the information overload, which is inherent in the scientific and technical age, brings the educational system to a standstill of "substantive self-centeredness". The only way out is to "embark on a different path, the path of a meaningful and creative paradigm in education" (Asmolov, 1996, 677). Therefore, to find the sense of life is possible in education, "which creates a meaningful picture of the world and helps make life decisions in uncertain situations" (Asmolov, 1996, 678).

The relevance of the mentioned above theses is multiplied by the socio-cultural crisis of our society, the disintegration of the usual value system, the changing of stereotypes in a professional career building and professional

development. Analysing the process of higher vocational education, we can formulate the following contradictions:

- between the declared in pedagogical practice orientation on the student's personality development, and the dominance of the classical educational paradigm in teachers' training, aimed at subject preparation, assimilation of constantly increasing amount of knowledge and skills;
- between the need to create conditions for the development of students as future professionals and the dominant focus on them as objects of pedagogical influence;
- between the need for spiritual and value-emotional development of a future specialist's personality and the lack of psychological and pedagogical conditions and mechanisms that provide the solution to this problem in the process of studying in a higher educational institution (Radchuk, 2014).

The real process of higher vocational education indicates a serious deformation of the professional formation of a personality of a future specialist, which leads to deformation of human consciousness – the alienation of an individual from own personality, loss of professional sense, future prospects, helplessness and devastation. Researchers focus on the disturbing tendency in the development of a humanitarian aspect of educational content, which is reflected in verbalisation and rationalisation of education. Information overload blocks affective-emotional sphere of an individual, prevents adequate, holistic perception of reality, and formation of an emotional contact with it. Individuals' emotional world, their creative potential, productive thinking is actually superseded by the dominance of information.

The problem of higher vocational education of the humanitarian professionals is becoming extremely urgent as there are serious requirements for their moral qualities and values development. Higher pedagogical education, according to M. Kagan, focuses primarily on the "training of a "subject teacher", has more or less effective teaching methods to teach the basics of a subject, but not a so-called "teacher-creator", who shapes the Person as a whole and unique Individual who responds to the demands of a new historical type of 21st century's culture" (Kagan, 2007). Having analysed the process of future psychologists' training, G. Breslav raises the logical question of how one can be attached "to the values of "non-directional psychology" in a rather rigid training model, which nevertheless is closer to the ideology of "preparation" rather than "education" (Breslav, 1997, 252).

Therefore, there is a need to overcome one-sided technocratic tendencies in professional training of future specialists, which are manifested in insufficient consideration of their personal development (Radchuk, 2017).

Conclusions

On the basis of theoretical and methodological analysis, there have been four basic educational paradigms identified: cognitive-informational (traditional, cognitive), personal (humanistic), competent and cultural (humanitarian). It is found that, unlike instrument-oriented learning, which provides translation, reproduction and assimilation of knowledge, skills, technologies (cognitive-information and competence paradigms) and therefore is secondary to the processes of personality development, education should first and foremost be focused on the development of a holistic personality (personal and cultural paradigms).

It can be stated that at the theoretical level there has been a drastic narrowing of the semantic field of scientific and pedagogical reflection: the focus is drawn to production of the sum of knowledge, programmed social behaviour, technologies of a future specialist's activity. Insufficient understanding of the essential aspects of educational process leads to an inclination towards formal, technological aspects, and to overly enthusiastic attitude in calculating points and credits.

In such conditions, the education in its humanitarian sense suffers, and the quality of education is often reduced to the level of mastering professional knowledge and skills. Higher education institutions are increasingly inclined to pragmatic training of professional functionaries. However, the main goals of modern higher education should lie in the cultural orientations which allow substituting knowledge approach by a meaningful one, where both the teacher and the student are active participants of educational activity.

The reform of education should be based on the idea of the integrity of education, which actualises the problem of careful reflexive and methodological support of the modern higher education system and the development of specific humanitarian educational technologies.

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ONLINE EDUCATION: LEARNING OUTCOME, SUCCESS & CHALLENGES

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***Abstract.** This paper's intents are to render the learning outcome, success and challenges that emerge in an online teaching and learning environment in comparison to the traditional face to face classroom environment. First of all, we will examine how the students acclimate to the new online digital learning atmosphere after the traditional face to face learning environment; what challenges and barriers the students encounter in a synchronous and in an asynchronous online learning environments? Second of all, we will focus on how professors adapt to the new digital online teaching styles and examine the new essential teaching innovations that arise in order to achieve and go beyond the expected learning outcomes; how to remit to the students' challenges and retain the positive and engaging learning environment? In addition, our aims are to examine new pedagogical innovations that naturally emerge while responding to the students' travails and to smoothly navigate them to achieve the expected learning outcomes. Furthermore, our paper's intents are to portray how an online learning environment can attain more effective learning outcomes in comparison to the traditional face to face classroom environment; how to think beyond our horizons and to enhance the learning outcomes in a digital learning atmosphere while addressing the students' challenges? Moreover, we will emphasize how the immediate graded feedback and students' feedback serve as pertinent tools in achieving the learning outcome and inspires students to learn in an online atmosphere.*

***Keywords:** online education, learning outcomes, pedagogical innovations, acclimation, time management, students' feedback, immediate feedback, synchronous, asynchronous, flexibility.*

Introduction

Online Education is the teaching and learning process that occurs outside the classroom via computers and related technology. Distance learning commenced in the middle of the 19th century in the U.S. while the U.S. Postal Service was established. In 1873 the practice of distance learning transitioned to the development of "Society to Encourage Home Studies" in Boston, Massachusetts by Ana Eliot Ticknor. In 1911, using the Australian Postal System, the Department of Correspondence Studies at the University of Queensland in Australia was established. In 1946, the University of South Africa became the

champion and innovator of distance learning. Distance learning continued with by use of television and the radio and then distance learning shifted to online education in the 1990's and widened its horizons parallel with the expansion of the digital era. In 1989 the University of Phoenix was the first university that opened its fully online bachelors and masters programs.

In Russia on the other hand, the practice of distance education commenced in 1917 after the Russian Revolution. This transitioned during the Soviet Union as a system of education at different levels based on the remote one on one individual consultations between a student and teacher/professor. In the 1960's, 11 associated universities were established with various such departments and programs. Students were first required to attend the introductory lectures and to get acquainted with the course material and requirements. After the introductory lecture the student continued to study independently in the distance education style by communicating one on one with the professor. At the end of the semester the student was required to return to the university for the exam session (Maslakova, 2015). This system partially resembled the current hybrid system today in the American educational system during the corona pandemic.

The distance education expanded in the Russian Federation after signing the memorandum with UNESCO. Afterwards this lead to the opening of MTI VTU which received accreditation in 2000 and continues to develop very actively. This institute offered numerous distance learning programs and issued diplomas. In 2005 distance learning expanded within the universities in the Russian Federation and in the training of personnel of large corporations such as the Russian Railways, SeverStal, and the Norilsk Nickel. In 2005, the Russian distance education programs were recognized on the international level by the International Association ADL (Advanced Distributed Learning).

The aims of our paper are to share successful practical experiences in teaching online courses in an asynchronous and synchronous environments in achieving the best learning outcomes while encountering several challenges such as technical challenges, lack of preparation, lack of motivation, lack of time management skills and self-discipline (Sundukova & Vanykina, 2020). How do we handle these challenges to achieve our learning outcome goals? Can we exceed the expected learning outcome in an online atmosphere in contrast to the traditional face to face learning environment? What additional challenges and barriers can emerge and how do we deal with them (Saprykina & Volokhovich, 2020)?

Methodology

Our methodology consists of thoroughly analyzing the data and feedback from 230 students who took asynchronous and synchronous online courses taught

at the Rochester Institute of Technology and 110 students who took synchronous and synchronous online courses taught at Pskov State University during the spring, summer and fall 2020 semesters. Additional survey was conducted among 6 thousand students from 153 universities within the Russian Federation. We will compare the students' statistics and feedback in Table 1 and compare it with the national statistics of the Russian universities in Table 2. For instance, more than **50%** of the students in Russian universities appreciate online education as it offers them the flexibility to plan their schedule and study independently and more efficiently. Furthermore, students from universities in Moscow and Moscow Region do not have to spend close to 4 hours a day on commute and save money on rent in order to live close to the university. On the other hand, **58.1%** of the students in Russian universities blamed poor technical communication and low functionality of applications as one of the serious problems with online education. In addition, **70%** of the students in Russian universities in online education complained about the lack of face to face communication with fellow classmates and professors. The following chart summarizes the survey conducted by the RAEX rating agency with 6 thousand students from 153 Russian universities:

*Table 1 RAEX Survey Conducted from 153 Russian Universities
(Distance education, 2020 (2020))*

The available distance (online) learning opportunities (selection of several options)				
	Universities in the top-20 RAEX ratings	Regional Universities	Universities in Moscow	Russian Universities on average
Individual work with teachers/professors using video chats.	23%	25,9%	32,2%	27,4%
Viewing recorded video lectures.	36,1%	33,5%	67,6%	40,4%
Monitoring progress in your personal settings/account	58,3%	58,9%	56,7%	56,4%
Viewing “live” lectures in online format (with the ability to ask questions).	85%	40,2%	80,8%	66,1%
Attending online group video seminars	87,5%	40,3%	82,4%	69%
Performing interactive tasks (tests, surveys, etc.)	70,2%	79,4%	64%	72,3%
Receiving assignments in your personal settings/account.	73,1%	71,3%	64,2%	75,3%
Correspondence with teachers/professors and exchange of documents.	90,7%	88,4%	88,7%	90,2%

The source: Distance education, 2020 (2020). Moscow: Raex Analytics LLC, Raex LLC. Retrieved from https://raex-a.ru/researches/distance_education/2020

Students' learning styles change from generation to generation and most important of all change analogous to the technological innovations such as calculators, computers, tablets, cellular phones, internet sources, etc. Prior to the corona pandemic, in the U.S. in 2020 Larry Bernstein's study (Bernstein, 2019) discovered that **48 %** of students use their desktop computer in the classroom, **42 %** of the students use their smartphones, **33 %** use the interactive whiteboards and **20 %** use tablets. Furthermore, Larry Bernstein (Bernstein, 2019) claims that the technological impact of education escalates outside the classroom. His survey concludes that 64 % of students use a smartphone to do their homework assignment, 65 % of students do their homework on some digital notebook such as ipad, google pad, etc. (this is close to **85 %** in the U.S.). Moreover, Larry Bernstein claims that both the teachers and students rely on technology to enhance the quality of education by developing the autonomy in the learning process by selecting the technology that works best for them such as smartphone, laptops alone side with paper and pencil. These facts have perpetually guided students and professors to hands-on teaching and learning more outside the classroom and most important of all, to the online teaching and learning (Bernstein, 2019).

Next we will share about successful practices that lead to students' supportive feedback, teaching evaluations and the achievement of learning outcome. Most important of all, we will emphasize how immediate graded feedback and flexibility were the primary techniques that help achieve the learning outcome, retain a positive learning atmosphere and inspires students to learn in an online atmosphere.

More Flexibility in an Online Learning Environment

Online education and degrees offer alternatives and more flexibility to students who work full time and are raising families. The primary difference between online and traditional face to face learning is the fact that online education liberates the students from the usual trappings of on-campus degree programs that require commuting to the university, working out their schedule around their courses and being physically present on campus for their coursework. A high quality degree earned in an online environment should not fundamentally differ from a traditional on-campus degree. The only significant difference should be the way the courses are taught (Finch & Jacobs, 2012; Nikulicheva, 2020).

According to Northeastern University's Online Learning Experience, in addition to **flexibility** and self-pace learning that online education offers to students there are six additional benefits to online education. Students who take online courses enhance their **time management** skills as students design their own schedule and pace and hence gain efficiency in being their own boss in order to succeed. **Self-motivation & Emotional Intelligence** is another skill that

students gain while studying in an online atmosphere by adapting to changing environments, handling multitasking responsibilities and setting priorities (Saprykina & Volokhovich, 2020). **Improved virtual communication and collaboration** is another vital feature that renders the online education environment as the majority of communication is done online by e-mail and through use of various platforms. Students who take online courses gain **broader and global perspectives** by interacting with students from other countries as several foreign students participate in online courses. **Critical thinking** of course plays a vital role in all learning environments. Furthermore, the online learning environment enhances the students' refined critical thinking skills as students are expected to be more independent and focus on deeper details in comparison to the traditional face to face learning atmosphere. Every student taking an online course increases his/her learning curve with **new technical skills** by learning to apply new platforms such as MyCourses, skype, facebook, google meets, and using software such as latex, desmos, etc.

While the practice of online education is expanding rapidly especially during the corona crisis, on the contrary, online education just like any other ideology and practice has its limitations and drawbacks. First of all, time management and self-discipline are vital skills in order to succeed in an online learning atmosphere (Saprykina & Volokhovich, 2020). Second of all, online education has very diminished and limited face to face interaction or none at all especially in asynchronous-style courses. Can every subject be taught online? For instance, we can certainly learn the traffic rules online but it is a good idea to learn to drive a car remotely without actually physically operating the vehicle? Online education strictly relies on computer technology and the internet. Is it safe to assume that all the students have the necessary computer literacy and technology knowledge and skills to succeed in an online course?

The motivations for applying technology in teaching and learning in an online environment have been present for quite some time as more students participate in conferences, participate in co-ops and internships while taking courses (Finch & Jacobs, 2012). In order to support the students' aims and outcomes, it is pertinent to address the following questions. How do we deliver the course content in an online atmosphere with the use of related technology? How do we make the material and the course accessible to all students? What differences emerge in comparison to the traditional face to face classroom atmosphere and what necessary adjustments must be implemented in order to achieve the learning outcomes (Sherry, 1995)?

Recently during the corona virus pandemic, teaching online was not an option for professors and online learning was not an option for the students either. This was the first such unexpected change of atmosphere and acclimation for many students and to numerous professors as it occurred in the middle of the

spring 2020 academic semester. How would students and professors transition smoothly and efficiently under such challenging circumstances (Sundukova & Vanykina, 2020)? The first criteria that was recommended to all the faculty members from the administration was to be as flexible as possible with students. This then led to the specifics of flexibility that go past the rigid standards with deadlines of homework assignments and projects that traditionally exist in the face to face courses. The second criteria that was recommended was the use of accessible technology to all the students, which includes hardware and software (Nikulicheva, 2020; Saprykina & Volokhovich, 2020; Sundukova & Vanykina, 2020).

Each professor or faculty member interprets flexibility differently. For instance, in the traditional face to face course Michael Radin allows exactly one re-submission of each homework assignment within one week after the students receive their graded assignment. On the other hand, in his online courses Michael allows several re-submissions for each assignment and allows his students to hand re-submissions of assignments by the end of the semester. This new trial certainly improved the students' homework grades and especially their test grades as they gained additional hands-on practice with the homework problems to absorb the material at a deeper level in comparison to the traditional face to face class. Second of all, in the traditional face to face class, Michael would grant his students extensions on the submissions of their homework assignments to 4–5 days after the deadline without any penalty points for late submissions; in the online environment, Michael allows his students hand in their assignments without any penalty points by the end of the semester as long as the students inform him that they cannot hand in their assignment by the posted deadline. This reduced the students' stress level and gave them opportunities to grasp the material at their own pace. Students also felt more comfortable asking questions in comparison to asking questions in the traditional face to face classroom atmosphere.

Acclimation is a serious factor for both students and the professors (Saprykina & Volokhovich, 2020). The instant challenges that emerge are how to teach in a digital atmosphere without using the whiteboard and markers and how to grade homework assignments, projects & tests without paper and pens? These are especially challenging tasks for novices in online teaching and learning. What can be done analogous to the traditional face to face classroom atmosphere and what new pedagogical innovations will be necessary to meet the expected learning outcome goal and prevent failure (Neuhauser, 2010)? In fact, Figure 1 below summarizes the common teaching strategies that have worked successfully in the traditional face to face courses and recently in online courses:

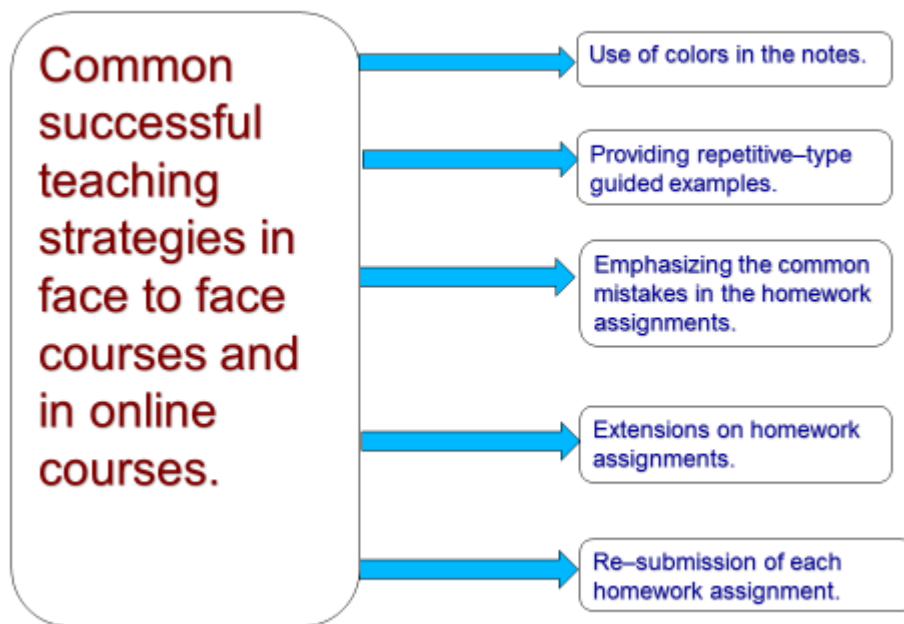


Figure 1 Teaching Strategies in Face to Face and in Online Courses

In order to address these questions more thoroughly, we will compare the similarities and differences in teaching and learning styles in the synchronous-style online courses and in the asynchronous-style online courses.

Synchronous-style vs Asynchronous-style; Similarities & Differences

Synchronous-style of teaching and learning involves live face to face interaction between the students and professors by the use of video systems such as skype, facebook, google meets, blue jeans and zoom. The lectures are conducted through the video system and the students can interact at any time to ask questions and suggest comments as in the regular classroom atmosphere. On the other hand, **Asynchronous-style** of teaching and learning has very little or no face to face interaction between students and professors and the course is conducted by the use of platforms such as MyCourses. Course lectures and videos are downloaded on a regular basis that offer students flexibility to view the notes and watch the videos on their own schedule and leisure. We will address the advantages and disadvantages of the two styles, the common goals that the two styles aim for, the common challenges that emerge in both teaching and learning styles and how to handle these nuisances smoothly and navigate the students through the challenging tasks; this directs to emotional intelligence and primal leadership (Radin & Shlat, 2020).

For instance, in his two hour synchronous–style classes, Michael lectures for an hour and then allows students to ask questions on their homework assignments and tests during the second hour (the second hour of class is dedicated to office hours for questions). Students can also ask the same question several times if necessary. In addition, during lecture time Michael has enough time to go over each set of notes two or more times to emphasize the vital fundamentals frequently used to solve problems, derive formulas and prove formulas. These are certainly advantages in comparison to the traditional face to face classes as there would not be enough time due to the limited available time needed to cover all the required topics. In traditional face to face courses, not all the students can attend scheduled office hours and hence have limited opportunities to ask questions on the homework assignments. In Michael’s online courses students have opportunities during class time to ask questions on homework problems several times if necessary. This is also an advantage in comparison to the traditional face to face classes. Figure 2 below summarizes the new teaching strategies implemented recently in online courses:

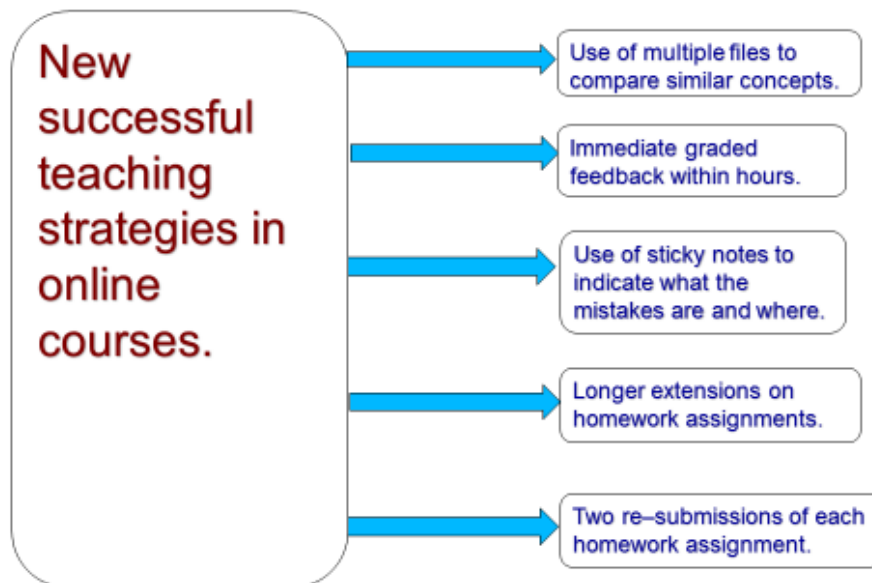


Figure 2 New Teaching Strategies in Online Courses

The next pertinent question that we will address: what are the disadvantages of the synchronous–style classes and what challenges emerge?

First of all, internet failure and technical failures with hardware can occur at any time in synchronous–style classes as they meet live. Second of all, software such as zoom, blue jeans, skype, google meets, facebook, ClickMeeting, LMS Moodle 3 (BigBlueButton) etc. can fail as well. These problems results with students missing the material and then learning and making up the material on

their own time outside of scheduled class time (this is equivalent to missing a face to face traditional class). International students also experience serious problems with the synchronous–style classes as they can be located in various time zones world–wide and not be available to participate for various reasons such as work, family obligations, and large differences in time zones. We will mention further limitations that arise in synchronous–style courses in the later section of the paper.

On the contrary, asynchronous–style courses offer international students in different time zones more flexibility of watching the course videos and absorbing the concepts on their own schedule in comparison to synchronous–style courses. In fact, students can often watch the guided videos while traveling on public transportation and while waiting at bus stops and train stations (Nikulicheva, 2020). Problems such as internet failure and equipment failure will not cause menacing impacts such as missing the scheduled lectures. Virtual communication is essential in asynchronous–style courses as there is very little or no face to face interaction (Gallaher & LaBrie, 2012). Virtual communication includes answering students' questions via skype, facebook, google meets and by e–mail that include the deadline of homework assignments, test dates and questions on homework assignments and on tests. It is pertinent to keep the length of the messages short and crisp as students may be in a time zone with 6–8 hours in time difference. For instance, Michael requires his students to hand in their homework assignments and tests as pdf files and then uses the sticky notes to write comments to indicate where the mistakes occur, what the mistakes are and how to correct the mistakes; students wrote frequent comments about the use of sticky notes in the course evaluations. In addition, Michael provides more repetitive–type examples in the courses' notes and guided videos as it generally takes a bit longer time for the students to grasp the material when they are attempting to learn it on their own by watching the videos without any guidance from their professor. Michael successfully used repetitive–type problems in his traditional face to face courses prior to COVID and it worked as a vital source to monitor students' common mistakes that occur throughout the learning process and emphasize them to his students (Orlova & Radin, 2018).

Analogous to synchronous–style online courses, professors and students also experience limitations and challenges in asynchronous–style online courses (Nikulicheva, 2020). First of all, numerous students who take asynchronous–style online courses work and encounter time management problems and frequently fall behind schedule with trying to keep up with the material, with submissions of homework assignments and with their communication. Second of all, large difference in time zones can prevent students from taking scheduled quizzes, tests and exams. This becomes a challenge for professors to schedule quizzes, tests and exams; flexibility is essential in these circumstances by offering quizzes, tests and exams during different days and times. Large differences in time zones also limits

the communication between the professors and students as it may be several hours before a professor answers the students' e-mail and vice versa and hence causes frequent delays in the communication. Swift response to questions and immediate graded feedback have been repeatedly expressed in his teaching evaluations. Table 2 below summarizes the students' comments and observations that appeared often on Michael's and Natalia's teaching evaluations:

Table 2 Frequent Comments and Observations on Students' Evaluations

Immediate Graded Feedback	92%
Sticky Notes as written comments	96%
Swift Response to Questions	95%
Effective Response to Questions	90%
Flexibility with extensions on deadlines of assignments	96%
Flexibility of time of submission of assignments	97%
Resubmission of homework assignments	94%
Flexibility of use of technology during traveling	96%
Use of colors in the notes	93%
Effective communication in Notes	94%
Repetitive Guided Examples in Notes	92%
Length of videos 15 minutes and under	97%

Conclusions, Further Challenges & Questions

Via Tables 1 and 2, the statistics from students' feedback and course evaluations guides us to the following conclusions remitting the advantages of an online teaching and learning environment. First of all, students appreciate the immediate graded homework assignments and tests and find it an essential learning process as it accelerates the rate of understanding the concepts. This then leads to the faster speed of communication such as swift and effective responses to e-mails, swift responses to questions during synchronous lectures and the speed of exchanging information in comparison to traditional face to face courses. Second of all, students appreciate the flexibility that the online teaching and learning environment offers such as submissions and re-submissions of homework assignments, and allowing more time to ask more detailed repetitive-type questions on the material and on homework assignments which is not always possible in the traditional face to face atmosphere due to time constraints and additional limitations. Furthermore, online teaching and learning environment provides students flexibility to design their own schedule and learn at their own pace and hence go beyond the expected learning outcome as they ask more

questions, ask more detailed questions and can solve more difficult problems. However, there are some disadvantages and challenging problems that arise with online teaching and learning atmosphere that requires further innovations and improvements.

As we mentioned previously throughout the paper, the common challenges that emerge in online teaching and learning environment include efficient time management, hard time with acclimation, internet failures, unreliable hardware and equipment, problems with software and problems with large differences in time zones. In addition, cheating and plagiarism has been a serious problem in online courses in comparison to the traditional online courses. The vital question to address is how to handle these difficulties and challenges and navigate students as smoothly as possible through the tough acclimation period and meet and exceed the learning outcome?

We will commence with the first question on developing efficient time management and acclimating to online teaching and learning. First of all offering students more flexibility with extensions on homework assignments, allowing students to re-submit each homework assignment twice, and most important of all giving students opportunities to ask questions on homework assignments during the second hour of class as many times as necessary were the essential ingredients to their acclimation to online learning. This was especially appreciated by numerous students as several students are taking many courses at the same time, working and has family obligations (a lot to do and not enough time); this is certainly an acclimation period for them.

Internet failure and unreliable equipment occurs quite frequently during online teaching and learning. One of the solutions is to keep the technology as simple as possible and apply software that is compatible with all the operating systems. Quite a few students may have outdated equipment and hence may not have access to new programs and licenses. Therefore it can be quite a substantial risk to require students to purchase a license for a program or to require them to use a specific program. This is where flexibility is again the fundamental tool that can work successfully. For instance, constructing a pdf file from hand written work can be done with older cellular phones or by inscribing photographs in a word file and then compiling the word file to a pdf file. In addition, offer students more options how to submit assignments without the purchase of licenses and we can discover various students' technological innovations. Furthermore, apply platforms that do not require high internet speed as students may not have access to high internet speed.

Even though cheating and plagiarism can be a serious problem in online courses as students have easier access to solutions and can communicate with their classmates and friends, there are still reliable methods to reduce this problem by discouraging this dishonest behavior. First, treating students honestly and

showing that you care about your teaching is the first step to earn the students' trust and establish a positive learning atmosphere in the course. Second of all, providing prompt, accurate and honest graded feedback also strengthens the trust between the professor and the students. Last but not least swift and precise answers to students' questions and providing flexibility to students with submission of assignments increases the trust level between the professor and the students. Inspire students to learn as much as you love to teach. Just as the American actor James Drury often would say "Hope you enjoy watching the Virginian as much as I enjoy playing in the show".

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TOOLS FOR PERSONALIZED LEARNING-BASED TEACHER EDUCATION

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Abstract. *Changes in the education from a teacher-centered to a student-centered approach requires changes in schools and in teacher education. One of possible ways is personalized learning (PL). It is a new concept in many countries around the world. PL is closely related to individualized, differentiated learning, inclusive education principles (Abbot, 2014; EDUCAUSE, 2013). PL builds on an understanding of learner: individual development, seeking of personal goals, taking into consideration individual differences and inclusion. PL “challenges teachers to search for pedagogy and practices that will help them addressing diversity in their classroom” (Guðjónsdóttir, 2000, p.9). Different methods and tools (e-tools as well) might be used for PL such as digital storytelling, three step interview, e-portfolio. Paper presents theoretical analysis of links between aspects of effective learning (good knowledge of each student; shared teacher and student responsibility within the learning process; personal learner involvement, linking to individual motivation, experience, and aspirations; collaboration, participation and involvement in the learning process; effective use of information technology and other learning resources (Williams, 2013)) and methods/tools for PL.*

Keywords: digital storytelling, e-portfolio, personalized learning, teacher education, three step interview.

Introduction

Personalized learning (PL) is highly related to student-centered pedagogical approaches, inclusion and meeting of personal needs of each student. “Personalized Learning in teacher education is concerned with how modes of teaching influence student-teacher learning and, in turn, how the ways in which student teachers learn may influence their future teaching” (UNESCO, 2020, p. 17). “PL is therefore a progressive learner-driven model, through which student teachers engage actively, deeply and reflectively in rigorous challenges and meaningful authentic tasks to demonstrate desired outcomes” (Zmuda, Curtis and Ullman, 2015, form (UNESCO, 2020, p. 17). The concept of PL “embraces four core elements:

- a) Collaborative dialogue, co-construction, personal reflection and mutual ownership by learners and teachers;
- b) Flexible content, tools, and learning environments to facilitate learners’ interests and needs and teacher-learner collaboration;
- c) Targeted support in response to learner interests and needs, through learning
- d) communities and communities of reflective practice;
- e) Data driven reflection, decision-making and continuous improvement, drawing on self-evaluation and feedback to inform next steps in learning and teaching” (UNESCO, 2020, p. 17).

Situation in a modern world requires organize learning not only in the classrooms but also using different e-learning tools.

The paper aims to explore theoretically grounded and practically piloted e-tools relevant for personalization and currently used in different teacher education practices. The paper presents several e-tools: digital storytelling, three step interview and e-portfolio. This study is based on the scientific literature review and the presentation of several cases.

E-tools for Personalized Learning

PL requires the adaption of the teaching/learning methods, curriculum and learning environment. “ICT use and E-Learning classrooms are a key element to creating a PL environment” (Williams, 2013, p.10). Student must be active and participate in learning process from the beginning. Williams (2013) has identified six critical areas to ensure PL: (1) locus of control; (2) knowing students as learners; (3) student engagement; (4) collaboration; (5) effective use of ICT; (6) classroom culture.

Students in schools are active in cyberspace and they usually do not have difficulties to using different e-tools. The task of teacher is to ensure effective use of these methods and tools. The paper presents possibilities of effective use of digital storytelling, three step interview, e-portfolio for PL.

Digital Storytelling

Storytelling is not a new method and has been widely used in different educational contexts. Storytelling might be defined as the interactive process of using words and actions to reveal the elements and images of a story while encouraging the listener's imagination. Storytelling is increasingly recognized as having important theoretical and practical implications (Kim, 1999). The method of storytelling is useful for young children to develop their vocabulary, concentration, comprehension, ability to think symbolically and metaphorically, to enhance fluency. In a research study by Walker (2001), stories were presented to children in three ways: telling, reading, and CD-ROM. Children in the storytelling group attained higher scores in comprehension than children in the other groups. Storytelling is also useful for enhancing attention-giving and for social capacities. Stories engage thinking, emotions, and can even lead to the creation of mental imagery (Green & Brock, 2000). As stated Polichak and Gerrig, "individuals listening to stories react to them almost automatically, participating, in a sense, in the action of the narrative" (Polichak & Gerrig, 2002, p.88). According to Green (2004) shared narrative can be a force in creating community. Digitalization affected educational processes and storytelling has become more widely practiced pedagogical approach in teaching and learning (Miller, 2009). Technologies enable to use not only oral or written stories, but they become digital stories and are accessible for anyone and anywhere in the world. Digital Storytelling can provide today's learners with strong foundations in the most demanded skills for 21st century, which are connected with ICT literacy, ability to conduct online searches, use different online tools and multimedia to tell a story (Mellon, 1999).

Digital storytelling was first developed at the Center for Digital Storytelling in California in the late 1980s. "Digital Storytelling is the modern expression of the ancient art of storytelling" (Barrett, 2006). This gives possibility to ensure student-centered learning strategies based on their engagement, reflection, project-based learning, and the effective integration of technology into instruction (McDrury & Alterio, 2000). Figure 1 presents links between digital storytelling and other learning strategies: student engagement, project-based learning, technology integration and reflection for deep learning which are also important for PL.



Figure 1 Convergence of Student-centered Learning Strategies (Barret, 2006)

By encouraging students to organize their own ideas into individual stories, digital storytelling can easily support learning in different disciplines. Some of the advantages of integrating digital storytelling in classroom have been identified by Gils (2005): (1) Digital storytelling can provide more variations of learning than traditional methods; (2) It can personalize learning experience; (3) Can make the explanation of certain topics less complex; (4) Can create real life or problem-solving situations; (5) Can improve learners' engagement in learning process.

Barret (2006) states that digital storytelling enhances student learning, motivation, engagement, builds technology skills, and it is more effective than paper-based reflection. "Digital storytelling combines the art of telling stories with a variety of digital multimedia, such as images, audio, and video. Just about all digital stories bring together some mixture of digital graphics, text, recorded audio narration, video and music to present information on a specific topic." (Robin, 2008).

Digital storytelling encourages additional educational outcomes by enhancing motivation and creativity, increasing collaboration and peer-to-peer teaching (Kreps, 1998). "Digital storytelling allows computer users to become creative storytellers through the traditional processes of selecting a topic, conducting some research, writing a script, and developing an interesting story" (Robin, 2006, p. 222) – these elements are extremely important for PL.

Three Steps Interview

A Three Steps Interview is a form of participatory interview approach, developed by the International Women's Group, Eugene, Oregon (Bodone, Dalmau, Doucouré, Guðjónsdóttir, Guðjónsdóttir, Ishak, et al., 1997;

Dalmau & Guðjónsdóttir, 2017). It was designed to support participative, equitable and reflective approaches to life history research interviews in small groups of three–five participants. “In this interview format, all participants take turns in three rotating roles (as interviewer, interviewee, and reflective note-taker). If there are more than three people in the group, the group asks two people to share the note taker or facilitator roles. It is imperative that each group member handles a role. The following describes each role:

1. Interviewer: facilitates the discussion and asks the questions.
2. Interviewee: shares her practice and experience with the group.
3. Reflective Note-taker: takes notes and at the end of the session gives brief feedback on the process of the interview, including what impressed him/her in the discussion” (UNESCO, 2020, p.28).

As it is presented in the UNESCO document “Personalized Learning within Teacher Education A Framework and Guidelines” the Three Step Interview “to be effective, several steps are suggested to follow:

1. Participants are paired or in a group of three. One participant interviews the other on a given topic. One participant takes notes or records the interview.
2. Participants rotate roles and repeat step 1.
3. Pairs or trios join another pair or a trio. Then, in a Round Robin format, they share what they have learned from their interviews.
4. Variation: Report to the whole group.
5. Agree on an amount of time for each person to share before the interview begins” (UNESCO, 2020, p.28).

The same document states that “it is important to: (1) Model good listening and interviewing skills, such as eye contact and active listening. Participants should remember that this is an interview not a conversation. (2) Model good open-ended questions, such as *How did you...? Tell me about...* (3) Model good follow up questions, such as: *Tell me more..., Explain...*

With advances in technology, most participants now use their phones to record the interview and then they can listen to themselves repeatedly, which helps in thinking about their practice and writing it up” (UNESCO, 2020, p.28).

To understand the various occasions and ways to use this approach we offer three different cases, the first one is from teacher educators’ project, and the next two from teacher education classes.

Multicultural Teacher Education

At the University of Iceland 14 teacher educators participated in a cooperative self-study project for two years. The study aimed to develop a dialogic space that would mobilize teachers’ diverse experiences and perspectives to build a framework for multicultural teacher education (Gísladóttir & Óskarsdóttir, 2019). One of the tools they used was the *participatory interview*

approach. The educators worked in groups of two or three. The goal with the interviews was to aid their understandings of how their cultural backgrounds influence their work as teacher educators.

The interviewers asked the interviewees: to explain their understanding of multicultural education; tell about how they came involved in/where their interest in multicultural education came from; and explain their instructional methods, how they make learning spaces for all and create classroom climate that welcomes everyone's participation.

During the interviews the participants experienced that even though their background was diverse what they had in common was an experience of being an outsider in a community at some time in their life. Their vision for multicultural education was built on their experience and welcoming all learners in their learning communities was at their heart. The participatory interview helped them make a dialogic space that allowed them to problematize and rethink teacher education collectively.

Working Inclusive Practices

One of the main topics of the course *Working in Inclusive Practices* (WIP) at the University of Iceland is professional working theory (PWT) (Dalmau & Guðjónsdóttir, 2017). Early in the autumn semester of 2020, teacher students who were enrolled in the course were asked to explore, reflect on, and relate their practice (experience of their work/roles) to theory (theoretical framework and their explanations for what happens in the classroom) and ethics (reasons behind their practice, their beliefs, and values about the world).

Students were assigned randomly into groups of three and took a 12 minutes' turn in each role, in line with the participatory interview approach. They were provided with interview questions, including: "What made me proud in my practice last time? What policies or legislation did I follow? What societal issues do I see in my school and how do I see these reflected in my practice?" After the interviews, each student received reflective notes and started to develop his/her professional working theory. One of the teacher students commented on the task: "It was interesting to practise taking interviews, listen and write down about others who are complete strangers. I got ideas from them and it is a brilliant way to hear from others about things you yourself might not have considered. I managed to think about my professional working theory and how I want to shape my practice when I start to teach."

Action research course

Action research is a selective course for graduate students. Students choose their topic for their project and through the years we have learnt that our students often find it hard to set their focus. As a student reported: "How do I choose a topic? Can I do whatever I would like to do?" Another one asked: "What kind of methods can we use?" Therefore, we decided to see if the three-step interview

approach could support them in finding their topic, setting the purpose, deciding the aim and developing the research question.

The students were assigned randomly to groups of three, the process was introduced and what to pay attention to. The basic questions were: “Tell us about your idea for the research, why do you want to research this topic and what would you like to see at the end of the action research.” The interviews were recorded for students to use as they drafted their research proposal. Students reported that the activity was helpful as they began to write their proposal. “During the interview I began to develop an idea for my action research” a student wrote in her personal evaluation and another one said: “The interview was helpful for me to frame my idea.”

We have noticed that for diverse group of students who are either current or prospective teachers, the participatory interview approach emphasizes equity by offering insights into complexity of everyone’s experiences and practice and acknowledging value and learning from all of them. We have learnt that experienced teachers are both excited and thankful for this activity because they have a story to tell but do not often get an opportunity to tell it. Our experience suggests that moving from discussions to interview mode is often a challenge. Sometimes it seems to be difficult for the interviewers to just listen and to keep their own stories to themselves. They have to be reminded all the time of their role and its importance. The note-takers are similarly important because they not only take the notes but also keep time, pose questions that have not been asked or ask for clarification. By following the steps provided in this section and responding to the challenges that may arise, the participatory interview approach can be useful for teacher educators and teacher students because it opens a space for all to get to know each other and oneself and to reflect on their current practice or ideas for the future ones.

E-portfolio as an Instrument and Environment for Personalized Learning

E-portfolio is widely used in higher education seeking to help learners collect evidence about their learning, to consider assessment, develop critical thinking and prepare for lifelong learning (Bolliger, Shepherd, 2010; Mahasneh, Omar, 2020). The investigation by Colás-Bravo, Magnoler, Conde-Jiménez (2018) has proven that e-portfolio is like a kind of a tool and a source having a large potential to develop harmonious awareness of university students. Students become more engaged in the creation of the process of learning, and this increases their awareness and abilities (Gámiz-Sánchez, Gallego-Arrufat, & Crisol-Moya, 2016). According to Alajmi (2019), the usage of e-portfolio improves learners’ abilities, skills and knowledge, reveals strengths and weaknesses.

Each learner is unique, having one's own learning style, pace, whereas knowledge and abilities differ because of cultural differences (Sfenrianto, Hasibuan, Suhartanto, 2011). Unfortunately, traditional teaching and learning cannot recognize these differences (Laksitowening, Hasibuan, 2015). As the authors have it, e-learning provides conditions for PL, while meeting learner's needs, co-creating the scenario for learning. E-portfolio is one of the instruments which provide conditions for the manifestation of PL. In scientific research, application of e-portfolio in the process of learning is dealt with as a learning instrument, a learning environment (Barrett, Carney, 2005), a learning strategy (Bolliger, Shepherd, 2010), a means for career development and employment (Ciesielkiewicz, 2019), an assessment instrument (Barrett & Garrett, 2009) or/and a means of feedback for both students and university teachers (Vázquez-Cano, López Meneses & Jaén Martínez, 2017; Händel, Wimmer & Ziegler, 2018). PL is concerned about creating conditions for a learner to take responsibility for one's own learning (Jaros, Deakin-Crick, 2007). Application of e-portfolio ensures authentic learning because learners organize the filling-in of their e-portfolio, contemplate on their learning processes, draw conclusions, improve learning with regard to their considerations (Goldsmith, 2007; Reese, Levy, 2009), it helps learners to set personal goals related to their learning.

PL is being personally monitored, dynamic (Karmeshu, Nedungadi, 2012), whereas the practice of application of the e-portfolio provides conditions to evaluate the processes of own learning and implement required corrections based on own reflections (Goldsmith, 2007; A. Yastibas, G. Yastibas, 2015). These are the conditions for authentic assessment and evaluation (Sewell, Marczak, Horn, 2005):

- provides conditions for a university teacher to see a student, group or a community as individual, unique, having one's own features, needs and strengths;
- serves as a cross-section lens providing a fundamental for future analysis and planning;
- serves as a particular communication means ensuring continuous communication and information exchange among participants;
- provides a possibility to remove drawbacks of traditional assessment and evaluation; provides a possibility to assess more complex and important aspects of a particular area or theme;
- covers a broad spectrum of knowledge and information from many interested individuals who have knowledge, e.g. a programme or a person in different situations (e.g. mentors, tutors, peer or community leaders).

Interactivity is important for PL (Nedungadi, Raman 2012), and the filling-in of e-portfolio is inseparable from communication with a university teacher, friends to improve learning (Bolliger, Shepherd, 2010; Lin, 2008). Seeking to improve learning, feedback is highly important. E-portfolio provides conditions for not only a learner, but also for a university teacher to get it to correct the goals, assessment criteria, methods, teaching and self-assessment approaches as well as content (Goldsmith, 2007).

Application of e-portfolio as a PL instrument, an environment, focuses on the following university teacher's skills: facilitation, active listening, provision of feedback, intervention, assessment (Attwell, 2009). Suggested holistic approaches to adapting e-portfolio in practice would cover the institutional level, the curriculum, the process of learning, the personal and e-portfolio levels (Beckers, Dolmans, van Merriënboer, 2016).

Conclusions

These tools and presented activities are examples of PL as they enable participants to link to individual experience, aspirations and motivation through collaboration and involvement in the learning process. They can be used with diverse groups of learners, including student teachers and teacher educators. Each of presented tools includes more than one out of six identified areas to ensure PL. Digitalization led to transformations from traditional to modern application of well-known tools. This is one of identified areas to ensure PL. All three tools ensure student engagement, students become more motivated and they might manage their time.

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APPROACHES TO THE LEADERSHIP IN EDUCATION

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Abstract. *The concept of leadership in education has been influenced by several disciplines: sociology, psychology, political science, economics, philosophy (Simkins, 2005, English, 2006). The development of the concept of leadership has also been greatly influenced by the analysis of organizational systems from a sociological perspective (English, 2006).*

The analysis of scientific literature shows that the concept of leadership in education is analyzed and presented by many authors from different points of view. Leadership in education is analyzed by emphasizing the position of administration and management, reviewing changes in the school system and leadership models that help to implement systemic changes in school, focusing on the learning process and curriculum development, emphasizing leadership in higher education, narrative, historical context, and meta-analysis.

The results of the focus group with higher education staff show that leadership in higher education covers a wide range of activities: administration, management, teaching, research, supervision of final theses, decision-making in projects - basically sociological, political, administrative, philosophical aspects of leadership are incorporated.

Keywords: *education, leadership, higher education.*

Introduction

The phenomenon of leadership is receiving more and more attention from researchers in various disciplines and this phenomenon is still popular. Much attention is paid to the analysis of the concept of leadership, the identification of leadership characteristics, the comparison of leadership models, the analysis of various theoretical approaches and the expression of the phenomenon of leadership in different disciplines. Some researchers analyze leadership by distinguishing leadership traits and / or patterns of behavior (Yukl & Lipinger, 2005; Alimo-Metcalfe & Alban-Metcalfe, 2005), while others focus on the phenomenon itself, emphasizing the importance of communication and changes in the information process (information-processing perspective) and linking it to relationship building (Messick & Kramer, 2008; Bryman, 2011; Gill, 2011; Grint, 2011; Northouse, 2016). A wide range of research methods and various groups of

participants (e.g., individuals, small target groups, large groups of employees in an organization) are used to analyze the concept of leadership.

The aim of the paper – to present understanding of leadership phenomenon in education, paying attention on historical perspective and impact of different disciplines. As the concept of leadership is quite broad, qualitative methods are applied for the research. Literature review and focus group method were applied for the research. Concept analysis and historical perspective as the basis of literature review were applied for theoretical analysis. Manifest content analysis applied to analyze focus group data. Manifest content analysis focused on identifying easily observable targets within text (Kleinheksel et al., 2020).

Historical Perspective of Leadership

A sequence of historical events can help to see ongoing changes in the interpretation of the concept of leadership. Based on this idea, the concept of leadership is linked to the historical period and cultural environment, which includes classical interpretation, examples from the Renaissance period, and the contemporary context (Grint, 2011). The analysis is associated with historical events and personalities or popular works. The interpretation is particularly relevant to the analysis of the concept of leadership from a political point of view. The modern interpretation of the concept of leadership in the context of the modern world is based on the interpretation of industrialization, the impact of the economic crisis on the world, World War II, globalization, Cold War history, progress, analysis of political change. Grint (2011) visualizes the concept of leadership based on the political events of the time and historical events from 1900 to 2000 (see Fig. 1).

Politics and Leadership

DeRue et al. (2011) and Ferris et al., (2016) suggest linking leadership trait analysis to demographics, reputation, and communication skills. Reputational power is singled out at the organizational level, as it leads to the expression of increased power and relates to the allocation and use of financial resources. Communication and social competences are linked to a charismatic personality and the ability to speak persuasively (rhetorical skills) and to influence others. Meanwhile, it is suggested to characterize the behavior of a leader by linking it to four components: task-oriented, relational-oriented, change-oriented, and passive. A very important emphasis here is political knowledge and experience in the field of politics (Ferris et al., 2007; Ferris et al., 2012; Baur et al., 2016; Ferris et al., 2016). Some researchers analyze the benefits of political knowledge and the use of existing knowledge in the organization, where they find that those who have

political knowledge / skills better understand interpersonal relationships in terms of social dynamics, regulate their behavior according to the situation, influence others, form a sincere and the image of a trusted person (Ferris et al., 2007). A total of eight components characteristic of the configuration of charismatic personality rhetoric are distinguished: (1) collective focus, (2) temporal orientation, (3) follower worth, (4) similarity to followers, (5) values and moral justifications, (6) tangibility, (7) action, and (8) adversity (Baur et al., 2016). Political leadership research emphasizes follower evaluation and satisfaction with the activities of a political leader (DeRue et al., 2012).

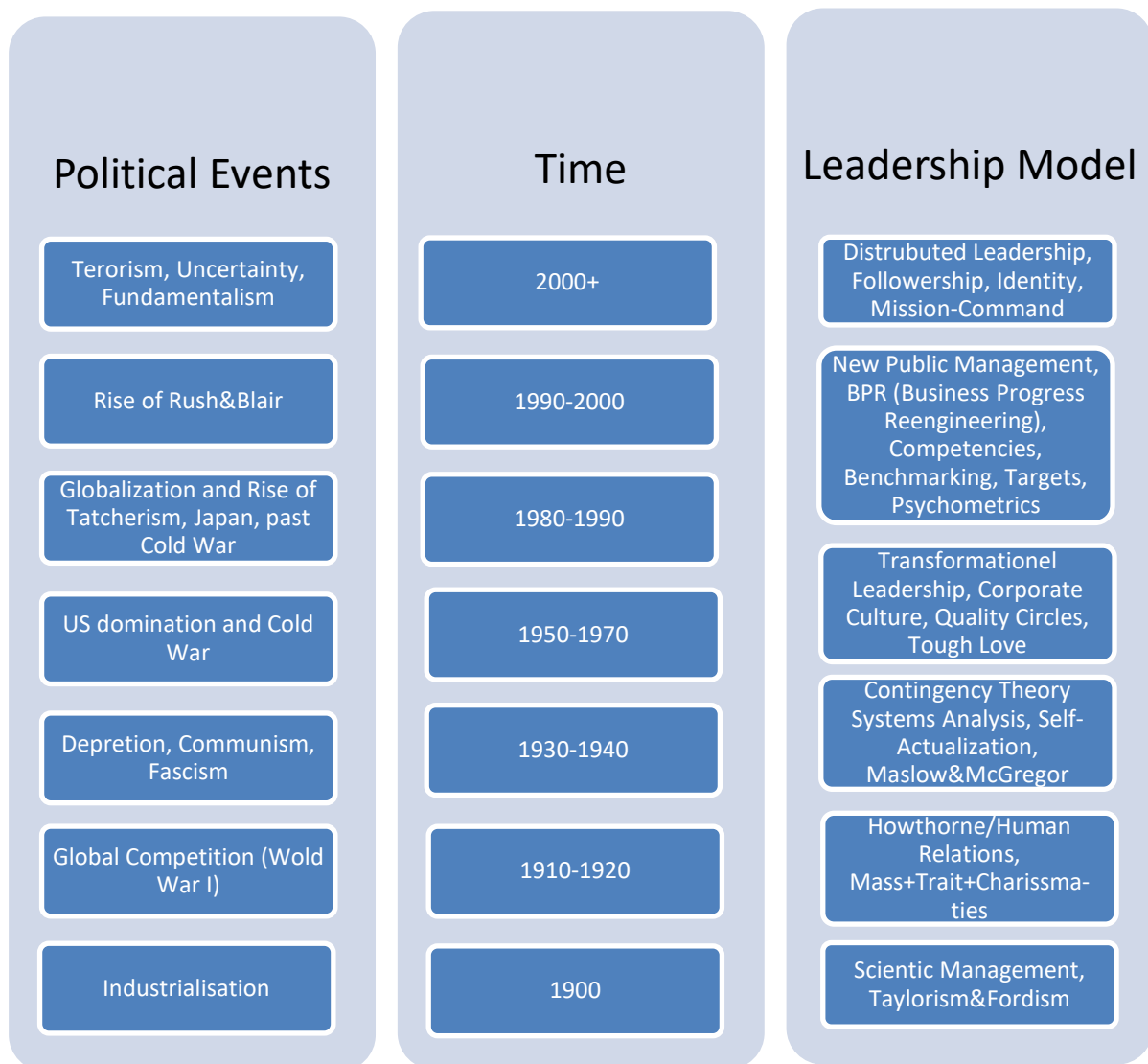


Figure 1 *Historical Perspective of Leadership* (Grint, 2011,13)

Leaders with sufficient policy qualifications are able to analyze and motivate the needs of followers, as well as being flexible and adaptable to the situation. In

this case, we distinguish two models of leadership that are characteristic of political leadership – transactional and transformational leadership. Political leaders with the characteristics of these two leadership models are able to clearly identify the needs of followers, to properly define the competitor's business model and to act strategically in the most appropriate way in the current situation. It is also emphasized that political knowledge and skills are acquired and constantly updated / improved, which makes it possible to create a unique image and style of a leader and can be associated with openness and trust. Organizations, meanwhile, are encouraged to take advantage of the mechanism of constructing political knowledge and strategic thinking skills and apply this to organizational governance (Ewen et al., 2013).

Leadership in Sociology

The sociological aspect of the concept of leadership is often discovered in the analysis of the organizational development process and in the discussion of organizational structure, as well as in articles focusing on managerial characteristics, communication, conflict threats, or cultural impact on the education system (Webster, 2004). In addition, the focus is on quality, successful leadership, interpersonal communication, and emotional field support mechanisms. It is observed that the concept of leadership is constantly changing because there is no ideal and uniform case and it is difficult to describe and present the overall picture of a leader. Webster (2004) gives the example of England, where the concept of leadership in higher education has sociologically inspired changes in the subjects taught by introducing certain new topics such as race, colonialism, self-representation in other cultures, and cultural awareness. Another distinguished field of research from a sociological point of view concerns discrimination against individuals, with a particular focus on older society and job retention, where Max Weber's social closure theory and Niklas Luhmann's inclusion / exclusion theory (Braedel-Kühner & van Eist, 2012). Lois (2007) also supports the popularization of the concept of discriminatory leadership in relation to age and the declining participation of older people in career development. Strategic orientation to labor market policy, economic change, orientation to human resource management, involvement of social partners in the activities of the organization both politically, managerially and sociologically change the image and structure of the organization itself (Kruse, 2010). The authors (Braedel-Kühner & van Eist, 2012) analyze the phenomenon of leadership in the work environment, distinguishing the instrumental - rational workplace environment and emphasizing the qualities of a leader in an organization who has been over 50 years old. In this respect, on the one hand, the cultural aspect of the organization, which is visible through human resources policy and strategic and structural

changes, is important, on the other hand, it is important to analyze the concept of interactive leadership and interaction between leaders (Bellmann et al., 2003). An interesting observation would be that many years of experience and joint activities with colleagues create personal and emotionally strong interrelationships and are linked to rational evaluation, noting a strong business culture in the organization. There are two approaches to leadership that are relevant to leadership research and practice monitoring: 1) the tendency to standardize and unify the concept of leadership by providing summaries; 2) monitoring the leadership process and changes in the organization, identifying elements of development. „This perception of leadership is accompanied by a direct leadership situation between leaders and subordinates, which is shaped by the communication and interaction processes of leadership. This individualised leadership situation is influenced by the diversity of identities. An essential layer in this diversity is biographical ageing and age as a social construction (Braedel-Kühner & van Eist, 2012, 125). This approach analyzes the interaction of leadership with a person’s cultural identity and the multifaceted approach that is shaped by ethnic, religious, and gender socialization in relation to education, values, age, and personality traits (Bissels et. all 2001). This means “individualised, age-related leadership: „Individualised and age-related leadership places the individual, i.e. the leader or the subordinate, in his or her own psycho-developmental and biographical context.” (Braedel-Kühner & van Eist, 2012, 127). It can be noted that the topics of leadership in scientific articles based on the social point of view are not abundant, largely focusing on the areas of management and education.

Psychological View on Leadership

The psychological aspect focuses not only on the description of the leader, but also strongly analyzes the relationship with followers, which includes power and mutual influence, reciprocal exchanges, identity and categorization processes, causal attribution, arousal and affect, and the like. Also, the presentation of the concept of leadership in psychology is independent of the context of activity, supervision, cultural context. Leadership analysis (circa 1960–1970) in psychology is strongly associated with social psychology and to a lesser extent with organizational psychology (Hogg, 2001). The concept of "The Leadership craze" is heard, which is related to the concept of a unique personality, which focuses on the search for the ideal. Messick & Kramer (2008) notes that psychologists, when analyzing the concept of leadership, ask several important questions:

- What are the personal characteristics of leaders?
- What is the nature of the relation between leaders and followers?

- Why do we perceive some people to be better leaders than others?
- What are circumstances that evoke leadership qualities in people?
- Can leadership be taught?

The thematic field that is analyzed in leadership works to distinguish axial directions in the concept of leadership is indeed broad and encompasses several directions. The main themes analyzed in leadership books as Messick and Kramer (2008) state from 2004 to 2008 are related to:

- Leading change: organizational change and expert voice.
- Leading scientifically: trait/competency approach, business setting.
- Learning from leadership outside organizational context: political setting, educational setting, military setting, sport setting.
- Leading through imagination: fictional story, fictional character.
- Insider accounts: business author and autobiography expert.
- Consultant of leadership: consultant author, business setting, numbered suggestion.
- Leading through: religious leader, evangelical voice.

As in the field of management, the same situation is observed in psychology, that the authors talk a lot about the distinctive features of management and leadership and, through comparison, seek to discover the main distinctiveness (Zoller & Fairhurst, 2007). It should also be noted that the strongest analysis for many years is and has been in the field of management. A study of articles in psychology also shows that quite often leadership is analyzed through organizational structure and management study (Fairhurst, 2008).

Leadership in Education

Dooley and Lichtenstein (2008) describe several methods for studying *leadership* interactions, including by focusing on (a) micro, daily interactions using real-time observation, (b) meso interactions (days and weeks) using social network analysis, where one examines a set of agents and how they are linked over time, and (c) macro interactions (weeks, months, and longer) through event history analysis. Finally, agent-based modeling simulations (i.e., computer simulations based on a set of explicit assumptions about how agents are supposed to operate) are also being used to study complexity leadership.

It is noticeable that there is a growing literature, which increasingly analyzes various leadership models in the context of leadership in education and conducts evaluation at the level of qualitative and quantitative research (Gunter, 2001). The concept of leadership in the context of education is linked to two models: Transactional Leadership and Transformational Leadership. Heißenberg (2015) supports this idea and emphasizes the benefits of innovation, and the importance

of these two leadership models for changing the education system in the school. It is observed that the two models are different and transformational leadership is preferred nonetheless (Gunter, 2001; Heißenberg, 2015). Transformational leaders are described as leaders who had the idealized influence, inspirational motivation, intellectual stimulation, individualized consideration. It is not so much the structure and tasks that are important here, but it is much more relevant to talk about the relationships between the members of the organization, and the desire to focus on joint activities and fulfillment of obligations. The transactional leadership model is more associated with the day-to-day operations of an institution, where managerial skills are important and where a more constructive approach can be seen in working and working in groups or individually, seeking consensus. It focuses on specific skills that are specific to specific tasks and seeks to notice and develop those skills. Under this model, the leader corrects activities and corrects mistakes, adheres to standards, and rewards employees in case of success. Meanwhile, Robinson et al. (2008) see the characteristics of educational leadership by integrating and combining the following two models of leadership: instructional leadership and transformational leadership. Instructional leadership focuses on setting learning goals, monitoring and analyzing curricula, and strengthening the learning culture. It is important for transformational leadership to talk about commitment, fostering a shared vision, cooperation, overcoming difficulties together, and ambitious goals. A study by this author has shown that when talking about the relationship between leadership model and achievement, educational leadership is dominated by Instructional leadership and other leadership models, while transformational leadership, which is quite often singled out as important, occupies the lowest position (mean effect sizes for impact of transformational leadership (13 effects from 5 studies), instructional leadership (188 effects from 12 studies), and other leadership approaches (50 effects from 5 studies) on student outcomes).

Research Methodology

Focus group was organized at university, participants were academic staff. There were 7 participants in the focus group. The length of the discussion was 1 hour and 20 minutes. All discussion was recorded and transcription was analyzed using content analysis method.

Participants were selected using targeted selection: they had to be academic staff of the university with at least 5 years of work experience. The study participants represented the humanities and social sciences.

Questions discussed with the group were:

- What are the typical activities of a researcher / academic?
- Identify the challenges you face in your work.

- What mission do you see working in high school?
- Is it possible to be a leader in several areas while working at university?

As the discussion was conducted in Lithuanian, the quotations will not be translated and presented in the article.

Research Results

An analysis of the transcribed text of the discussion revealed that persons working in higher education generally play a variety of roles, but the main ones are research, teaching, project activities, administration and dissemination of research results. The main categories highlighted are presented in Table 1.

In all of these activities, a university employee can accept leadership. Participants in the discussion agreed that administration, activity projects, dissemination of results are not narrow skills, they are more related to the expression of general essentially managerial competencies. A higher education institutions lecturer/researcher often (employees of other educational institutions less often) must have good enough management skills. In some administrative positions, leadership skills are needed to demonstrate leadership more often than by a researcher or lecturer.

Table 1 Activities and Leadership in Higher Education Institutions

Category	Subcategory	Category	Subcategory	Category	Subcategory
Activities	Research	Challenges	Reconciliation with personal life	Leadership	As a personal trait
	Teaching		Bureaucracy, formalization		Interfaces with the position, status
	Projects		Inadequate pay		In the education of the younger generation
	Administration		Uncertainty about the future		
	Dissemination of research results				

However, lecturers/researchers working in higher education institution also face challenges and obstacles, which are usually associated with a highly formalized bureaucratic system. A lot of time is spent on this, which leaves less time for direct research and teaching activities. In addition, it has a direct reflects on personal life and its quality. Working in high school does not mean that you are guaranteed a good salary, that you are valued, that you can feel dignified.

Still, most employees are leaders. This is usually due to innate personal qualities, and in such situations the same person can be a prominent leader in research, both in teaching and disseminating research results, or as an administrator. It happens that a person has interest into one field/activity he/she likes. Almost all persons working in higher education are leaders and examples in the education of the younger generation.

Conclusions and/or Discussion

Although the concept of leadership is found in different sciences - sociology, politics, management, psychology - the concept of leadership of higher education academics is mainly associated with managerial, administrative, psychological, only in some rare cases - political aspects. Leadership is basically defined as influence, need, role for other people. It is determined by the personality, its psychology. Often in the short term, leadership is seen as an expression of managerial skills, but only in the long term can one see the impact on others - colleagues, students. Leadership in education is a complex concept, and therefore must be seen as a phenomenon at the crossroads of many sciences.

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ПРОБЛЕМЫ МАТЕМАТИЧЕСКОЙ ПОДГОТОВКИ УЧИТЕЛЕЙ НАЧАЛЬНЫХ КЛАССОВ: ВЫЯВЛЕНИЕ СВЯЗЕЙ МЕЖДУ ПОНЯТИЯМИ

Problems of Mathematical Education of Primary School Teachers: Identifying Relationships between Concepts

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Abstract. *The purpose of this article is to investigate how the undergraduate students in the primary education programs understand mathematical information (concepts). Having an understanding of the mathematical content allows the teacher to design different approaches to teaching younger students with different learning styles and abilities. The analysis of theoretical studies published in Russian scientific literature has shown that one of the important criteria for understanding information in a particular field of knowledge is to identify logical connections between the concepts of this field. In this article the authors present the results of their study on how undergraduate students studying in the profiles of "Primary Education" and "Psychological and Pedagogical Education" form the links between the concepts used in everyday life versus the connections between mathematical concepts. The results show that other disciplines/ fields of study influence the formation of connections between mathematical concepts. In addition, some specific difficulties in establishing some of these connections were identified. Based on this research, the authors provide recommendations on specific strategies to improve the professional education for future teachers in the area of mathematical knowledge.*

Keywords: *mathematical training of primary school teachers; understanding of mathematical information; relationships between mathematical concepts.*

Введение *Introduction*

В современных условиях от учителя начальных классов требуется готовность самостоятельно выбирать способы организации, приемы и средства обучения, позволяющие положительно влиять как на образовательный процесс, так и на его результаты. Для осуществления такого самостоятельного выбора учитель должен так владеть содержанием

учебного предмета, чтобы уметь по-разному интерпретировать информацию, т.е. подбирать подходящие примеры, составлять учебные задания для детей, подбирать виды деятельности, вести диалог на языке, доступном ученикам. Применительно к математике, объекты которой обладают высокой степенью абстракции, необходимость такой интерпретации приобретает особое значение (Arthur, Owusu, Asiedu-Addo & Arhin, 2018; Bershadsky, 2004; Skemp, 1987; Turkina, 2018). Для этого будущий учитель должен понимать математику.

Однако, специфика подготовки будущего учителя начальных классов на факультетах начального образования заключается в необходимости овладения широким спектром знаний из различных предметных областей, и на математическую подготовку отводится довольно незначительное количество учебных часов (Granichina & Sheremeteva, 2020).

Разрешение имеющегося противоречия между необходимостью наличия у будущих учителей начальной школы понимания математики и ограниченностью учебных ресурсов для этого требует исследования возможностей организации процесса изучения математических дисциплин, направленного на понимание, в условиях обучения на факультетах начального образования.

Цель данной статьи заключается в описании результатов экспериментального исследования уровней понимания математики студентами, обучающимися по профилям начального образования и психология, и обосновании влияния выявленных условий на видение студентами связей между математическими понятиями, характеризующее понимание математики.

Методами исследования являются теоретический анализ литературных источников, анкетирование, обработка и анализ полученных данных.

Теоретические основы исследования *The Theoretical Background*

Педагог, организующий процесс обучения младших школьников математике, должен уметь выбирать средства и методы обучения, соответствующие реальным условиям обучения, должен уметь по-разному интерпретировать математическую информацию, составлять и корректировать учебные задания для детей в зависимости от их возможностей, организовывать разные виды деятельности с математическими объектами. Для этого учителю необходимо обладать целостным видением математических объектов, умением характеризовать одни математические понятия на основе их связей с другими (Sheremeteva, 2018). Поэтому подготовка студента должна быть направлена не только на

формирование определенной системы математических знаний, но и на понимание объектов познания математики.

Исследователи характеризуют знание как предпосылку и психологическую основу понимания, а само понимание - как способность постичь смысл и значение познаваемого объекта, явления, текста, и это постижение связано с выделением существенных элементов и их взаимосвязей (Brudny, 1998; Zinchenko, 1998). Постижение смысла познаваемого объекта происходит на основе отражения в сознании отношений, связей этого объекта с тем, что уже есть в сознании человека. Это выстраивание целостного видения объекта, которое включает в себя содержательные, логические, эмоциональные компоненты. Понять - значит иметь возможность из имеющихся элементов знаний, представлений, установок, ощущений собрать функционирующее целое, называемое семантическим полем.

В самом процессе понимания выделяют три уровня: последовательное изменение структуры воссоздаваемой в сознании ситуации (монтаж семантического поля), перемещение мысленного центра ситуации от одного ее элемента к другому (переценовка семантического поля) и построение целого (трансформированный концепт) (Bershadsky, 2004; Brudny, 1998; Turkina, 2011; Znakov, 1998; Wertheimer, 1987). В процессе прохождения познающим субъектом этих уровней происходит изменение значимости выявляемых связей, наполнение знаний смыслом, переход в новое качество, называемое «живым знанием» (Zinchenko, 1998).

Наличие понимания характеризуется умением построить собственную действенную модель объекта, которая адекватна ситуации, используя для этого различные виды информации и связи между ними.

Хранение информации в сознании человека как правило опирается на имеющиеся наборы понятий, между которыми существуют различные виды содержательных связей. В процессе обучения математике, как правило, устанавливаются родовидовые связи между понятиями. Так, среди явных определений в математике чаще всего используются определения через род и видовое отличие. Кроме этого, достаточно часто рассматриваются причинно-следственные связи (например, в процессе обоснований), связи вида часть – целое (например, в генетических определениях) и т.д. Некоторые связи между понятиями устанавливаются стихийно и не всегда верно. В процессе обучения при монтаже семантического поля, т.е. перемещении по цепочке от одного понятия к другому, познающий субъект не всегда имеет возможность увидеть связи между несоседними элементами этого поля. В частности, некоторые студенты испытывают затруднения при определении отношений между объемами понятий прямоугольника, ромба и квадрата. Зная, что множество прямоугольников содержит множество

квадратов, они при этом считают, что множества прямоугольников и ромбов не пересекаются. Причиной этого является видение квадрата только с позиций знакомого со школы родовидового определения, т.е. как прямоугольника с равными сторонами. А рассмотрение квадрата в качестве ромба с прямым углом могло бы являться следствием работы по перецентровке семантического поля геометрических понятий и построения целостного концепта.

Выявление уровней понимания связей между математическими понятиями может служить важным показателем качества математической подготовки будущих учителей начальных классов. Очевидно, что чем выше этот уровень у будущего учителя, тем больше у него возможностей для нахождения решения задач, для составления задач, для нахождения нужных путей для выстраивания диалога с детьми, для организации процесса обучения младших школьников математике (Sheremeteva, 2012).

В психологии для диагностики уровней понимания связей между абстрактными понятиями используется методика «логика связей» (Bershadsky, 2004; Golovey & Rybalko, 2010). Методика основана на предъявлении ученику житейских понятий и позволяет исследовать понимание испытуемыми связей между этими понятиями. Она предназначена для людей, имеющих среднее образование, поэтому может применяться для исследований уровней понимания студентами житейских понятий.

Испытуемым сообщается, что первые шесть пар слов, снабженных цифрами от единицы до шести, задают определенные типы связей между понятиями (Табл. 1).

Таблица 1. Виды связей между житейскими понятиями
Table 1 Types of Connections between Everyday Concepts

№ типа связи	I	II	III	IV	V	VI
Определяющий пример	овца – стадо	малина – ягода	море – океан	свет – темнота	отравление – смерть	враг – неприятель

Требуется определить аналогичные типы связей в остальных парах слов и указать для каждой пары номер соответствующего примера, в котором задан тот же тип связи, что и для данной пары слов: испуг – бегство, месть – поджог, физика – наука, десять – число, правильно – верно, плакать – реветь, грядка – огород, глава – роман, пара – два, покой – движение, слово – фраза, смелость – геройство, бодрый – вялый, обман – недоверие, свобода – воля, прохлада – мороз, страна – город, пение –

искусство, похвала – брань, тумбочка – шкаф. Следует отметить, что для каждой пары понятий может быть выявлено более одного вида связи.

Для диагностики уровней понимания связей между научными понятиями целесообразно добавить другие типы связей, специфичные для определенной области знаний. В частности, для диагностики понимания связей между математическими понятиями нами были даны названия типов связей и добавлены еще три типа связей VII – IX (Табл. 2) (Sheremeteva, 2012).

Таблица 2. *Виды связей между математическими понятиями*
 Table 2 *Types of Connections between Mathematical Concepts*

№ типа связи	I	II	III	IV	V	VI	VII	VIII	IX
Определяющий пример	овца – стадо	малина – ягода	море – океан	свет – темнота	отравление – смерть	враг – неприятель	мама – ребенок	волк – лиса	стих – поэзия
Тип связи	элемент – множество	вид – род	степень	противоположность	причина – следствие	тождественность	взаимозависимость	вид – вид	обобщение

Для диагностики уровней понимания связей между математическими понятиями мы выбрали пары математических понятий, изучаемых студентами гуманитарных направлений в вузовском курсе математики. Студентам предлагается определить тип связей между следующими парами понятий: высказывание – предикат, натуральные числа – рациональные числа, значение функция – аргумент функции, делимое – делитель, параллельность – перпендикулярность, подмножество – его дополнение, катет – гипотенуза, уравнение – строгое неравенство с переменной, многоугольник – многогранник, треугольник – многоугольник, плоскость – пространство, уравнение – система уравнений, делимость – кратность, куб – шар, система уравнений – совокупность уравнений, число – переменная, функция – соответствие, аксиома – теорема, сложение целых чисел – вычитание целых чисел, делимость слагаемых на число – делимость суммы на число. В этом случае для каждой пары понятий тоже может быть выявлено более одного вида связи.

Методы, организация и результаты исследования *Methods, Organization and Results of the Research*

Целью исследования являлось установление уровней понимания студентами связей между житейскими и математическими понятиями, выявления различий у студентов двух групп в определении типов связей, а также в выявлении связей, вызывающих наибольшее количество трудностей и требующих дополнительных усилий со стороны педагогов по преодолению этих трудностей с целью повышения эффективности обучения математике. В экспериментальной работе принимали участие студенты – будущие психологи и студенты – будущие учителя начальных классов, обучающиеся в двух вузах (Российском государственном педагогическом университете им. А.И. Герцена и Петрозаводском государственном университете) и изучившие курс математики, практически идентичный по содержанию. В исследовании принимали участие более 120 студентов. Участникам анкетирования было предложено заполнить две таблицы: «Виды связей между житейскими понятиями» (Табл. 1) и «Виды связей между математическими понятиями» (Табл. 2).

Обработка результатов анкетирования (результатов заполнения таблиц участниками) осуществлялась двумя способами: а) по количеству неправильно выявленных связей между понятиями; б) по количеству связей, которые не были выявлены. В результате обработки были получены следующие результаты:

1. Обе группы студентов (студенты, обучающиеся по профилям психология и начальное образование) обладают достаточно высоким уровнем понимания связей между житейскими понятиями. Количество неправильно выявленных связей (ошибок) не превышало 9 и в среднем составляло около 15%. Различия в количестве ошибок в двух группах студентов не являются значимыми, что было проверено с помощью критерия U Манна-Уитни (Sidorenko, 2002). О незначительности отличий в количестве правильно выявленных связей между житейскими понятиями в двух группах студентов можно судить по данным таблицы 3 (Табл. 3).

2. Незначительность различий в понимании двумя группами студентов связей между житейскими понятиями является свидетельством возможности дальнейшего проведения сравнения этих групп студентов по уровню усвоения ими связей между математическими понятиями.

Таблица 3. Результаты диагностики видов связей между житейскими понятиями
Table 3 Results of Diagnostics of Types of Connections between Everyday Concepts

№ типа связи		I	II	III	IV	V	VI
Тип связи		элемент – множество	вид – род	степень	противоположность	причина – следствие	тождественность
Количество верно выявленных связей (в %)	П	53%	46%	42%	98%	53%	67%
	НО	55%	58%	43%	87%	58%	65%

П – студенты, обучающиеся по профилю психология, НО - студенты, обучающиеся по профилю начальное образование.

3. Уровень понимания связей между математическими понятиями в обеих группах студентов оказался ниже уровня понимания связей между житейскими понятиями. Количество неправильно выявленных связей (ошибок) в некоторых анкетах доходило до 20 и в среднем составило 34%. При этом количество ошибочно выбранных связей в группе студентов, обучающихся по профилю начальное образование, оказалось существенно ниже, чем в группе студентов, обучающихся по профилю психология. Эти различия, составляющие около 20%, являются значимыми, что было подтверждено с помощью критерия U Манна-Уитни (Sidorenko, 2002). Об отличиях в количестве правильно выявленных связей между математическими понятиями в двух группах студентов можно судить по данным таблицы 4 (Табл. 4). В подавляющем большинстве случаев количество выявленных связей во второй группе студентов превышает соответствующее количество в первой группе.

Таблица 4. Результаты диагностики видов связей между математическими понятиями

Table 4 Results of Diagnostics of Types of Connections between Mathematical Concepts

№ типа связи		I	II	III	IV	V	VI	VII	VIII	IX
Тип связи		элемент – множество	вид – род	степень	противоположность	причина – следствие	тождественность	взаимозависимость	вид – вид	обобщение
Количество верно выявленных связей (в %)	П	32%	12%	0%	7%	0%	53%	26%	10%	13%
	НО	34%	10%	5%	25%	3%	62%	31%	27%	16%

П – студенты, обучающиеся по профилю психология, НО - студенты, обучающиеся по профилю начальное образование.

Наличие различий между количеством выявленных связей между двумя группами студентов мы объясняем двумя причинами: 1) наличием у студентов, обучающихся по профилю начальное образование, профессиональной мотивации на уяснение специфики математических понятий, которые в том или ином виде находят свое отражение в начальном курсе математики, 2) спецификой организации учебного процесса: при модульной организации обучения у будущих учителей математические дисциплины изучаются параллельно с дисциплинами методической направленности, поэтому, вероятно, происходит частичный перенос методов работы с понятиями начального курса математики на математические понятия, изучаемые в дисциплинах математической направленности.

4. Наиболее сложными для выявления оказались следующие типы связи между понятиями: V (причина – следствие), III (степень), и IX (обобщение). (Табл. 4). Количество верно выявленных связей этих типов составило соответственно 3%, 5% и 16% у студентов, обучающихся по профилю начальное образование, и 0%, 0% и 13% у студентов-психологов. Кроме того, у последних низкий процент выявленных связей отмечается в типах IV (противоположность) и VIII (вид – вид).

Анализ причин затруднений позволил разработать некоторые рекомендации для внесения изменений в процесс обучения математике будущих учителей начальных классов, для которых профессионально необходимо владеть разными способами работы с абстрактными понятиями.

Выявленные проблемы в установлении студентами связей между понятиями объясняются спецификой изучения математических дисциплин. В частности, трудности в определении причинно-следственных связей связаны с недостаточностью обоснований в процессе обучения. Небольшое количество учебных часов, отводимых на математические дисциплины, как правило, приводит к тому, что большая часть времени отводится на знакомство с определениями основных понятий и формулировками утверждений, а также решение стандартного набора типовых задач. Для целенаправленного формирования у студентов видения причинно-следственных связей следует шире использовать возможности для проведения обоснований. В частности, можно рекомендовать при решении большинства задач предлагать студентам находить обоснования для каждого шага в решении задачи.

Проблемы с выявлением связей между понятиями, относящихся к типу «степень», можно объяснить недостаточностью работы с содержанием изучаемых понятий, т.е. работы по выделению как существенных, так и несущественных свойств объектов, характеризующихся изучаемым понятием,

нахождением общих и различных свойств объектов, характеризующихся различными понятиями. Работа в этом направлении будет способствовать пониманию связей между абстрактными понятиями.

Незначительное количество выявленных студентами связей типа «обобщение» свидетельствует о недостаточности работы с объемами понятий, в частности, работы по установлению отношений между объемами изучаемых понятий. Элементы теории множеств, изучаемые в курсах математики для гуманитариев, дают возможность при изучении других математических понятий решать задачи, связанные с определением отношений между объемами вводимых и ранее изученных понятий, изображать эти отношения на кругах Эйлера.

Сказанное выше объясняет целесообразность дополнения курса математики некоторыми задачами и видами заданий. Их использование позволит осуществлять целенаправленную работу по перецентровке семантического поля математических понятий и построению из довольно разрозненного, как показали наши исследования, набора математических знаний и представлений функционирующего целого.

Выводы *Conclusion*

В результате проведенного теоретического анализа проблемы исследования возможностей организации процесса изучения математических дисциплин, направленного на понимание, авторами предложено использовать модифицированную психологическую методику «Логика связей», дающую возможность определения уровней понимания связей между житейскими и математическими понятиями.

В результате проведенного эмпирического исследования, основанного на анкетировании студентов двух университетов, обучающихся по профилям психология и начальное образование, и обработки данных этого анкетирования были сделаны следующие выводы:

1. Уровни понимания связей между житейскими понятиями у студентов этих двух профилей не обладают значимыми различиями. Однако, у студентов этих двух профилей имеются значимые различия в понимании связей между математическими понятиями. Правильное выявление студентами профиля начального образования большего количества связей между математическими понятиями объясняется, по мнению авторов, двумя причинами: 1) наличием у студентов, обучающихся по профилю начальное образование, профессиональной мотивации на выяснение специфики математических понятий, 2) спецификой

организации учебного процесса, т.е. модульной организацией процесса обучения, при которой математические дисциплины изучаются параллельно с методическими.

2. Наибольшее количество трудностей вызывает у студентов понимание следующих типов связей между математическими понятиями: причина – следствие, степень и обобщение.
3. Рекомендации по целесообразности дополнения курса математики некоторыми задачами и видами заданий, предложенные авторами, будут способствовать повышению уровня понимания связей между математическими понятиями.

Summary

As a result of the theoretical analysis of the problem of studying the possibilities of organizing the process of studying mathematical disciplines aimed at understanding, the authors proposed to use a modified psychological methodology "Logic of Connections", which makes it possible to determine the levels of understanding of the connections between everyday and mathematical concepts.

As a result of the conducted empirical research, based on a survey of students of two universities studying in the profiles of psychology and primary education, and processing the data of this survey, the following conclusions were made:

1. The levels of understanding of the connections between everyday concepts among students of these two profiles do not have significant differences. However, students of these two profiles have significant differences in understanding the connections between mathematical concepts. The correct identification by students of the primary education profile of more connections between mathematical concepts is explained, according to the authors, by two reasons: 1) the presence of students studying in the profile of primary education, professional motivation to understand the specifics of mathematical concepts, 2) the specifics of the organization of the educational process, i.e. the modular organization of the learning process, in which mathematical disciplines are studied in parallel with the methodological ones.
2. The greatest number of difficulties causes students to understand the following types of connections between mathematical concepts: cause-effect, degree and generalization.
3. Recommendations on the feasibility of supplementing the course of mathematics with some tasks and types of tasks proposed by the authors will help to increase the level of understanding of the connections between mathematical concepts.

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АНАЛИЗ МОТИВОВ БУДУЩИХ ВОСПИТАТЕЛЕЙ УЧРЕЖДЕНИЙ ДОШКОЛЬНОГО ОБРАЗОВАНИЯ К ИЗУЧЕНИЮ ИНОСТРАННОГО ЯЗЫКА

The Analysis of Future Preschool Teachers' Motives for Learning a Foreign Language

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Abstract. *The article focuses on the relevance of the study of future preschool teachers' motivation for learning foreign languages, which is as follows: the ability to formally and informally communicate with foreign colleagues at conferences, seminars, symposia for discussing current issues of preschool education, the search for new text, graphic, audio and video information contained in foreign language materials for professional purposes, the creation of a foreign language educational environment in a preschool institution in order to teach children the elements of a foreign language. A definitive analysis of the concept of "motive" in domestic and foreign scientific sources is carried out. Based on the definition of motives for learning a foreign language by second-year students – future preschool teachers (according to the method of O.Yatsyshin), as well as on the observation of their activities in the process of learning English and during confidential conversations with them, the students' motives for learning English as a foreign language are analyzed. Psychological and pedagogical conditions of the formation of future preschool teachers' motives for learning English as a foreign language are presented: organization of cross-cultural communicative activity of students, creation of situations of guaranteed success during the learning process, creation of a professionally oriented educational environment. It is emphasized that the abovementioned conditions should be both interconnected and interdependent; they should also be implemented in the educational process of a higher education institution not gradually, but simultaneously and systematically, in order to receive the sustainable positive motives of future preschool teachers for learning a foreign language.*

Keywords: *higher education institution, motive, future preschool teacher, foreign language learning, preschool institution, educational environment.*

Введение ***Introduction***

В процессе обучения иностранному языку студентов лингвистических учебных заведений (к которым относятся Винницкий государственный педагогический университет имени Михаила Коцюбинского и Национальный педагогический университет имени М. П. Драгоманова) возникает серьезная необходимость в выявлении мотивов, влияющих на процесс усвоения этой дисциплины. Иностранный язык не является профилирующим предметом в данных заведениях, времени, отводимого программой на изучение, недостаточно, чтобы в совершенстве овладеть им. Поэтому одной из главных задач, решаемых преподавателями в процессе обучения, является обеспечение высокого уровня мотивации студентов; они должны направлять свои усилия на нейтрализацию негативного отношения студентов к изучению иностранного языка как непрофилирующей дисциплины, формировать положительную мотивацию в обучении, то есть мотивацию, связанную с формированием потребности иноязычного общения (Malinka, 2019; Yacyshyn, 2003).

Актуальность исследования проблемы мотивации будущих воспитателей к изучению иностранных языков следует из противоречия между: возможностью академической мобильности, официального и неформального общения с иностранными коллегами во время конференций, семинаров, симпозиумов с целью обсуждения актуальных вопросов дошкольного образования и изучения зарубежного опыта, поиском новой текстовой, графической, аудио и видео информации, содержащейся в иностранных материалах профессионального направления, созданием иноязычной образовательной среды в учреждении дошкольного образования с целью обучения элементам иностранного языка и отсутствием у большинства студентов положительной мотивации к изучению иностранного языка.

Целью данной публикации является анализ мотивов к изучению иностранного языка будущих воспитателей и выявление педагогических условий, способствующих повышению положительной мотивации одновременно с коррекцией отрицательной мотивации к изучению иностранного языка.

В ходе подготовки данной публикации нами использованы следующие методы исследования: теоретические: анализ научных

источников для уточнения понятийного аппарата; синтез, систематизация и обобщение теоретических положений исследуемой проблемы; эмпирические: педагогическое наблюдение (за процессом усвоения знаний по английскому языку на практических занятиях), беседы, анкетирование будущих воспитателей детского сада.

Теоретические основы темы *The Theoretical Background*

В определении понятия «мотив» точки зрения исследователей расходятся. Мотив рассматривается и как потребность (Rubinshtejn, 2000; Vozhovich, 1995), и как цель (Leont'ev, 1994) или свойство личности (Magomed-Jeminov, 1997). Хотя общим в определении этого понятия разными учеными является то, что мотив рассматривается ими как внутреннее побуждение личности к определенному виду активности (деятельности, общения, поведения), связанное с удовлетворением соответствующей потребности; а сам мотив учения характеризуется как интерес к знаниям, направленность на отдельные стороны учебной деятельности, связанной с внутренним отношением ученика к ней, как желание учиться и тому подобное.

В процессе обучения студентов иностранному языку мотивация является ключевым понятием (Zhou, 2018; Spada & Lightbown, 1994; Gardner et al., 2004; Alshenqeti, 2018).

Согласно (Dörnyei, 2001), учитель, преподаватель должен иметь определенные навыки для формирования у студентов мотивации к изучению иностранного языка. Alshenqeti (2018) оканчивает свою публикацию перечнем мотивационных стратегий, которые могут улучшить изучение иностранных языков студентами.

Большинство авторов указывают на побудительную функцию мотива и на то, что та или иная потребность является предпосылкой всякой деятельности. Отсюда следует, что мотивы имеют потребностный характер, который определяет сходство понятий «мотив» и «потребность». Если потребность есть нехваткой чего-то, что чувствует человек, то мотив является побуждением, связанным с этой нехваткой.

Таким образом, возникает необходимость эмпирического исследования мотивов будущих воспитателей.

Методы, организация и результаты исследования ***Methodology, Organization and Results of the Research***

С целью изучения состояния мотивации студентов 3-го курса специальности 012 "Дошкольное образование" Винницкого государственного педагогического университета имени Михаила Коцюбинского к изучению английского языка нами был проведен опрос по методике "Определение мотивов изучения иностранного языка студентами нефилологических специальностей" (автор методики Yacyshyn, 2003). Опрос проводился 5.09.2020; в опросе приняли участие 31 студент – будущие воспитатели учреждений дошкольного образования. Студентам предлагалось по 10-балльной шкале оценить мотивы, побуждающие их более тщательно изучать иностранный язык. Минимальный балл – 1, максимальный – 10. Каждый вопрос начинался словами: «Стараюсь более тщательно изучать иностранный язык, потому что ...». Всего студентам было предложено 22 утверждения, каждое из которых соответствовало определенному мотиву. При обработке результатов мы учитывали тот факт, что числовой балл, присвоенный каждому из мотивов, определяет его место в индивидуальной иерархии мотивов изучения иностранного языка студентами – будущими воспитателями учреждений дошкольного образования. Суммарные числовые результаты в виде среднего арифметического позволяют сделать вывод о доминировании отдельных побуждений в регуляции деятельности изучения иностранного языка студентами, вошедших в выборку испытуемых. Опрос проводился дистанционно с помощью одного из приложений Google, а именно - google forms (ознакомиться с ней можно по ссылке <https://forms.gle/LQZKB17mbXG6am837>)

В данной публикации мы проанализируем наиболее актуальные, по нашему мнению мотивы изучения иностранного языка для будущего воспитателя.

В ответе студентов на вопрос «Стараюсь более тщательно изучать иностранный язык, потому что знать иностранный язык (несколько иностранных языков) престижно» преобладал вариант 10, т.е. максимальную оценку выбрали 20 респондентов. Соответственно большинству опрошенных присущ мотив престижа. Результаты ответов студентов на этот вопрос можно видеть на рисунке 1.

знать иностранный язык (несколько иностранных языков) престижно

31 відповідь

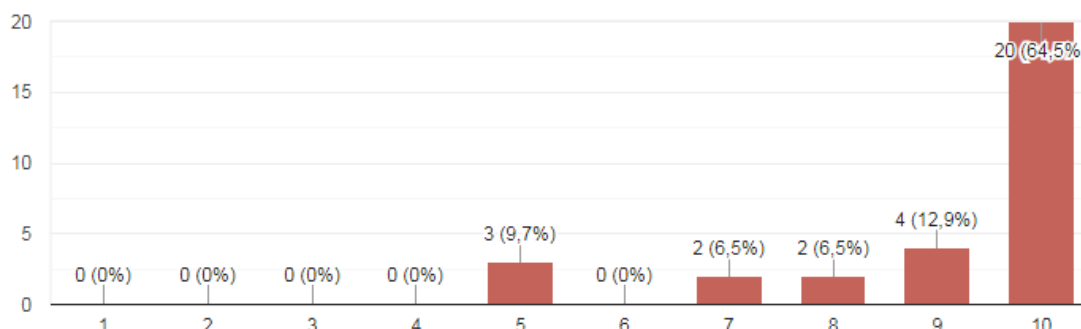


Рисунок 1. Ответы будущих воспитателей на первый вопрос «Стараюсь более тщательно изучать иностранный язык, потому что знать иностранный язык (несколько иностранных языков) престижно»

Figure 1 Answers of Future Preschool Teachers to the First Point "I am trying to study a foreign language more diligently, because it is prestigious to know a foreign language (several foreign languages)"

Познавательный мотив (ответ на вопрос «Стараюсь более тщательно изучать иностранный язык, потому что я нуждаюсь в приобретении новых знаний, познании нового в языке и через язык» приоритетным является для 8 студентов – именно они выбрали максимальный вариант – «10». И для пяти студентов, которые выбрали вариант «9», также очевидна приоритетность познавательного мотива. Трое студентов выбрали вариант «8» и шесть – вариант «7». Таким образом, можно сделать вывод о том, что для большинства студентов, принимавших участие в опросе, а именно для 22 студентов познавательный мотив в изучении английского языка является приоритетным в большей или меньшей степени.

Также нам было важно узнать наличие профессионального мотива будущих воспитателей, которые брали участие в опросе. О наличии профессионального мотива свидетельствует ответ на вопрос: «Стараюсь более тщательно изучать иностранный язык, потому что такие знания обеспечат мне успех в дальнейшей профессиональной деятельности: учу язык ради будущей профессии». Больше выборов получил вариант «5» – 7 студентов, по 5 студентов выбрали варианты «10», «9» и «8». Считаем, что именно последние свидетельствуют о приоритетности данного мотива в иерархии мотивов студента. Поэтому для 15 студентов - это почти половина студентов, участвовавших в опросе, профессиональный мотив является приоритетным. Варианты «2» и «4» не выбрал ни один студент,

по 1 студенту выбрали вариант «1» и «3», вариант «6» – 3 студентов, и наконец, вариант «7» выбрали 4 студента.

Ответы на следующий вопрос «Стараюсь более тщательно изучать иностранный язык, потому что иностранный язык позволяет пользоваться новыми источникам информации (газеты, журналы, компьютерная сеть и т.п.)» свидетельствует о приоритетности коммуникативного мотива. Проанализировав рисунок 2, можем сделать вывод о том, что для пяти студентов, участвовавших в опросе, данный мотив не является приоритетным, а для студентов, которые выбирали варианты «6», «7», «8», «9» и «10» этот мотив является приоритетным в большей или меньшей степени. По результатам нашего опроса таких студентов оказалось большинство – 26.

иностраннй язык позволяет пользоваться новыми источникам информации (газеты, журналы, компьютерная сеть и т.п.)

31 відповідь

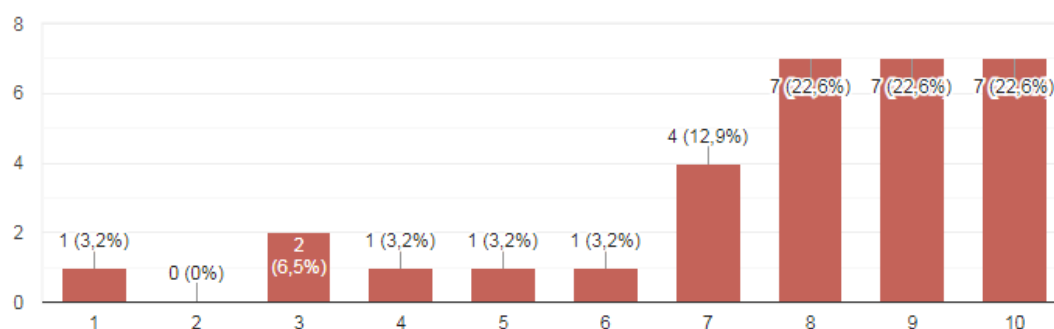


Рисунок 2. Ответы будущих воспитателей на вопрос «Стараюсь более тщательно изучать иностранный язык, потому что иностранный язык позволяет мне пользоваться новыми источниками информации (газеты, журналы, компьютерная сеть и т.п.)»

Figure 2 Answers of Future Preschool Teachers to the Point "I am trying to study a foreign language more diligently, because it gives me access to new sources of information (newspapers, magazines, computer network, etc.)"

Ответ на вопрос «Стараюсь более тщательно изучать иностранный язык, потому что не хочу выглядеть хуже других студентов в группе, отставать от них в знаниях языка» свидетельствует о приоритетности мотива избегания негативного опыта (отрицательный узкосоциальный мотив). Анализ результатов позволяет утверждать, что для большинства студентов, принимавших участие в опросе (19 студентов), этот мотив является в большей или меньшей степени приоритетным («6» - 2 студентов, «7» – 4 студента, «8» – 5 студентов и «9» и «10» – по 4

студента, 12 студентов выбирали варианты от «3» до «5»: «3» – 1 студент, «4» – 3 человека и «5» – 8 студентов.

Ответ на вопрос «Стараюсь более тщательно изучать иностранный язык, потому что для меня важно быть лучше других в изучении языка (лучшим из лучших)» свидетельствует о приоритетности мотива достижения (самоутверждения). Стоит отметить, что исследованиями психологов (Rubinshtejn, 2000; Vozhovich, 1995; Leont'ev, 1994) доказано, что такой мотив относится к негативным. Результаты нашего опроса свидетельствуют, что для значительной части студентов, участвовавших в опросе, а именно – 17 студентов такой мотив является большей или меньшей степенью приоритетным (варианты «6», «7», «8» и «10» выбрали по 4 студента и вариант «9» - 1 студент. Для 14 студентов, проходивших опрос, такой мотив является не очень весомым и приоритетным (варианты «3» и «5» выбрали по 5 студентов, вариант «2» - 2 студента и варианты «1» и «4» - по 1 студенту).

Ответ на вопрос «Стараюсь более тщательно изучать иностранный язык, потому что есть реальная перспектива поехать / выехать за границу, где знание языка необходимы», свидетельствует о приоритетности интегративного мотива. Результаты, полученные нами, указывают на приоритетность этого мотива для 22 студентов: вариант «6» выбрали 3 человека, «7» – 1, «8» – 4 студента, «9» – 8 студентов и «10» – 6. Для 9 студентов такой мотив является неприоритетным (примерно одинаковое количество студентов выбирали варианты «1», «2», «3» и «5» (по двое студентов на каждый вариант) и 1 студент выбрал вариант «4»).

Приятно удивили выборы студентов на десятый вопрос «Стараюсь более тщательно изучать иностранный язык, потому что как гражданин понимаю значимость владения иностранным языком для нужд общества», что свидетельствует о приоритетности широкого социального мотива. Для большинства студентов, участвовавших в опросе, а именно – для 24 человек, этот мотив является большей или меньшей степенью приоритетным. Наглядно обобщения ответов студентов можно видеть на рисунке 3.

Ответ на вопрос «Стараюсь более тщательно изучать иностранный язык, потому что хочу избежать наказаний (выговоров, плохих оценок) и осуждения преподавателей, родителей, товарищей» имел целью проверить приоритетность мотива избегания отрицательного опыта. Результаты показали, что для 18 студентов, проходивших опрос, этот мотив является значимым, причем 6 из них выбрали вариант «9», а четверо – вариант «10». Стоит отметить, что данный мотив по классификации (Markova, 1990) относится к отрицательным мотивам, поэтому преподавателям

иностранного языка стоит обратить внимание на переориентацию этого мотива в положительный.

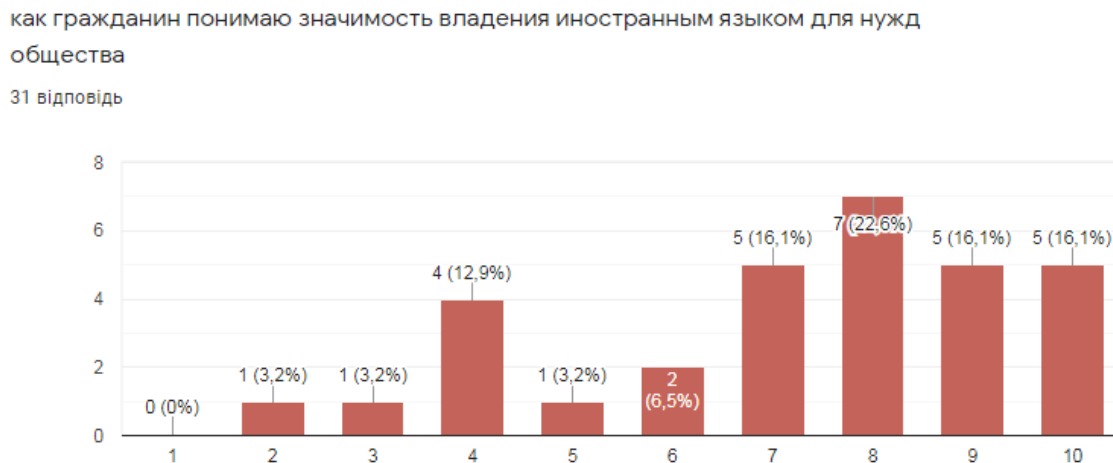


Рисунок 3. Распределение ответов будущих воспитателей на вопрос «Стараюсь более тщательно изучать иностранный язык, потому что как гражданин понимаю значимость владения иностранным языком для нужд общества»
Figure 3 Distribution of Future Preschool Teachers' Answers to the Point "I am trying to study a foreign language more diligently, because as a citizen I understand the importance of knowing a foreign language for the needs of society"

А вот ответы на последний вопрос «Стараюсь более тщательно изучать иностранный язык, потому что за упорный труд желаю получить полезный результат (положительные оценки, освобождение от экзаменов и зачетов, диплом с отличием и т.д.)» были ожидаемыми: прагматический мотив, приоритетность которого можно определить по ответам на этот вопрос, является важным для 28 студентов, которые проходили опрос. Причем вариант «10» выбрали 14 студентов, «6», «8» и «9» – 4, 5 и 4.

Итак, на основании результатов проведенного эмпирического исследования можем сделать вывод о том, что несмотря на значительное количество положительных выборов, есть мотивы, которые требуют большего внимания и коррекции преподавателя. Как, скажем, прагматический мотив, мотив достижения и мотив избегания отрицательного опыта. Считаем, что предлагаемые далее психолого-педагогические условия помогут преподавателю учреждения высшего образования в коррекции этих мотивов.

Развитию положительных мотивов, которые мы обнаружили в будущих воспитателей, принимавших участие в опросе, и коррекции негативных будут способствовать, по нашему мнению, такие

педагогические условия: организация кросс-культурной коммуникативной деятельности студентов в специально созданной языковой среде, создание ситуаций гарантированного успеха в обучении, создание профессионально направленной образовательной среды, формирование навыков критической рефлексии в отношении себя и собственного учебного процесса.

Наблюдение за процессом овладения будущими воспитателями иностранным языком, беседы с ними и опыт авторов этой публикации (Yacyshyn, 2003; Malinka, 2009) доказывает, что наибольшее влияние на формирование положительной мотивации осуществляет общение с носителями языка. Именно поэтому мы рекомендуем на практических занятиях по иностранному языку организовывать кросс-культурную коммуникативную деятельность студентов в специально созданной языковой среде. В связи с интеграцией Украины в мировое и европейское образовательное пространство, введением безвизового режима у современных студентов увеличились возможности путешествий за границу, в частности в англоязычные страны. Однако, возникновение пандемии отрицательно повлияло на мобильность студентов. Но, несмотря на это мы можем на практических занятиях по иностранному языку организовывать онлайн встречи с носителями языка (это могут быть и иностранные воспитатели), на которых обсуждать актуальные для дошкольного образования вопросы или обсуждать общественные проблемы, которые косвенно могут относиться к проблемам дошкольного образования. По нашему мнению, такое общение, кроме положительного влияния на формирование мотивации будущих воспитателей к изучению иностранного языка будет способствовать формированию планетарного сознания, почтительного отношения к людям других национальностей, развития средств толерантного поведения, в частности речевого, обеспечение взаимосвязи социальной, культурной и языковой ориентации в поликультурной среде, создание условий для осознания индивидуальности, специфичности украинского и иностранных языков и культур.

С целью создания языковой среды, что, в свою очередь, позволит овладеть необходимыми навыками общения, мотивирует на дальнейшее изучения иностранного языка, можно использовать сайты международного общения молодежи (www.Sharedtalk.com, Livemocha.com). Для активизации самостоятельной работы с учебными Интернет-ресурсами различной структуры преподавателю необходимо осуществлять поиск и отбор необходимых интернет-ресурсов, давая их точные адреса, а также научить студентов работать с выбранными Интернет-ресурсами. При этом необходимо оценивать, насколько выбранные ресурсы будут

соответствовать языковому и общекультурному уровню конкретной группы студентов. Существенным критерием при отборе материала также выступает его актуальность, степень новизны, культуросообразность подобранной информации. Ссылка на поисковые системы также является преимуществом, поскольку облегчает отбор нужной информации и помогает сэкономить время. Рациональное использование видео- и аудиоматериалов может существенно способствовать обучению восприятия будущими воспитателями английского языка и подготовке их к ситуациям реального общения, поэтому важно применять оправданную тактику управления процессом, то есть правильно подобрать или разработать упражнения для реализации конкретной задачи.

В ситуациях успеха (второе педагогическое условие) не столько реализуется возможность знаний студентов, сколько предоставляется им большая возможность личностной реализации. В таких условиях уровень положительной мотивации к изучению иностранного языка должен расти и становиться выше, чем в обычной ситуации, и именно устойчивая внутренняя мотивация должна обеспечивать личности надежный успех, побуждая к преодолению трудностей на пути его достижения.

Очень важной особенностью формирования мотивации к изучению иностранного языка будущими воспитателями является необходимость создания преподавателем в процессе обучения этой дисциплине таких условий, чтобы процесс обучения по возможности был имитацией деятельности будущих специалистов и максимально приближался к их будущей профессиональной деятельности. Эффективность создания профессионально направленной образовательной среды (третье педагогическое условие) обусловлено тем, что в таком случае усвоение новых знаний по иностранному языку происходит путем обсуждения актуальных проблем дошкольного образования с учетом интересов, мировоззрения учащихся; на занятиях создаются условия общения, приближенные к условиям естественной языковой среды, что положительно влияет на развитие внутренней положительной мотивации. Чем менее строго учебной будет деятельность, чем более приближенной к условиям реальной действительности или сферы будущей профессиональной деятельности студента, тем выше будет уровень мотивации. Превращая учебную задачу в задачу общения, которая является лично значимой для студента, мы создаем условия для роста мотивации к овладению языком. С этой целью можно использовать специальные педагогические ситуации. Например: представьте, что вы уехали за границу с целью изучения опыта иностранных коллег (например, подходов в образовании и воспитании детей дошкольного возраста частного детского сада). Одна группа студентов будет играть роль

воспитателей иностранного детского сада, а другая - отечественного. Для того, чтобы у студентов не было ощущения искусственности ситуации, стоит подобрать реальный частный детский сад. Такая ситуация будет побуждать студентов пополнять словарный запас, совершенствовать речевые навыки, а «дополнительным продуктом» будет обогащение методической копилки инновационным опытом.

Формирование навыков критической рефлексии в отношении себя и собственного учебного процесса возможно при условии систематического применения студентами процессов анализа и самоанализа во время практических занятий (четвертое педагогическое условие). Применению рефлексивного анализа и формированию рефлексивных умений способствует и выполнение в процессе подготовки к практическим занятиям по иностранному языку следующих задач: постановка тактических и стратегических целей будущей профессиональной деятельности, составление программы личностного / профессионального саморазвития, анализ ежедневных затрат времени и эффективности его использования, разработка упражнений на самомотивацию и другие. Рефлексия направлена на развитие профессиональных умений, оптимальный выбор методов и средств обучения, повышению мотивации к изучению иностранного языка.

Рассмотренные педагогические условия, по нашему мнению, будут способствовать формированию положительной мотивации будущих воспитателей к изучению иностранного языка, реальному сотрудничеству между преподавателем и студентами, усилению интереса к будущей педагогической деятельности. Соответственно они должны быть взаимосвязанными и взаимообусловленными, а также реализованными в образовательном процессе учреждения высшего образования не поочередно, а комплексно и системно, что поспособствует формированию устойчивых положительных мотивов будущих воспитателей к изучению иностранного языка.

Выводы *Conclusions*

На основе анализа научной литературы, эмпирического выяснения мотивов изучения иностранного языка студентами третьего курса - будущими воспитателями учреждений дошкольного образования (Yacyshyn, 2003), наблюдения за деятельностью студентов при изучении английского языка, доверительных бесед с ними можем сделать следующие выводы.

Имеющееся противоречие между возможностями в удовлетворении профессиональных интересов воспитателя заведения дошкольного образования путем обмена опытом с иностранными коллегами и поиска актуальной информации в сети Интернет, которые предоставляет владение воспитателем иностранным языком и отсутствием приоритетности в иерархии мотивов значительной части студентов положительных мотивов в овладении иностранным языком позволяет решить создание специальных педагогических условий в учреждении высшего образования. В частности, к таким педагогическим условиям относим организацию кросс-культурной коммуникативной деятельности студентов, создание ситуаций гарантированного успеха в обучении, создание профессионально направленной образовательной среды, формирование навыков критической рефлексии в отношении себя и собственного учебного процесса.

В частности, переориентировать мотив избегания негативного опыта (отрицательный узкосоциальный мотив), что является приоритетным для 61,3% будущих воспитателей, участвовавших в опросе (если считать и вариант «5», который выбрали 25,8% студентов, то цифра становится 87%, на один из положительных (познавательных или социальных) мотивов в изучении иностранного языка помогает одно из предлагаемых нами педагогических условий – создание ситуаций гарантированного успеха в обучении.

Summary

Based on the analysis of scientific literature, determination of motives for learning a foreign language by second-year students - future preschool teachers (according to the method of Yatsyshyn, 2003), observation of students' activities while learning English, and confidential conversations with them we can draw the following conclusions.

It is obvious that a good command of foreign languages gives future preschool teachers a lot of opportunities to satisfy their professional needs and interests (e.g. the opportunity to share their experiences with foreign colleagues, to find relevant information on the Internet, etc.). However, for a significant part of students positive motives for learning a foreign language don't rank top in the hierarchy of motives. It is possible to settle this contradiction due to special pedagogical conditions created in a higher education institution. Such conditions include the organization of cross-cultural communicative activities of students, the creation of situations of guaranteed success in the learning process, the creation of a professionally oriented educational environment.

In particular, one of the above mentioned pedagogical conditions - the creation of situations of guaranteed success in the learning process – helps reorient the motive of avoiding negative experiences (negative narrow social motive) which is prior for 61.3% of future preschool teachers who participated in the survey (with account of point “5”, which was chosen by 25.8% of the students, the figure comprises 87.1%) to one of the positive motives in learning a foreign language.

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ОСОБЕННОСТИ ФОРМИРОВАНИЯ ГРАЖДАНСКОЙ АКТИВНОСТИ СТУДЕНТОВ УНИВЕРСИТЕТА В УСЛОВИЯХ КВАРАНТИНА

Peculiarities of Formation of Civil Engagement of University Students in Quarantine Conditions

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Abstract. *The article defines the essence of the concept of “civic engagement of university students” and the process of formation of civic engagement of university students in quarantine conditions. The structure of civic engagement of university students is characterized. Criteria are substantiated and indicators of the formation of civic engagement of university students are defined: incentive criterion (sustainable social motives for achieving socially significant goals, the student’s achievement motive, value attitude to future professional activities); epistemological criterion (knowledge about public organizations and their activities, awareness of knowledge of civic responsibility, the presence of civic consciousness) behavioral (leadership ability, responsibility for own decisions, actions and team actions) creatively developing criterion (the presence of self-knowledge skills, the ability to introspection, self-esteem, self-criticism of the results of one’s own socially useful activity). The substantive characteristic of such levels of formation of civic engagement of university students as: insufficient, initial, sufficient, high is given. The use of such digital tools is shown, which allows to form effectively the civic engagement of university students in quarantine conditions: a) the creation of an author’s blog (to display information about: the national identity of the Ukrainian people (history, traditions, language, culture, etc.), planned for the future and already organized events by the student self-government were held, video and photo reports of the events) b) use of Google applications (Google meet - for conferences, meetings, online consultations; Google Drive, Google forms - for online questionnaires with the aim of: predicting the relevance of the event, it is planned, determining the effectiveness*

of the activities, identifying the psychological atmosphere in the team, identifying the socio-psychological characteristics of students, student awareness; Google photos; Google calendar; Google video).

The results of an experimental study on the formation of civic engagement of university students, carried out during 2019 at V.O. Sukhomlynskyi Mykolaiv National University, are presented, which proves the practical importance of using such digital tools in quarantine conditions.

Keywords: *civic engagement of university students, the formation of civic engagement of university students, digital tools, blog, Google applications.*

Введение ***Introduction***

Проблема формирования гражданской активности не является новой в мировой научной практике. Еще в прошлом веке Уильям Джеймс (James, 1910) утверждал, что молодежь обязательно нужно привлекать к участию в общественной работе.

О формировании гражданской активности, как одно из приоритетных направлений развития и самореализации молодежи в Украине, отмечается как в Концепции Государственной целевой социальной программы «Молодежь Украины» на 2016-2020 гг. (Derzhavna cil"ova social"na prohrama «Molod" Ukrainy» na 2016–2020 rr., 2016), Так и в ряде международных документов, в частности в Хартии основных прав Евросоюза (Хартија основних прав Yevrosoyuzu, 2000), Европейской хартии участия молодежи в общественной жизни на местном и региональном уровне (Yevropejs"ka hartija uchasti molodi v hromads"komu zhytti na miscevomu i rehional"nomu rivni, 2015) и других документах.

Формирование гражданской активности студентов в учреждениях высшего образования осуществляется преимущественно во внеаудиторное время. Однако главной проблемой в воспитании этого качества в украинских учреждениях высшего образования является карантинные мероприятия, начавшиеся с марта 2020 года. Именно поэтому и актуализировалась потребность в налаживании взаимодействия между преподавателем и студентами не только в учебной, но и воспитательной целью.

Теоретические основы темы ***The Theoretical Background***

Как одно из средств формирования гражданской активности рассматривается волонтерство, в том числе участие в общественных организациях, занимающихся СПИДом (как клиенты, волонтеры,

сотрудники или сторонники) (Omoto, Snyder & Hackett, 2010; Clary & Snyder, 1991).

Американская психологическая ассоциация поддерживает идею, что педагоги должны нести ответственность за привитие студентам общественных ценностей (в частности, чувствительность и толерантность к людям разного происхождения и способностей, непредвзятое отношение, уважение к социокультурному и международному многообразию), а также за формирование гражданской активности, а не только профессиональных знаний (APA, 2007). Однако, существуют существенные барьеры, которые включают отсутствие административной поддержки, ограничение времени преподавателей и нежелание студентов заниматься общественной работой (Chenneville, Toler & Gaskin-Butler, 2012).

Существуют исследования, в которых авторы пытаются рассмотреть гражданство с психологической точки зрения, то есть понять гражданство с точки зрения гражданина (Stevenson, Dixon & Hopkins, 2015). Конечно, в привлечении молодежи к общественной деятельности значительная роль принадлежит семье и сверстникам, школе, университету, церкви, рабочему коллективу (Pancer, 2014; Vyshkivskaya & Shykyrynska, 2021)

Определим сущность понятия «гражданская активность студентов университета»

Под гражданской активностью ученые понимают одну из форм социальной активности, основной целью которой является реализация социально значимых интересов (Basnin, 2009; Davydyuk, 2015; Karas, 2000) одно из главных условий формирования и функционирования гражданского общества; специфическое качество личности каждого гражданина и важную составляющую социальной активности (Chernuha, 2017); деятельность людей, связанную с осуществлением общественных функций в тех сферах жизни общества, которые не могут регулироваться или реально не регулируются государством (Акитов, 2008).

Гражданскую активность студентов университета определяем как структурно-содержательное качество личности, охватывающее знания прав и обязанностей студенческой молодежи; осознание ответственности за качество будущей профессиональной деятельности; стремление мобилизовать свои морально-волевые усилия на достижение общественно значимой цели; способность к решительным действиям, направленным на улучшение студенческой общины и общества; умение адекватно реагировать на критику студенческого общества, анализировать результаты собственной гражданской деятельности и прогнозировать последствия этой деятельности.

Обосновано и охарактеризованы компоненты гражданской активности студентов университета: мотивационно-ценностный (наличие интереса к общественной работе и будущей профессиональной деятельности, желание участвовать в жизни студенческого сообщества и общества), когнитивно-информационный (наличие целостного представления о задачах и содержании гражданской деятельности, основы социально-психологических, экономических, политических, правовых знаний, знание культурных, исторических достижений народа Украины и мировой цивилизации), операционно-деятельностный (умение осуществлять социально-преобразующую деятельность; создавать собственные социальные проекты, проводить благотворительные акции, умение брать на себя ответственность, делать осознанный выбор) и результативно-рефлексивный (умение критически оценивать свои поступки, умение анализировать и прогнозировать результативность собственных действий в процессе совместных проектов).

Формирование гражданской активности студентов университета в условиях карантина представлено как процесс воздействия (с помощью цифровых средств) актива студенческого общества и преподавательского состава университета на способность студента к решительным действиям, направленных на улучшение условий студенческой жизни и позитивных изменений в обществе.

Для того, чтобы определить эффективность цифровых средств в налаживании коммуникации между преподавателями и студентами, а также членами студенческого самоуправления и студентами университета в процессе формирования гражданской активности нужно разработать критерии и показатели. Нами определены следующие критерии и показатели сформированности гражданской активности студентов университета: побудительный критерий (устойчивые социальные мотивы по достижению общественно значимых целей, наличие у студента мотива достижения, ценностного отношения к будущей профессиональной деятельности); гносеологический критерий (знания об общественных организациях и их деятельности, осознанность знаний о гражданской ответственности); поведенческий (способность к лидерству; проявление ответственности за собственные решения, действия и действия команды); творчески-развивающий критерий (способность к самопознанию, самоанализу, самооценке, самокритике результатов собственной общественно-полезной деятельности).

Уровень сформированности гражданской активности студентов университета определено как регулярность и постоянство проявления показателей гражданской активности студентов университета. Определяем

такие уровни сформированности гражданской активности студентов университета: недостаточный, начальный, достаточный, высокий.

В течение 2015-2016 учебном году проведено констатирующий эксперимент, в ходе которого были применены такие стандартизированные методики «Мотивация успеха и боязнь неудачи», «Методика выявления мотивации достижений», «Изучение мотивации обучения в вузе», «Выявление и оценка коммуникативных и организаторских склонностей» (КОС-2), «Самооценка личности», «Дерево» и тест «Определение уровня сформированности гражданских качеств личности» а также авторские анкеты «Исследование знаний студентов о гражданственности» и «Гражданское сознание».

К исследованию было привлечено 375 студентов. Из них 188 человек в экспериментальной группы (ЭГ) и 187 человек в контрольной группы (КГ) (Vojchun & Shykyryns"ka, 2015).

Формирующий эксперимент проведен в течение 2016-2017 и 2017-2018 учебных годов на базе Николаевского национального университета имени В. А. Сухомлинского, Национального педагогического университета имени М. П. Драгоманова; Таврического национального университета имени В. И. Вернадского, ДВНЗ «Донбасский государственный педагогический университет» (ДГПУ) и Николаевского межрегионального института развития человека. В ходе формирующего этапа педагогического эксперимента проверялась эффективность разработанных нами педагогических условий формирования гражданской активности студентов университета средствами самоуправления (содержательно-методическое обеспечение работы студенческих тьюторов, опора на внутренние потребности студента, использование современных информационно-коммуникационных технологий, целенаправленная организация и проведение soft skills-тренингов).

В рамках третьего педагогического условия нами использовались следующие цифровые инструменты, позволяющие эффективно формировать гражданскую активность студентов университета в условиях карантина: а) создание авторского блога (для отображения информации о: национальной самобытности украинского народа (истории, традиций, языка, культуры и др.), запланированные на будущее и уже проведены мероприятия, организованные студенческим самоуправлением, видео- и фотоотчеты о проведенных мероприятиях) б) использование Google приложений (Google meet – для проведения конференций, заседаний, консультаций он-лайн; Google Диск, Google форм – для он-лайн анкетирования с целью: прогнозирования актуальности запланированного мероприятия, определения эффективности проводимых мероприятий, выявление психологической атмосферы в коллективе, выявления

социально-психологических особенностей студентов, информированности студентов; Google фото; Google календарь; Google видео).

Контрольный эксперимент проведен в сентябре-октябре 2018 года. Было использовано диагностический инструментарий идентичный тому, который использовался вначале исследования.

Обобщенные данные по сформированности гражданской активности студентов университета в начале и после завершения формирующего эксперимента представлены в таблице 1 и на рисунке 2.

Таблица 1. Обобщенные данные по гражданской активности студентов университета в начале и после завершения формирующего эксперимента (в абсолютных числах и в%)

Table 1 Summary of Data on Civic Engagement of University Students at the Beginning and after the Completion of the Formative Experiment (in absolute numbers and in%)

Уровень	Показатели							
	ЕГ		ЕГ		КГ		КГ	
	Вначале эксп.		После эксп.		Вначале эксп.		После эксп.	
	осіб	%	осіб	%	осіб	%	осіб	%
недостаточный	42	22,5	21	11,2	44	23,4	40	21,3
начальный	100	53,5	82	43,6	101	53,7	100	52,2
достаточный	34	18,2	54	28,7	32	17	36	18,1
высокий	11	5,8	31	16,5	11	5,9	12	6,4

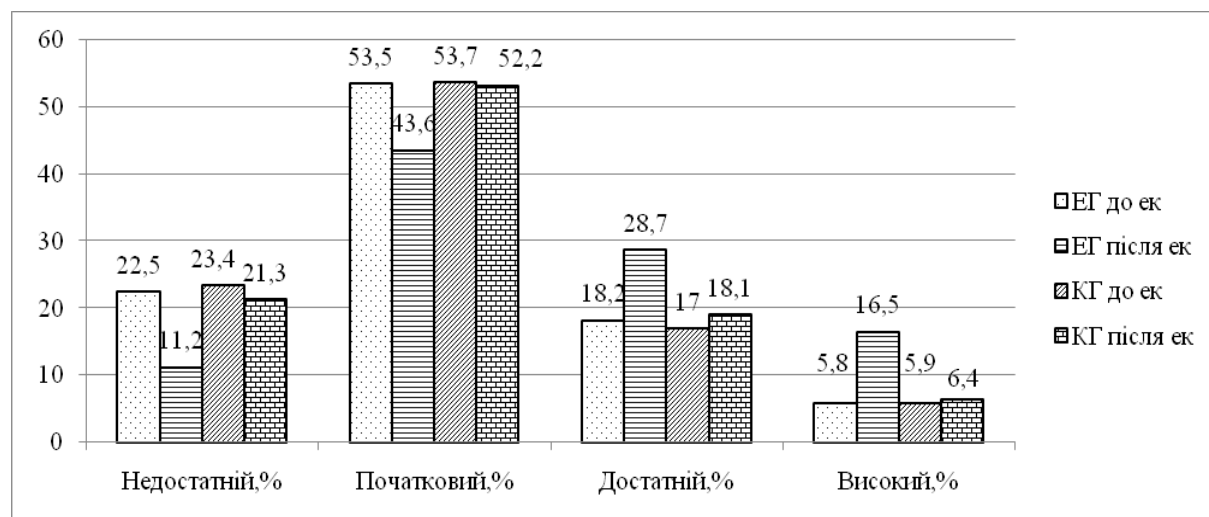


Рисунок 2. Обобщенные уровни гражданской активности студентов университета по окончании эксперимента (%)

Figure 2 Generalized Levels of Civic Engagement of University Students at the end of the Experiment (%)

Приведенные результаты экспериментального исследования по формированию гражданской активности студентов университета доказывают практическую значимость использования таких цифровых инструментов в условиях карантина.

Методы, организация и результаты исследования ***Methodology, Organization and Results of the Research***

Поскольку во время карантина актуализировалась потребность в использовании цифровых средств не только для дистанционного обучения, но и для налаживания взаимодействия между преподавателями и студентами с целью воспитательных задач и гражданской активности в частности, нами был проведен опрос: преподавателей (<https://forms.gle/fyruvCyQsvG3FmTk8>) Николаевского национального университета имени В.А.Сухомлинского и Винницкого государственного педагогического университета имени Михаила Коцюбинского и членов студенческого самоуправления (<https://forms.gle/qiXxFeoJqbzcnQHS9>) на предмет использования ими приложений Google в воспитательной работе. Именно такие приложения использовались нами в процессе формирования гражданской активности студентов университета в рамках педагогического условия – использование современных информационно-коммуникационных технологий. Опрос проводился в ноябре 2020 года.

В частности, мы предлагали преподавателям и членам студенческого самоуправления ответить на следующие вопросы: Считаете ли Вы использования приложений Google (Google meet, Google Drive, Google forms, Google photos; Google calendar; Google video и др.) целесообразными в воспитательной работе со студентами во время карантина / в работе студенческого самоуправления во время карантина? Какие цифровые инструменты Вы использовали в воспитательных целях за время карантина? / В работе студенческого самоуправления во время карантина? Как часто с целью воспитательного воздействия на студентов Вы использовали приложение Google meet; Google Drive; Google calendar; Google forms и Google video за время карантина? / В работе студенческого самоуправления во время карантина? Этот вопрос мы объединили в данной публикации, на самом деле, это было пять вопросов. Также преподавателям мы предлагали вопрос: целесообразно, по Вашему мнению, является создание собственного блога в формировании гражданской активности студентов университета?

Всего удалось задействовать к опросу 8 преподавателей и 22 студента. Проанализируем результаты проведенного опроса.

На первый вопрос о целесообразности использования приложений Google в воспитательной работе со студентами во время карантина / в работе студенческого самоуправления во время карантина все преподаватели дали положительный ответ и 90,9% студентов.

Ответы студентов на второй вопрос распределились следующим образом: Google meet – 11 (50%); Google Drive – 15 (68,2%); Google calendar – 8 (13,6%); Google forms – 11 (50%), Google photos – 8 (36,4%) и Google video – 7 (31,8%), не использовала – 1 (4,5%). Ответы же преподавателей были такими: Google meet – 8 (100%); Google Drive – 0 (0%); Google calendar – 2 (25%); Google forms – 2 (25%), Google photos – 1 (12,5%) и Google video – 3 (37,5%). Поскольку респонденты имели возможность, отвечая на этот вопрос, выбирать несколько вариантов, поэтому сумма не равна 100%.

Относительно ответа на вопрос о частоте использования приложения Google meet ответы студентов были такими: использую систематически – 31,8%, часто – 13,6%, не очень часто – 36,4%, очень редко – 9,1%, совсем не использую – 9,1%. А преподаватели отвечали так: использую систематически – 25%, часто – 37,5%, не очень часто – 37,5%, очень редко – 0%, совсем не использую – 0%.

Относительно ответа на вопрос о частоте использования приложения Google Drive ответы студентов были такими: использую систематически – 31,8%, часто – 27,3%, не очень часто – 22,7%, очень редко – 9,1%, совсем не использую – 9,1%. А преподаватели отвечали так: использую систематически – 12,5%, часто – 0%, не очень часто – 25%, очень редко – 25%, совсем не использую – 37,5%.

Что касается ответа на вопрос о частоте использования приложения Google calendar ответы студентов были такими: использую систематически – 9,1%, часто – 9,1%, не очень часто – 13,6%, очень редко – 18,2%, совсем не использую – 50%. А преподаватели отвечали так: использую систематически – 0%, часто – 25%, не очень часто – 37,5%, очень редко – 12,5%, совсем не использую – 25%.

Ответы студентов по частоте использования приложения Google forms были такими: использую систематически – 27,3%, часто – 18,2%, не очень часто – 18,2%, очень редко – 13,6%, совсем не использую – 22,7%. А ответы преподавателей такими: использую систематически – 12,5%, часто – 25%, не очень часто – 12,5%, очень редко – 12,5%, совсем не использую – 37,5%.

Относительно ответа на вопрос о частоте использования приложения Google video ответы студентов были такими: использую систематически – 13,6%, часто – 22,7%, не очень часто – 9,1%, очень редко – 13,6%, совсем не использую – 40,9%. А преподаватели отвечали так: использую

систематически – 0%, часто – 12,5%, не очень часто – 50%, очень редко – 0%, совсем не использую – 37,5%.

О важности создания собственного блога в формировании гражданской активности студентов университета (ответ на последний вопрос анкеты) все преподаватели отметили, что он является целесообразным.

Выводы *Conclusions*

Обобщение научной литературы, результатов опроса преподавателей учреждений высшего образования и членов студенческого самоуправления, бесед со студентами позволило сделать следующие выводы.

Современные цифровые инструменты, в частности приложения Google еще не в полной мере используются преподавателями высших учебных заведений и членами студенческого самоуправления в воспитании гражданской активности и налаживании конструктивного взаимодействия между субъектами образовательного процесса, несмотря на актуальность их использования в условиях карантина.

Проблема использования цифровых средств в процессе формирования гражданской активности студентов университета не исчерпывается проведенным исследованием. Перспективными направлениями исследования затронутой проблемы могут стать следующие: разработка механизма взаимодействия органов студенческого самоуправления с другими организациями, учреждениями, образовательными учреждениями в процессе формирования гражданской активности студенческой молодежи во время карантина; исследования проблемы формирования ответственности студентов университета в условиях студенческого самоуправления; изучение особенностей влияния академической мобильности на уровень гражданской активности студентов. Актуальным остается вопрос путей внедрения новейших информационно-коммуникационных технологий в процесс формирования гражданской активности студенческой молодежи.

Summary

Generalization of scientific literature, results of a survey of teachers of higher education institutions and members of student self-government, conversations with students allowed us to draw the following conclusions.

Modern digital tools, in particular Google applications, are not yet fully used by teachers of higher educational institutions and members of student self-government in

fostering civic engagement and establishing constructive interaction between the subjects of the educational process, despite the relevance of their use under quarantine conditions.

The problem of using digital means in the process of forming civic engagement of university students is not limited to the current research. Promising areas of research on the raised problem can be the following: development of a mechanism for interaction between student self-government bodies with other organizations, institutions, educational institutions in the process of forming civic engagement of student youth; research of the problem of formation of responsibility of university students in the conditions of student self-government; studying the features of the influence of academic mobility on the level of students' civic engagement. The question of ways of introducing the latest information and communication technologies into the process of forming civic engagement of student youth remains relevant.

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DEVELOPMENT OF REFLEXIVE COMPETENCE WITH THE HELP OF THE PROJECT METHOD IN ENGLISH LANGUAGE TEACHING FOR STUDENTS OF THE SPECIALTY “INFORMATION SYSTEMS AND TECHNOLOGIES”

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Abstract. *The development of reflexive competence and the process of evaluating the results becomes a prerequisite for the formation of each student as a thinking, sociable and socially active person. Therefore, from the huge number of different pedagogical technologies used in universities, it is necessary to choose one that more contributes to the development of these qualities. We believe that this technology is project-learning technology by which the students learn to analyze and evaluate themselves, other participants in interaction and joint activities. We believe that the use of project learning technology in the form of the web-quest in the lesson contributes to the development of the ability to reflect. The problem of research is the optimization of ways to form reflexive competence through project training at English lessons. The purpose of the study: to form a reflexive competence using the method of projects in English lessons. Object of study: process of reflexive competence formation in students. The subject of the study: the use of project training technology in the formation of reflexive competence in students of specialty “Information systems and technologies”. Experimental work was carried out in control and experimental groups among students of the above mentioned specialty. A total of 30 students participated in the experiment. The experimental and control group was an equal number of students - 15 people.*

Keywords: *reflexive competence, reflection process, IT students, English language teaching, project method, web-quest, internet resources for teachers.*

Introduction

The priority goal of modern education is the development of a personality ready for self-education and self-development. According to the Federal State Educational Standard of Higher Education of 2016, special attention is paid to the formation of reflexive abilities. According to this document, graduates of a higher educational institution should have formed not only the ability of reflexive-evaluative activity, but also the ability to self-organization and self-regulation.

The standard focuses on the importance of implementation of students' assessment activities and, in turn, the formation of the reflexive competence. The

research of this kind is currently being carried out by S.S. Kashlev, T.P. Leontyeva, V.D. Shadrikov, S. Hole and other researchers. The reflection allows the formation of personal and cognitive universal educational actions. Moreover, in connection with the changes taking place in modern society, it is important to maintain an interest in mastering any foreign language among students of linguistic and non-linguistic specialties. To do this, it is necessary to teach the student to analyze the content of his activities, evaluate it and plan a positive result. Obviously, reflection allows formation of self-control, self-esteem, self-regulation and the formation of a habit of comprehending events, problems, life, helps students to formulate the results obtained, redefine the goals of further work, and adjust their educational path.

As part of our research, we decided to focus on the use of project-learning technology. Many researchers study this problem: V.B. Lebedintsev, I.I. Mazur, E.S. Polat, V.N. Yanushevsky, A.V. Leontovich, N.A. Kralya, M. Holm, P. Blumenfeld and others.

In our opinion, project-based learning technology has a number of advantages over other methods. In addition, in the standard of higher education for bachelors in the field of "Information systems and technologies", special attention is paid to the method of projects within the framework of academic disciplines. The use of the technology of project activity is most effective, since it is characterized by an individual, communicative, practice-oriented orientation and is focused on the independent work of students, which contributes to the development of skills such as planning activities, projecting results, monitoring, analyzing and evaluating activities, correlating results and plans. It is these skills that determine the essence of reflection process.

However, in the existing practice of English language teaching (ELT) in higher educational institutions, the possibilities of project-based learning technology are not used sufficiently in the process of forming reflexive competence. The choice of the most optimal ways to form this personality quality of students through project-based learning determines the relevance and problem of our research.

The research problem is to optimize the ways of forming reflexive competence through project-based teaching in English lessons.

Purpose of the study: to form reflexive competence using the project method in English lessons for students of the "Information systems and technologies" specialty.

Object of research: the process of formation of reflexive competence in students

Subject of research: the use of project-based teaching technology in the formation of reflexive competence in students.

Literature Review

In our opinion, the technology of project-based teaching should be applied in the implementation of programs of all academic disciplines, in particular, in English lessons. Thus, students will gain experience in project activities, as a special form of educational work, contributing to the education of independence, initiative, responsibility, increasing motivation and effectiveness of educational activities; in the course of implementing the initial concept at a practical level, they will master the ability to choose adequate means of the task at hand, to make decisions, including in situations of uncertainty. They will have the opportunity to develop the ability to choose several options for solutions, to search for non-standard solutions, to find and implement the most acceptable solution. Before introducing project-based learning into the educational process, we need to present a literature review in this topic.

Russian and foreign academicians (A.V. Leontovich, E.S. Polat, M.Y. Oleshkov, P. Blumenfeld, etc.) specialize in the study of the technology of project-learning technology. Today there are many different definitions of the concept of "project learning technology". Let's consider some of them.

E.G. Azimov defines it as one of the teaching technologies, including a foreign language, based on modeling social interaction in a small group during the educational process (Azimov, 1999)

According to V.V. Davydov, the technology of project-based learning is a learning system in which students acquire knowledge and skills in the process of planning and performing gradually more complicated practical tasks – projects (Davydov, 1999).

M.Y. Oleshkov, on the other hand, understands it as a teaching method that guides students towards creating a joint educational product (Oleshkov, 2006)

European methodologists give various definitions of the technology of project technology. P. Blumenfeld considers it as an integrated approach to teaching, focused on involving students in research. In these conditions, they seek solutions to non-standard problems by asking questions, discussing ideas, making predictions, developing plans, collecting and analyzing data, drawing conclusions, passing them on to others and creating the final products of educational activities (Blumenfeld, 1991).

According to T. Markham's definition, project-based learning technology is a method that stimulates students to study a school subject, acquire new knowledge and skills by solving complex, authentic and carefully designed problems by a teacher (Markham, 2003).

M. Holm understands it as a teaching method that makes students find solutions to specific problems. He notes that project-based learning is student-

centered. They select, plan, research, and manufacture a product by answering a question that is directly related to true to life issues (Holm, 2011).

We see that, despite the differences in definitions, the opinions of the authors agree that the technology of project-based teaching is focused on the independent work of students in obtaining knowledge, skills and experience, while the final product has practical value for students. In addition, all researchers are convinced that it is a practice of joint activity between the participants of the educational process and is based on the following principles:

- the principle of individualization: an individual approach is carried out and thus favorable conditions work for the development of individual abilities.
- the principle of communicative orientation: in the project activity, it is assumed that there are certain relationships between the participants in the educational process.
- the principle of self-study: students have the opportunity to show initiative and independence in the educational process. They independently determine the goals and objectives of the activity; select the necessary material using a variety of information sources; plan the content of the activity and carry it out, achieving the desired result.

Thus, we see that a project is a plan and product of students' independent research work or project activity. Consequently, project-based learning is a technology for the implementation and organization of project activities of students.

Currently, there are several classifications of projects. English specialists in the field of language teaching methodology distinguish between three types of projects: group, in which research is carried out by the whole group, and each student studies a specific aspect of the chosen topic; mini-research, consisting in conducting a sociological survey using questionnaires and interviews; a project based on work with literature, implying selective reading on a topic of interest to the student. At the same time, mini-research and work with literature can be considered as a kind of group project. In our opinion, this is an insufficiently complete classification. In this connection, we will rely on the classification of projects proposed by Russian teachers (E.S. Polat, N.A. Kralya, V.N. Yanushevsky, etc.). Depending on the leading type of activity carried out by students, the above mentioned researchers distinguish:

- research projects that require a well-built structure, designated goals, the relevance of the research subject for all participants, and social significance.

According to V.N. Yanushevsky, this type of projects involves argumentation of the relevance of the topic taken for research, formulation of the research problem, its subject and object, designation of research tasks in the

sequence of the adopted logic, hypotheses for solving the indicated problem, development of ways to solve it, discussion of the results obtained, conclusions, registration of research results, identification of new problems for the further development of the study (Yanushevsky, 2011).

E.S. Polat clarifies that any project requires a creative approach, and in this sense, they can all be called creative. But when determining the type of project, researchers identify the dominant type of activity. Creative projects presuppose the appropriate design of the results. They, as a rule, do not have a detailed structure of joint activities of the participants. At first it is only outlined and further develops, subject to the genre of the final result (Polat, 2000)

However, according to V.N. Yanushevsky, the presentation of the results of the project requires a well-thought-out structure in the form of a script for a film or play, a holiday program, an essay plan, an article, design and headings of a newspaper, etc. Such projects should be implemented in group work.

- information projects are aimed at collecting information about an object, phenomenon. It is supposed to familiarize the project participants with this information, analyze it and summarize the facts intended for a wide audience.

According to N.A. Kralya, such projects, like research projects, require a well-thought-out structure, the possibility of systematic correction along the way. The structure of such a project can be designated as follows: the purpose of the project, its relevance.

So, summarizing and denoting the relationship between reflexive competence and the technology of project-based learning, we once again note:

1. Students themselves learn, discover, comprehend and apply the knowledge gained. Project activity puts students in front of the need to find and make the best decision. This allows a teacher to individualize the learning process and make it more intensive, giving students the opportunity to choose the pace of progress towards the final learning outcomes.
2. It enables students to collaborate with each other, listen to each other and develop interpersonal skills. Working on a project allows you to gain experience before being involved in professional activities.
3. The learning process is as close as possible to practice. Participation in such activities increases the level of English language proficiency, forms the skills of independent activity, initiative, since project-based training offers to independently analyze information from various English-language sources and draw appropriate independent conclusions.

Thus, we believe that project-based learning technology can improve the educational process. This is possible because it is focused on the individuality and

independence of students, on the practical application of knowledge and creativity. This nature of the activity is necessary for students, as it motivates them to learn. At the same time, the conditions for the successful development of reflexive competence coincide with the conditions for the effective use of technology. These include student autonomy, planning, analysis and performance evaluation. Therefore, in our opinion, the use of this teaching technology in the classroom of the English language will contribute to the effective formation of reflexive competence.

Sample Selection

The leading component of the professional competence in general of a future IT bachelor is knowledge, skills, abilities and personal qualities that allow to design information systems that have the potential to solve problems that will arise in the future, and currently have a high level of uncertainty. It becomes evident that to carry out these professional duties, an IT student needs to possess reflexive competence.

Experimental work was carried out in control and experimental groups among students of the faculty "Information systems and technologies". A total of 30 students participated in the experiment. The experimental and control group was an equal number of students - 15 people.

Methodology

As a result of mastering the bachelor's program, the graduate must have the competences established by the bachelor's program. The set of competencies established by the bachelor's program must provide a graduate of a higher educational institution with the ability to carry out professional activities in at least one area of professional activity and (or) area of professional activity, established in accordance with paragraph 1.11 of the Federal State Educational Standard of Higher Education, and to solve the problems of professional activity at least, than one type.

Based on the Federal State Educational Standard of Higher Education undergraduate in Information systems and technologies, we can determine the components of reflection of oneself and one's own activity, reflection of joint activity, reflection of the participants in the interaction.

1. Reflection of oneself and one's own activity:
 - the ability to independently determine the goals of education, to set and formulate tasks for themselves in activities;
 - ability to work individually;

- possession of the basics of self-control, self-assessment in activities.
- 2. Reflection on joint activities:
 - the ability to plan ways to achieve goals, including alternative ones, together with others;
 - ability to organize interaction with clients and partners in the process of solving management problems
 - the ability to monitor activities in the process of achieving a result; adjust your actions in accordance with the changing situation; correlate actions with planned results.
- 3. Reflection of the participants in the interaction:
 - the ability to find a common solution and resolve conflicts based on coordination of positions and consideration of interests;
 - the ability to analyze and evaluate the behavior and activities of participants in the process.

Tests for determining the level of reflexive competence formation were developed by T.F. Usheva. These tests are aimed at assessing the formation of various components of reflection. We believe that the test developed by T.F. Usheva is the appropriate one for determining the level of reflexive competence. The researcher proposes to use it in the classroom of any academic subject, including English. The assignments make it possible to assess the level of formation of each of the reflection components, as well as the achievement of the planned results of the project-based learning technology.

At the same time, before the start of project activities, the teacher needs to fix the level of formation of reflection in order to determine how well students have developed the skills of analyzing and evaluating themselves, joint activities and its participants in order to track the development of skills in dynamics.

We recommended to focusing on the following indicators for assessing results:

Table 1 Indicators for Assessing Educational Results

Score indicator	Description	Points
1	2	3
high level of formation of reflection	The student is able to analyze his own interests, plan activities and predict its possible results. It does not seem difficult for him to organize his own and joint activities to achieve the goal, as well as correlate the result with the goal. He is able to coordinate and control activities in accordance with changing conditions, exercising self-control, self-assessment and evaluating the activities and participants in the interaction.	5

average level of reflection formation	The student has little difficulty in carrying out independent activities. It is difficult for him to organize his own or joint activity in changing conditions, to plan it, to design its results. He can carry out introspection and self-assessment and evaluate work partners.	4
the level of formation of reflection is below average	The student does not know how to analyze and evaluate himself and the behavior of other people. He experiences significant difficulties in planning, designing results and organizing independent activities. It is difficult for him to work in a constantly changing environment.	3
low level of formation of reflection	The student does not know how to plan and organize independent activities. He does not have the skills to analyze and evaluate himself, his own and joint activities and behavior of other people.	2

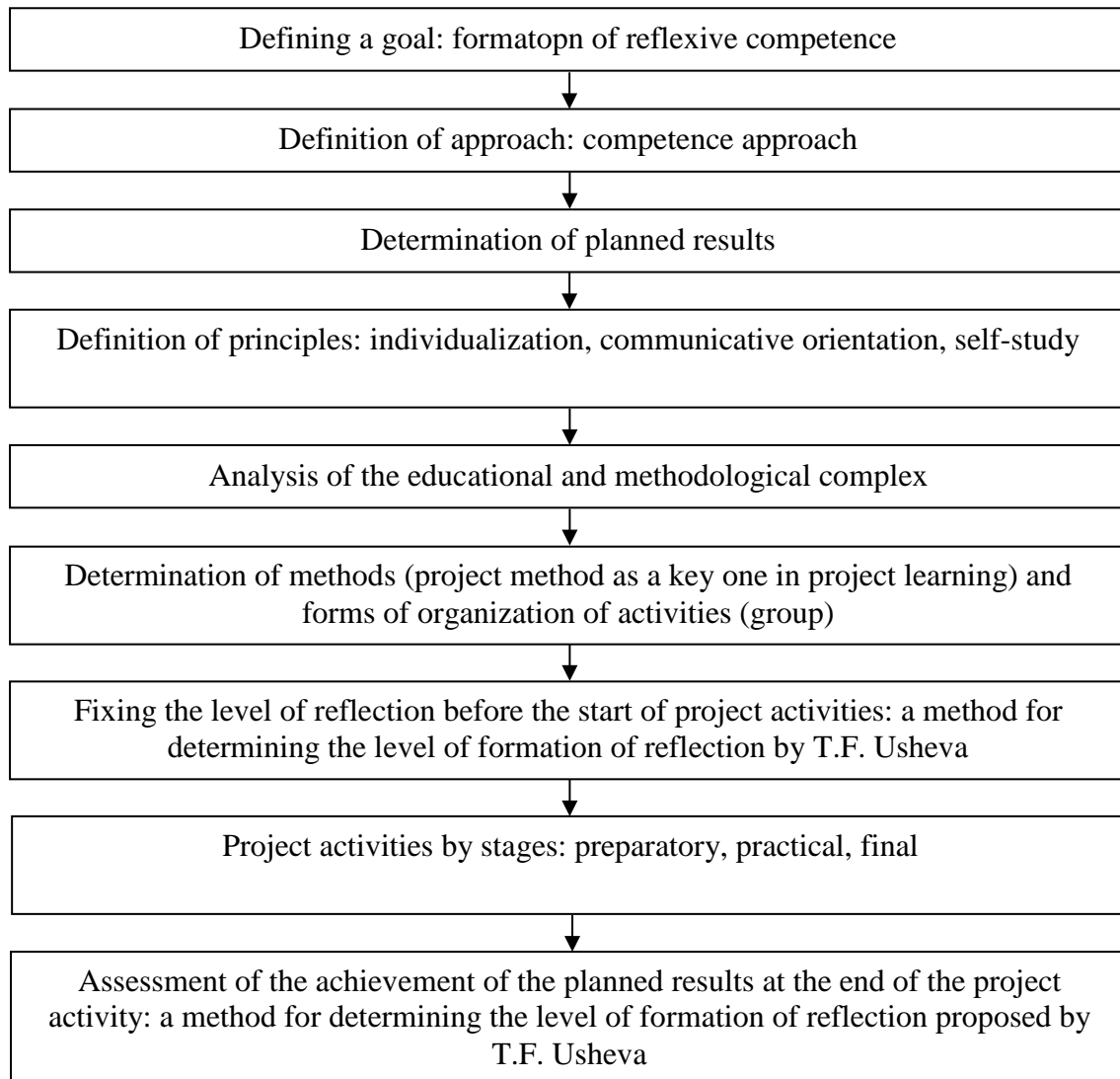


Figure 1 Model of project learning technology

We believe that the process of reflexive competence formation will be successful if the technology of project learning is used. The technology considered in the framework of our research, as noted earlier, allows individualizing the educational process, develops interpersonal interaction skills, and forms the skills of independent activity.

Let's give an example of the project-based learning technology model we are designing.

So, the creation of a project should take place in the process of studying one module. Therefore, the plan for organizing the project activities of students can be presented in the form of the following model.

The plan is given taking into account the duration of one lesson at the university.

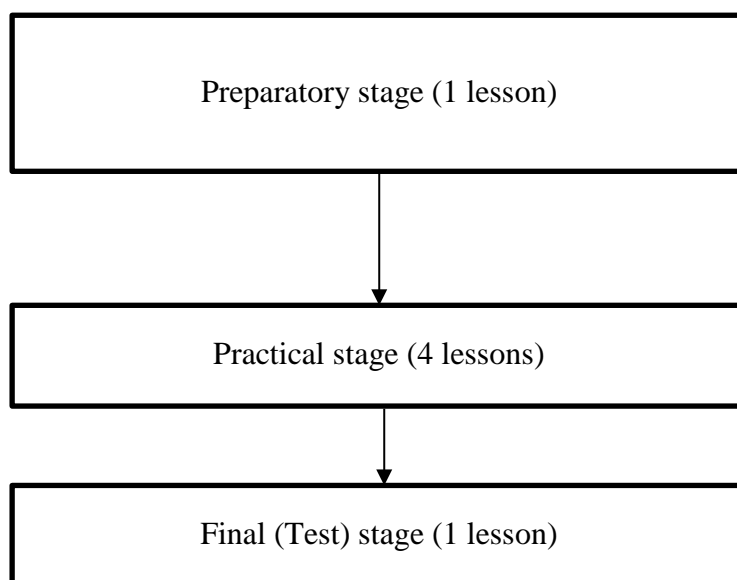


Figure 2 Plan of the organization of project activities of student

The Description of the Experiment

Preparatory stage

As today we are working in the format of distance learning as a result of tremendous consequences of COVID-19, we have also thought about how to organize the work of students with the teacher under these circumstances. In our modern world because of pandemia the technologization of modern linguistic education is developing at a rapid space (Aleksandrova, 2020) In this case we can suggest web-quest as a form of project-based technology.

Web quest is one of the newest teaching tools, and is focused on improving the effectiveness of the foreign language learning process. The essence of the

technology is that the students should collect the necessary materials on the selected problem in the Internet sources (Shvaikina, 2020) References to some sources are provided by the teacher, students must find some of the links themselves. Upon completion of the work on the topic, the learners should present the results in the form of their own web pages, electronically, in print or orally. The advantage of implementing a Web quest is that no specific technical knowledge is required for the event. You can work on a quest individually, or in small groups. The website used to develop the web quest was <http://zunal.com>.

Web-quests have a great potential for development trans-national joint projects (Gradaleva & Houston, 2018) that can enhance development of transprofessional skills of the future specialists (Oparina & Gridneva, 2019).

At the preparatory stage type of project, its name and time frame are determined (information project, "What makes a person successful? Describe a successful person")

The key task of the project: "Imagine that you are the editors of a city newspaper. You should write an article on a given topic.

Project creation context: "You need to divide into groups, write an article on a given topic. Publish your information in the students' newspaper."

At this stage, the teacher needs to introduce the topic of the project and familiarize students with the project assignment. Then the students are divided into groups of 5-6 people and choose a person whose biography they would like to highlight, and determine the purpose of the project activity - to present an article or a project about a successful person and what factors make a person successful in business.

Then students need to identify their own interests and what needs to be done to create a project (Table 2).

Table 2 Questions to be determined by students own interests and needs

<p>Before starting your project work answer the following questions:</p> <ol style="list-style-type: none"> 1. Why did I choose this topic? 2. What do I know about this topic now? 3. What do I want to know? 4. What do I need to make the project? 5. What should I do to make it? 	<p>Planned results:</p> <ul style="list-style-type: none"> – the ability to independently determine the goals of their learning, to set and formulate tasks for themselves in learning and cognitive activity; – ability to work individually; – Possession of the basics of self-control, self-esteem in educational and cognitive activities.
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Based on the answers, you should define a work plan, the implementation of which will lead to the achievement of the goal. It must be reflected in the diary of project activities. Students should conduct it to analyze and evaluate group work.

Practical stage

At this stage, the teams implement the planned actions, reflecting the difficulties encountered and the results of the work in the project diary.

Table 3 Project Diary

Project diary		
1	2	3
Actions of each member of the group	Difficulties	Result
Searching for necessary information		
Example of a students' answer: Everyone is analyzing information. We are selecting information that we may use in our work.	Example of a students' answer: It was difficult to find necessary information.	Example of a students' answer: We have much information about the theme that we have chosen. We are ready for the next step.
Answering the questions		
Example of a students' answer: We have divided questions. Student 1 is answering questions about success criteria. Student 2 is writing about a successful person. Student 3 is writing about success in business. Student 4 is answering questions about the difference between successful and unsuccessful people. Student 5 is writing about some interesting facts of business.	Example of a students' answer: Some students were doing it too long. It retarded our project work.	Example of a students' answer: We have all questions answered. We are ready to write an article.
Writing an article		
Example of a students' answer: Student 1, Student 2 and Student 3 are making the article using information that was found in the last step. Student 4 and Student 5 are correcting the article.	Example of a students' answer: It was difficult to gather the whole group.	Example of a students' answer: We have done the whole article.

The teacher should be aware of the success of the students' activities. To do this, he should regularly hold consultations, where students should report on the work done. The teacher should identify the difficulties arising in the process of project activities. They can be associated both with the search and analysis of information, and with the organization of joint activities in a group. In this case, the teacher should give students the opportunity to analyze the activity. To do this, during the consultation, they fill out a Difficulty Assessment Sheet.

Table 4 Difficulty Assessment Sheet

Analyze your group work and answer the following questions.
What happened?
Example of a students' answer:
We could not find necessary information. We had difficulties with writing article. It was difficult to gather our group for work. We had bad relationships in our group. Some students did not do anything.
Why did it happen?
Example of a students' answer:
There is too little qualitative information. We did not know how to write articles. Some students could not come when it was our meeting. Some students had a disagreement. Some students did not want to work.
What did I do to change it?
Example of a students' answer:
We searched for necessary information in the library. We read some memos about writing articles. Students that did not come to our meeting did their work later. Students talked to each other. They said what was wrong. We have the meeting about our project work.
What is the result?
Example of a students' answer:
We have found information that we can use. We know how to write articles now. We can gather our group at the next meeting. Students have solved their dispute. All of us understand that they should work.

Final (test) stage

Students finish their project activities by designing a students' newspaper and presenting their topic to other groups. After the presentation of the project, it is necessary to organize a round table discussion. For this, students are invited to analyze the contribution of each to the group project and the nature of the

interaction. Based on this data, the teacher can evaluate the project activity. They should first fill out a score sheet (Table 5).

Table 5 Assessment Sheet

Evaluation card Put pluses and minuses for each person's participation in the work. Then give each person a mark (from 2 to 5) for their work in the team.						Planned results:
Names of the people in your team:	Student 1	Student 2	Student 3	Student 4	Student 5	<ul style="list-style-type: none"> - the ability to find a common solution and resolve conflicts based on coordination of positions and consideration of interests; - the ability to analyze and evaluate the behavior and activities of participants in the educational process.
searched for information	+	+	+	+	+	
answered questions	+	+	+	+	+	
took part in writing an article	+	+	+			
corrected the text				+	+	
designed the project	+	+				
gave useful advice	+		+			
other:						
searched for pictures			+			
wrote the text for presentation				+	+	
took part in presentation at the class						
MARK:	5	5	5	4	4	

At the end of the project activity, the teacher must again fix the level of formation of reflection in order to track the dynamics of its development in children and evaluate the achievement of the planned results. We recommend using the questionnaire by T.F. Usheva.

Recommendations for the Organization of the Project Work

1. The project should begin with the choice of the project topic, definition of its problem and purpose. They are put forward by students at the suggestion of the teacher through leading questions, situations that contribute to the definition of problems, etc.

2. An important point is the distribution of tasks into groups. The teacher should organize a discussion of possible creative solutions and information retrieval. This is necessary for involvement of students in the work.
3. It is necessary to have regular mid-term discussions of the work done so that the students are aware of what they have already done and what they have to do. This is essential for building reflexive competence.
4. Project activities should be completed with collective discussion and formulation of conclusions.
5. The activity should be personally significant, important for the student. Therefore, the teacher should help students understand the meaning of their project activities, see the possibility of realizing their capabilities.
6. It is necessary to create such an atmosphere for project activities to maintain interest in these activities, a situation of success.
7. The teacher must create psychological comfort. The educator must support and guide them; must become their mentor, partner.

Conclusion

Summing up the results of the study, it should be noted that the problem of the formation of reflexive competence and determination of its place in the educational process using the technology of project-based teaching in English lessons is relevant. This is due to the fact that today the process of forming this type of skill through work on projects has not been organized. The use of project-based teaching technology in English lessons can be an effective way to form reflexive competence, as it is characterized by an individual, communicative, practice-oriented focus and based on the independent work of students, which contributes to the development of skills such as planning activities, projecting results, monitoring, analysis and performance evaluation, correlation of result and plan. These skills that are required in the professional activities of students in the Information systems and technologies specialty.

To carry out diagnostics before using the technology of project training and to monitor the achievement of educational results at the end of project activities, we proposed a system for assessing the achievement of planned results. To do this, we recommend using the method for determining the level of reflection, which was developed by T.F. Usheva.

The description of the project-based learning technology we are investigating, practical recommendations for its implementation and the development of a complex of projects within the framework of thematic planning of teaching materials give us grounds to assume that the use of project-based learning technology in the formation of reflexive competence is effective at every stage.

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PRASMJU MONITORINGS VESELĪBAS APRŪPES STUDIJU VIRZIENA STUDIJĀS - PACIENTU DROŠĪBAI UN VESELĪBAS APRŪPES KVALITĀTEI

Skills Monitoring in Healthcare Studies – for Patient Safety and Healthcare Quality

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Abstract. *The competence of healthcare professionals is crucial in ensuring patient safety and the quality of healthcare. Skills are one of the most important aspects of competence, but often health care employers, when assessing the readiness of young professionals, point out that the ability to implement skills in a real work environment are unclear, insufficient and even inadequate.*

The paradigm shift in education intends bringing skills to the foreground. In order to promote skills management, Rīga Stradiņš University (RSU) already in 2016 started work on the institutional level project “Skills Monitoring System” (hereinafter - SMS), focusing primarily on work and profession specific skills in the field of health care studies.

Visible and demonstrable monitoring of skills in education is an innovation. The aim of this article is to analyze and reflect the coherence of the RSU Skills Monitoring System concept with the current principles of education policy development, legal framework and basic principles of higher education pedagogy in skills acquisition and evaluation in health care education, as well as to evaluate the initial results of the newly developed system.

In order to achieve the goal, an interdisciplinary, qualitative study was conducted, where analytical and descriptive, inductive, deductive and synthesis research and legal (translation) norm methods were implemented, as well as interviews to evaluate initial results.

The results of the research show that the components and solutions included in SMS have been developed in accordance with the legal framework and the main educational guidelines, in accordance with the theoretical concepts of pedagogy. An education approach based on simulation integrated in the acquisition of skills allows to systematically evaluate the amount and quality of theoretical knowledge, to determine the actual level of abilities and to predict the quality of performance and compliance with the real work environment. The management of skills acquisition in Higher Education Institutions should be supported and promoted from the point of view of educators, employees and sectoral professional associations and employers.

Keywords: *health care quality, higher education, simulation-based education, skills, skills monitoring, patient safety.*

Ievads

Introduction

Jautājums par darba tirgum nepieciešamo prasmju apguvi bija aktualizēts jau 2012. gada Apvienoto Nāciju Izglītības, zinātnes un kultūras organizācijas (United Nations Educational, Scientific and Cultural Organization – UNESCO) publicētajā ziņojumā “Youth and skills: putting education to work”. Ziņojuma galvenā ideja – sekmēt jauniešu labāku iekļaušanos darba tirgū un sociālo pašapliecināšanos.

Pētījumos, kas veikti pēdējos gados, vēl arvien ir uzsvērts, ka jauno speciālistu prasmes dažkārt neatbilst darba tirgus vajadzībām un tā ir aktuāla problēma dažādās nozarēs, tostarp veselības aprūpes jomā (Health Workforce Policies in OECD Countries, Right Jobs, Right Skills, Right Places, 2016).

Prasmes ir profesionālā kapitāla nozīmīga daļa (Hargreaves, Fullan, 2012) jebkuras nozares attīstības un ilgtspējas veicināšanā, tādēļ augstākās izglītības institūciju (AII) atbildība par absolventu gatavību spēt pielietot prasmes reālā darba vidē aizvien vairāk pieaug.

Veselības aprūpes nozarē speciālistu prasmēm ir izšķiroša nozīme pacientu drošības un veselības aprūpes kvalitātes nodrošināšanā. Taču dati par ārstniecības procesa laikā pieļautu medicīnisku kļūdu gadījumiem (WHO. Patient safety. Data

and statistics) liecina arī par to, ka ārstniecības personu zināšanas, prasmes un kompetences ne vienmēr ir pietiekamas.

Paradigmas maiņa izglītībā paredz prasmju izvirzīšanu priekšplānā. Tas ir atspoguļots gan Eiropas Savienības (ES), gan nacionālās izglītības attīstības nostādnēs un rosina prasmju apguvei veltīt lielāku vērību arī augstākās izglītības procesā.

2016. gadā Rīgas Stradiņa universitātē (RSU) veselības aprūpes studiju virziena ietvaros tika uzsākts darbs pie institucionāla līmeņa projekta “Prasmju monitoringa sistēma” plānošanas – tā izstrādi uzsāka 2018. gadā, savukārt, ieviešanu 2020. gadā.

Šīs iniciatīvas mērķis bija izstrādāt prasmju monitoringa sistēmas modeli un atbilstošus IT risinājumus, lai nodrošinātu prasmju apzināšanu, pārredzamību, salīdzināmību, dokumentēšanu un pārvaldību. Projekts prioritāri ir vērsts uz darbam un profesijai specifisko praktisko prasmju pārvaldību veselības aprūpes jomā.

Darbam un profesijai specifiskās prasmes, saskaņā ar Ekonomiskās sadarbības un attīstības organizācijas (Organisation for Economic Co-operation and Development – OECD) izpratni un klasifikāciju, ir attiecināmas uz darba vietās nepieciešamajām tehniskajām prasmēm, kas atšķirībā no kognitīvajām, sociālajām un emocionālajām prasmēm, nav atbilstošas vai piemērojamas visās profesijās, bet attiecas konkrēti uz noteiktu profesiju (OECD Skills Strategy Implementation Guidance for Latvia: Developing Latvia's Education Development Guidelines 2021-2027, 2020).

Šis raksts ir veltīts prasmju apguves un vērtēšanas mērķorientētākas un skaidrākas pārvaldības pieejas veicināšanai AII un nākotnes perspektīvu iezīmēšanai.

Raksta mērķis ir analizēt un atspoguļot RSU Prasmju monitoringa sistēmas koncepta saskaņotību ar izglītības politikas attīstības aktuālajām nostādnēm, tiesisko regulējumu un augstskolas pedagogijas pamatprincipiem prasmju apguvē un vērtēšanā veselības aprūpes izglītībā, kā arī izvērtēt jaunradītās sistēmas izstrādes un ieviešanas sākotnējos rezultātus.

Mērķa sasniegšanai veikts starpdisciplinārs, kvalitatīvs pētījums, kura īstenošanai tika pielietotas analītiskās un aprakstošās, induktīvās, deduktīvās un sintēzes pētniecības metodes, tiesību normu iztulkošanas (interpretācijas) metodes, kā arī veiktas intervijas sākotnējo rezultātu novērtēšanai.

Pētījuma bāzi veido (1) teorētiskie (politikas plānošanas dokumenti un ziņojumi, tiesiskā regulējuma dokumenti, literatūras avoti un pētījumi) un (2) empīriskie (RSU studenti un docētāji, citu izglītības iestāžu pārstāvji, darba devēji un profesionālo asociāciju pārstāvji, jaunradītie IT risinājumi) resursi.

Literatūras apskats *Literature Review*

Prasmju jautājums ir daudzdimensionāls un skatāms no dažādām perspektīvām, taču šī raksta ietvaros prasmju koncepts tiek aplūkots no izglītības attīstības nostādņu, izglītības tiesiskā regulējuma un augstskolas pedagoģijas metodoloģiskās perspektīvas veselības aprūpes jomas specifiskā.

Izglītības attīstības nostādņu perspektīva

Prasmes un to apguve ir vairāku starptautisku organizāciju (UNESCO, ES, OECD, CEDEFOP) redzeslokā, skaidri apliecinot prasmju nozīmes pieaugumu gan izglītībā, gan darba tirgū.

Dokumentā “Jaunā prasmju programma Eiropai “Kopīgs darbs cilvēkkapitāla, nodarbināmības un konkurētspējas stiprināšanai”” (2016) ir iezīmēti prasmju politikas stratēģiskie darbības virzieni, kas savu aktualitāti nav zaudējuši joprojām. Programmas centrālie virzieni: (1) uzlabot prasmju veidošanas kvalitāti un atbilstību pieprasījumam; (2) nodrošināt, ka prasmes un kvalifikācijas ir pārredzamākas un salīdzināmākas; (3) uzlabot datu apkopošanu un informāciju par vajadzīgajām prasmēm informētākai karjeras izvēlei (Jaunā prasmju programma Eiropai, 2016). Attīstoties prasmju politikai, turpmākajos piecos gados plānots īstenot 12 darbības, starp kurām ir prasmju apzināšanas stiprināšana, nākotnes prasībām atbilstoša profesionālā izglītība un apmācība, prasmes zaļās un digitālās pārkārtošanās atbalstam, prasmes visam mūžam, individuālo mācību kontu iniciatīva u.c. (European Skills Agenda for sustainable competitiveness, social fairness and resilience, 2020).

Eiropas profesionālās izglītības attīstības centrs (European Centre for the Development of Vocational Training – CEDEFOP), kura galvenais darbības mērķis ir izstrādāt politiku, lai nodrošinātu darba tirgum vajadzīgās prasmes 2019. gadā ir izstrādājis dokumentu “CEDEFOP analītiskais ietvars pieaugušo prasmju pilnveidei”. Dokuments ir vērsts uz to, lai skaidrotu nepieciešamību stratēģiskai un koordinētai pieejas īstenošanai pieaugušo prasmju pilnveidē, ietverot gan prasmju novērtēšanas, gan prasmju un kompetenču apstiprināšanas, gan to atzīšanas aspektus (CEDEFOP analītiskais ietvars pieaugušo prasmju pilnveidei, 2019).

Saskaņā ar ES virzīto izglītības politiku arī Latvijas politikas plānošanas un izglītības politikas dokumentos tiek risināti ar prasmēm saistītie jautājumi. Dokumentā “OECD Latvijas Prasmju stratēģija NOVĒRTĒJUMS UN REKOMENDĀCIJAS” (2019) noteiktās prioritātes ietver: izglītojamo prasmju rezultātu stiprināšanu; mūžizglītības kultūras veicināšanu; prasmju nelīdzsvarotības samazināšanu darba tirgū; prasmju sistēmas pārvaldības stiprināšanu (OECD, 2019). Izglītības attīstības pamatnostādnes 2021.-2027.

gadam "Nākotnes prasmes nākotnes sabiedrībai" tiek izstrādātas, ņemot vērā iepriekšminētās OECD rekomendācijas. Izglītības attīstības pamatnostādņu 2021.-2027. gadam projekta dokumentā viens no izvirzītajiem mērķiem ir mūsdienīgs, kvalitatīvs un uz darba tirgū augsti novērtētu prasmju attīstīšanu orientēts izglītības piedāvājums (Pamatnostādņu projekts "Izglītības attīstības pamatnostādnes 2021.-2027.gadam "Nākotnes prasmes nākotnes sabiedrībai").

Izglītības attīstības nostādņu dokumentu analīzes rezultāti ļauj secināt, ka jau vairākus gadus tiek attīstīta tieši uz prasmju jautājumiem orientēta politika, kas veido pamatu mērķorientētai prasmju pārvaldības sistēmai.

Tiesiskā regulējuma perspektīva

Izglītība ir sistematizētu zināšanu un prasmju apguves un attieksmju veidošanas process un tā rezultāts. Attiecīgajā līmenī sasniedzamie mācīšanās rezultāti raksturo Latvijas kvalifikāciju ietvarstruktūras līmeņus, kas piesaistīti Eiropas kvalifikāciju ietvarstruktūrai (Izglītības likums, 1998).

Augstskolu likumā sasniedzamie studiju rezultāti tiek definēti kā studiju programmas, studiju moduļa vai studiju kursa noslēgumā iegūstamais zināšanu, prasmju un kompetenču kopums. Studiju kurss, kas ir studiju programmas un studiju moduļa daļa, atspoguļo noteiktā līmenī un apjomā organizētu, studiju programmai atbilstošu zināšanu, prasmju un kompetenču sistēmas izklāstu, kur definēti studiju rezultāti, par kuru sasniegšanu tiek piešķirti kredītpunkti (Augstskolu likums, 1995).

Studentiem un citiem izglītojamajiem kredītpunktus piešķir, ja tie sasniedz noteiktus studiju rezultātus, par ko liecina atbilstošs vērtējums. Turklāt studiju rezultātu sasniegšana ir jānovērtē, pielietojot procedūras un skaidri saprotamus kritērijus (European Credit Transfer and Accumulation System (ECTS) User's Guide, 2015).

Kredītpunktu piešķiršanai nepieciešama noteiktu studiju rezultātu sasniegšana, kam par pamatu ir vērtējums. Ņemot vērā, ka jēdziens studiju rezultāts nav abstrakts, bet ietver konkrēti definētas zināšanas, prasmes un kompetences, jāvērtē ir visas studiju rezultātā iekļautās komponentes, nepieļaujot selektīvu pieeju studiju rezultātu vērtēšanā.

Formālās izglītības ietvaros studiju rezultātu sasniegšanas pakāpi vērtē 10 ballu skalā vai ar vērtējumu "ieskaitīts/neieskaitīts" (Ministru kabineta noteikumi Nr.240, 2014; LR Ministru kabineta noteikumi Nr.512, 2014), savukārt Eiropas Parlamenta un Padomes lēmumā (ES) 2018/646 (2018. gada 18. aprīlis) termins *prasmju novērtēšana* tiek definēts kā process vai metode, ko izmanto, lai ar pašnovērtēšanu vai trešās personas apliecinātu novērtējumu, vai ar abiem novērtētu, noteiktu un raksturotu indivīdu prasmes, kas ir iegūtas neformālā vai ikdienējā vidē (Eiropas Parlamenta un Padomes lēmums (ES) 2018/646, 2018).

Augstskolas viens no uzdevumiem ir īstenot savas iekšējās kvalitātes nodrošināšanas sistēmas, kuru ietvaros izveido un publisko tādas studējošo sekmju vērtēšanas kritērijus, nosacījumus un procedūras, kas ļauj pārliecināties par paredzēto studiju rezultātu sasniegšanu (Augstskolu likums, 1995).

Veselības aprūpes jomu reglamentētajām profesijām ir definētas minimālās prasības konkrētās profesijas izglītībai, kas ir saskaņā ar Eiropas Parlamenta un Padomes Direktīvu 2005/36/EK (LR likums "Par reglamentētajām profesijām un profesionālās kvalifikācijas atzīšanu", 2001). Attiecībā uz ārstu, vispārējās aprūpes māsu, zobārstu, vecmāšu un farmaceitu profesionālās darbības veikšanu, ikviena dalībvalsts, lai kvalifikāciju apliecināšanai dokumentiem piešķirtu vienādu spēku visās dalībvalstīs, paredz nosacījumu, ka tie garantē un apstiprina, ka attiecīgā persona savas apmācības laikā ir apguvusi zināšanas un prasmes, kas minētas attiecīgajos punktos šajā direktīvā. Tas paredz iespēju personām, kuras savu profesionālo kvalifikāciju ieguvušas kādā no dalībvalstīm, uzsākt un veikt profesionālo darbību tajā pašā profesijā citā dalībvalstī, ar tādām pašām tiesībām kā šīs dalībvalsts pilsoņiem. Taču, vienlaikus, pakalpojumu sniegšanas atvieglināšana, pamatojoties uz kvalifikāciju apliecināšanu dokumentu savstarpēju atzīšanu, ir jānodrošina, paturot prātā sabiedrības veselības un drošības striktu ievērošanu un patērētāju aizsardzību (Eiropas Parlamenta un Padomes Direktīva 2005/36/EK, 2005).

Tiesiskā regulējuma analīze ļauj secināt, ka redzama un pierādāma prasmju vērtēšana ir pamats studiju rezultātu salīdzināmībai. Reglamentētajās profesijās veselības aprūpē konkrēti definētas un novērtētas prasmes uzlabo darba spēka mobilitāti, savukārt kvalifikāciju apliecināšie dokumenti garantē un apstiprina, ka attiecīgā persona savas apmācības laikā ir apguvusi noteiktas zināšanas un prasmes, kas ir viens no priekšnosacījumiem pacientu drošības un veselības aprūpes kvalitātes veicināšanā.

Augstskolas pedagogijas perspektīva veselības aprūpes izglītībā

Izglītībā jau ilgāku laiku notiek pāreja no „docētāja centrētas” pieejas uz „studentcentrētu” mācīšanu un mācīšanos, kuras fokusā ir akcents uz studiju rezultātiem un studenta kompetences sekmēšanu (Overview on Student-Centred Learning in Higher Education in Europe, 2015). Būtisks akcents ir studiju rezultātu formulēšana, lai precīzi definētu, kas studējošajam ir jāzina, jāsaprot un/vai jādemonstrē mācīšanās procesa noslēgumā (Curaj, Matei, Pricopie, Salmi, & Scott, 2015).

Augstākajā izglītībā arvien vairāk tiek diskutēts par iespējami efektīvākajiem veidiem, kā nodrošināt studentu nākotnes prasmju attīstību, kas tiek definētas kā spēja rīkoties, lai nākotnē veiksmīgi risinātu kompleksas problēmas nezināmos un strauji mainīgos kontekstos (Ehlers, 2020). Šo aktualitāti starptautiski augstākajā līmenī apliecina tas, ka 2020. gada novembrī rīkotās

Romas ministru konferences komunikē tieši nozaru studijuursos apgūstamās specifiskās un caurviju prasmes, uzsvērtas kā viens no virzītājspēkiem tam, lai studentcentrētas mācības kļūtu par realitāti un students stiprinātu spēju izprast un risināt sarežģītās pasaules pašreizējos un nākotnes sabiedrības izaicinājumus (Rome Ministerial Communiqué, Annex III, 2020).

Augstākās izglītības nākotnes prasmju modelī izšķirtas trīs savstarpēji saistītas dimensijas: (1) subjektīvā dimensija, kas vērsta uz indivīda subjektīvajām, personīgajām spējām mācīties, pielāgoties un attīstīties, lai uzlabotu viņa iespējas produktīvi iekļauties rītdienas darbaspēkā; (2) objekta dimensija – saistīta ar indivīda spēju rīkoties pašorganizēti attiecībā uz objektu, uzdevumu vai ar noteiktu priekšmetu saistītu jautājumu; (3) sociālā dimensija – saistīta ar indivīda spēju rīkoties pašorganizēti attiecībā pret savu sociālo vidi, sabiedrību un organizatorisko vidi (Ehlers, 2020).

Šī pētījuma konteksts aptver visas iezīmētās dimensijas, taču raksta fokusā ir veselības aprūpes joma, turklāt profesijai specifiskās praktiskās prasmes, kuras piekritīgas psihomotorajai jomai un kuru centrā pārsvarā ir fiziskās iemaņas, kas ietver smadzeņu un muskuļu darbības koordināciju (Kenedijs, 2007).

Psihomotorās jomas prasmju apguvei veselības aprūpē tiek īstenota simulācijā balstīta izglītības pieeja (SBIP), kura aizvien vairāk tiek izmantota, lai palīdzētu izglītojamiem un veselības aprūpes darbiniekiem attīstīt veselības aprūpē nepieciešamās zināšanas un prasmes.

Galvenie aspekti SBIP integrācijai veselības aprūpes jomas studiju programmās: (1) centieni uzlabot pacientu drošību un veselības aprūpes kvalitāti; (2) nepieciešamība aprobēt simulētā vidē jaunas tehnoloģijas un metodes, pirms to ieviešanas reālā klīniskā vidē darbā ar pacientiem; (3) nepieciešamība attīstīt komunikācijas prasmes un spēju strādāt komandā krīzes situācijās; (4) vajadzība samazināt klīnisko prasmju apguves laiku slimnīcās; kā arī (5) nepieciešamība nodrošināt izglītojamo sagatavotību darbam reālā darba vidē (So, Chen, Wong, Chan, 2019).

Simulācijā balstītas medicīnas izglītības priekšrocības: (1) tiek nodrošināta droša vide, kas paredz, ka izglītojamiem ir iespēja apgūt prasmes bez riska nodarīt kaitējumu pacientam un prasmju apguves īstenošana ir nodrošināta saskaņā ar izglītojamo vajadzībām un spējām gan indivīda, gan komandas līmenī; (2) dod iespēju atkārtotam mācīšanās procesam, individualizētai pieejai, pamatotai atgriezeniskajai saitei un novērtējumam par konkrētām darbībām, kas īstenotas simulācijas laikā; (3) ļauj izmēģināt sarežģītas un retas klīniskas situācijas (Motola, Devine, Chung, Sullivan, Issenberg, 2013).

Pedagoģijas teorijās tiek uzsvērts, ka svarīgi ir novērtēt visus sasniedzamos studiju rezultātus (Zlatkin-Troitschanskaia, Toepper, Pant, Lautenbach, Kuhn, 2018), taču, to var sarežģīt situācijas, kad nav iespējams izmantot tikai vienu

novērtēšanas metodi, bet nepieciešams izvēlēties vairākas, studiju rezultātu specifikai atbilstošas, novērtēšanas metodes (Kenedijs, 2007).

Psihomotoro prasmju taksonomija apraksta progresēšanu no fizisko iemaņu vienkāršas novērošanas līdz to apgūšanai. Psihomotoro prasmju taksonomijā ietvertie elementi: (1) uztvere – spēja izmantot novērotās norādes fiziskās darbības vadīšanai; (2) apziņa – gatavība konkrēti rīkoties; (3) kontrolēta reakcija – centieni ar mēģinājumu un kļūdu metodes palīdzību apgūt kādu fizisku iemaņu; (4) mehānisms – fiziskas iemaņas apguves starpposms, apgūtās reakcijas kļūst ierastākas, kustības iespējams veikt pārliecinātāk un prasmīgāk; (5) kompleksa acīmredzama reakcija – iespējams veikt fiziskas darbības, kas ietver virkni kompleksu kustību; (6) pielāgošanās – šajā līmenī iemaņas ir labi attīstītas, persona spēj modificēt kustības, lai risinātu problēmsituācijas vai pielāgotos īpašām prasībām; (7) radīšana – iemaņas ir tik labi attīstītas, ka noteiktās situācijās var izpausties personas radošums (Simpson, 1972).

Simulācijā balstīta vērtēšana attiecas gan uz sistēmisku un regulāru treniņu prasmju pilnveidei, gan uz izšķirošu vērtēšanu, lai noteiktu kompetences līmeni. Tradicionālos pārbaudījumu veidus – daudzizvēļu testus, mutiskos eksāmenus – arvien vairāk kā norma aizstāj efektivitāti pierādījusi simulācijas tehnoloģija, kas ļauj precīzi imitēt realitāti, šādā vidē demonstrējot noteiktu kompetences līmeni. (Society for Simulation Healthcare. About Simulation.)

Studentcentrētas un kompetencē balstītas mācīšanās un mācīšanas nodrošināšanai ir būtiski definēt precīzus un mērāmus studiju rezultātus, kā arī autentiskā vērtēšanā identificēt to apguves snieguma rādītāju līmeni. Simulācijā balstīta pieeja veselības aprūpes izglītībā pierādījusi efektivitāti gan studiju rezultātu apgūvē, gan kvalitatīvā to vērtēšanā.

Metodoloģija *Methodology*

Raksta mērķa – analizēt un atspoguļot RSU Prasmju monitoringa sistēmas koncepta saskaņotību ar izglītības politikas attīstības aktuālajām nostādņēm, tiesisko regulējumu un augstskolas pedagogijas pamatprincipiem prasmju apgūvē un vērtēšanā veselības aprūpes izglītībā, kā arī izvērtēt jaunradītās sistēmas izstrādes un ieviešanas sākotnējos rezultātus – sasniegšanai tika veikts starpdisciplinārs kvalitatīvs pētījums.

Izvirzītie uzdevumi ir: 1) sniegt vispārīgu pārskatu par prasmju konceptu no izglītības politikas attīstības nostādņu perspektīvas, no tiesiskā regulējuma perspektīvas un augstskolu pedagogijas pamatprincipu prasmju apgūvē un vērtēšanā perspektīvas; 2) aprakstīt prasmju monitoringa sistēmas konceptuālo modeli; 3) aprakstīt prasmju monitoringa sistēmas izstrādes un ieviešanas

sākotnējos rezultātus; 4) balstoties sistēmas lietotāju vērtējumā iezīmēt turpmāk attīstāmos aspektus prasmju monitoringa sistēmas modeļa pilnveidei.

Mērķa sasniegšanai ir izmantotas analītiskās un aprakstošās, induktīvās, deduktīvās un sintēzes pētniecības metodes, tiesību normu iztulkošanas (interpretācijas) metodes, kā arī veiktas intervijas sākotnējo rezultātu novērtēšanai.

Pētījuma bāze: politikas plānošanas dokumenti un ziņojumi, tiesiskā regulējuma dokumenti, literatūras avoti un pētījumi, RSU studenti un docētāji, citu izglītības iestāžu pārstāvji, darba devēji un profesionālo asociāciju pārstāvji. Jaunradītie IT risinājumi.

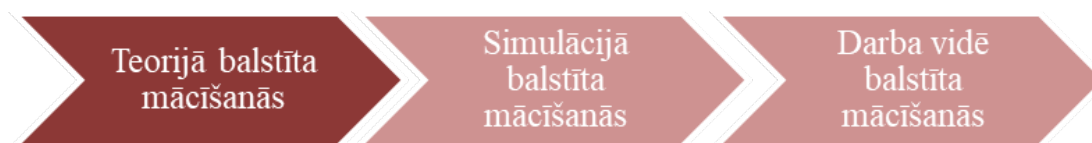
Rezultāti

Results

Prasmju monitoringa sistēmas koncepts

Prasmju monitoringa sistēmas koncepcijas galvenie principi ir (1) veselības aprūpes studiju virziena izglītības kvalitātes nodrošināšana, (2) simulācijā balstīta izglītības pieejas īstenošana prasmju apguvē un vērtēšanā, (3) prasmju apguves novērtēšana un prasmju apguves līmeņa noteikšana un (4) IT sistēmas atbalsts prasmju pārvaldības stiprināšanai.

RSU veselības aprūpes studiju virziena izglītības kvalitātes nodrošināšana, kas nosaka, ka posmā Nr.1. sākotnēji izglītojamie apgūst teorētiskās zināšanas, posmā Nr.2 izglītojamais simulētā vidē (i) aprobē apgūtās zināšanas, (ii) apgūst un pilnveido prasmes, (iii) demonstrē kompetenci, posmā Nr.3 izglītojamais reālā darba vidē aprobē zināšanas, prasmes un kompetences, ārstniecības vai apmācīttiesīgas personas uzraudzībā (prakses laikā) (1.att.).



1.attēls. *Mācīšanās un mācīšanās modelis veselības aprūpes izglītībā*

(raksta autoru gatavots)

Figure 1 *Teaching and Learning Model in Healthcare Education* (by authors)

Šī pieeja nodrošina pēctecīgu zināšanu, prasmju un kompetenču apguvi, ievērojot izglītojamā individuālo sniegumu. Veicina mācīšanās un mācīšanās rezultātu izsekojamību un pilnveides iespēju identificēšanu izglītības programmu saturā un īstenošanas procesā.

Simulācijā balstīta izglītības pieejas īstenošana prasmju apguvē un vērtēšanā, kas ietver: (1) atsevišķu individuālu prasmju apguvi un pilnveidi; (2) simulāciju scenāriju izspēli, kuru ietvaros komanda aprobē un demonstrē zināšanas, prasmes un kompetences; (3) institucionāla līmeņa procesu un konceptuālu risinājumu testēšanu, aprobāciju, novērtēšanu vai prognozēšanu simulētā vidē (2. att).



2.attēls. **Simulācijā balstītas izglītības pieejas īstenošana prasmju apguvē un vērtēšanā** (raksta autoru gatavots)

Figure 2 **Implementation of a Simulation-based Educational Approach to Skills Acquisition and Assessment** (by authors)

Simulācijā balstītā izglītības pieeja ļauj drošā un kontrolētā vidē sistēmiski izvērtēt teorētisko zināšanu apjomu un kvalitāti, noteikt spēju faktisko līmeni un prognozēt izpildījuma kvalitāti un atbilstību reālai darba videi.

Prasmju apguves novērtēšana un prasmju apguves līmeņa noteikšana, saskaņā ar mācīšanas un mācīšanās pieeju veselības aprūpes izglītībā (1. tab).

1. tabula. **Prasmju apguves līmeņi** (raksta autoru gatavots)

Table 1 **Skills Acquisition Levels** (by authors)

Teorijā balstīta mācīšanās	<p>A Pamatlīmenis (spēj raksturot prasmi):</p> <ul style="list-style-type: none"> • Students gūst teorētiskas zināšanas par prasmi, tās mērķi un pielietojumu. • Prasmes apguvē lielākoties tiek lietoti studiju materiāli un prasmes vizuāls atspoguļojums. • Prasme tiek vērtēta teorētisko zināšanu pārbaudes darbu formā (rakstiski, mutiski), kā arī risinot teorētiskus klīniskus gadījumus digitālu simulāciju formā (piemēram, interaktīvi scenāriji, virtuāli pacienti, virtuālas laboratorijas).
Simulācijā balstīta mācīšanās	<p>B1 Vidējs līmenis (spēj tehniski demonstrēt prasmi simulētā vidē):</p> <ul style="list-style-type: none"> • Students gūst iemaņas praktiski īstenot prasmi, izmantojot simulāciju īstenošanai iespējamus resursus. • Prasmju apguvi īsteno - nodrošinot prasmes demonstrācijas sesijas, ko realizē eksperta līmeņa speciālists, ka arī pamatojoties uz detalizētu prasmes pēctecīgu īstenošanas soļu izklāstu. • Prasme tiek vērtēta praktisku darbu un uzdevumu formā simulētā vidē, saskaņā ar iepriekš noteiktiem vērtēšanas kritērijiem

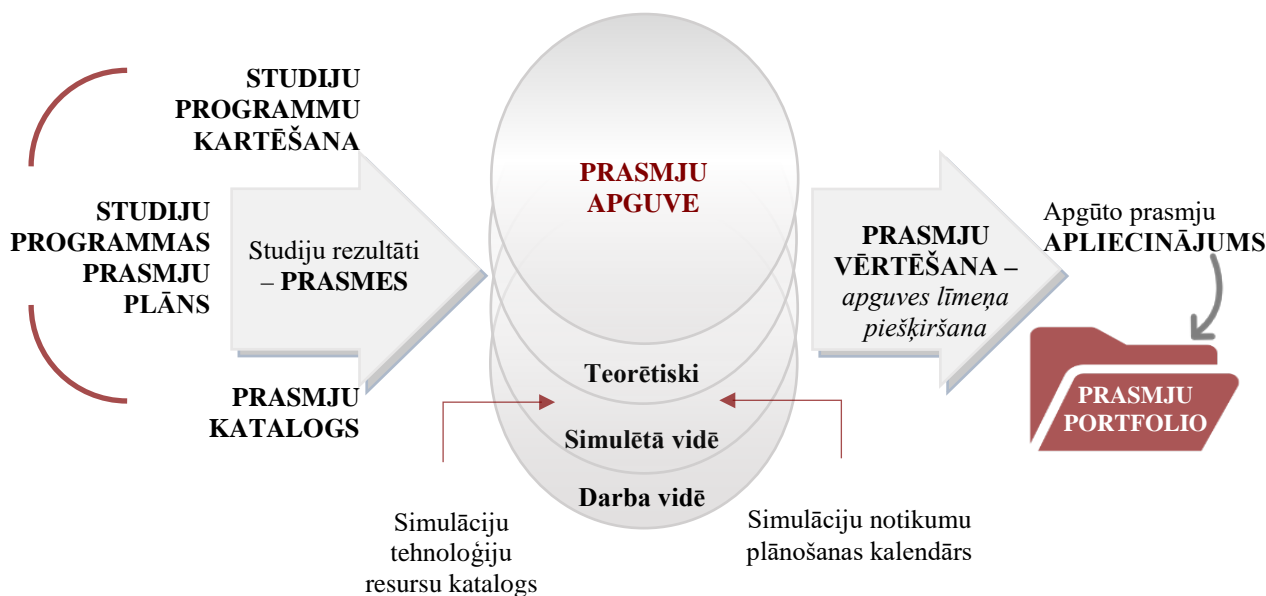
	<p>B2 Vidēji augsts līmenis (spēj demonstrēt prasmi vai prasmju kopu atbilstoši simulētas vides scenārija gaitai):</p> <ul style="list-style-type: none"> • Students gūst izpratni, spējas un praktiskās iemaņas simulētā vidē pielietot prasmi noteiktā kontekstā. • Balstoties uz teorētiskajām zināšanām un praktiskajām iemaņām, students spēj izvērtēt situāciju, pieņemt lēmumu un pielietot noteiktu prasmi simulēta scenārija ietvaros. Prasme tiek demonstrēta indivīda vai komandas līmenī, izmantojot simulāciju īstenošanai pieejamos resursus (arī virtuālās un papildinātās realitātes simulāciju tehnoloģijas) vai iesaistot simulētu dalībnieku. • Prasme tiek vērtēta simulācijas izspēles gaitā objektīvi strukturēta veidā pielietojot novērtējuma veidlapas.
Darba vidē balstīta mācīšanās	<p>C1 Augsts līmenis (spēj demonstrēt prasmi reālā darba vidē apmācītiesīgas personas uzraudzībā):</p> <ul style="list-style-type: none"> • Students gūst pieredzi īstenot prasmi reālā darba vides situācijā. • Prasme tiek demonstrēta studiju programmas prakses laikā apmācītiesīgas personas uzraudzībā. • Prasme tiek vērtēta reālā darba vidē, prioritāri vērtējot konkrētās prasmes pielietojuma atbilstību situācijai un prasmes izpildes kvalitāti. <hr/> <p>C2 Augstākais līmenis (spēj veikt prasmi reālā darba vides situācijā patstāvīgi):</p> <ul style="list-style-type: none"> • Students gūst pieredzi patstāvīgi veikt situācijas analīzi un noteikt nepieciešamās prasmes pielietojumu. • Patstāvīgi, reālā darba vidē, īstenoto prasmju skaits sniedz pamatu prasmes apguves līmeņa piešķiršanai.

Prasmju līmeņošana atspoguļo pakāpenisku prasmju apguves procesu no zināšanām par konkrētu prasmi un to vienkāršas novērošanas līdz prasmes praktiskai apgūšanai un spējai pielietot noteiktā kontekstā patstāvīgi. Prasmju līmeņošanas modelis sniedz prasmju apguves līmeņa skaidrojuma, atspoguļo pārskatu par iespējamajiem prasmju apguves un vērtēšanas iespējām katrā līmenī.

IT sistēmas atbalsts prasmju pārvaldības stiprināšanai, kas paredz: (1) prasmju apzināšanu un prasmju apguves pamatotības noteikšanu, balstoties kartēšanas rezultātos; (2) prasmju pārredzamību, kam pamatā ir prasmju katalogs un katras konkrētas studiju programmu prasmju plāns; (3) prasmju salīdzināmību, kas balstās prasmju apguves līmeņošanas modeli; (4) datu dokumentēšanu, prioritāri ietverot prasmju e-portfolio (3. att.).

Prasmju monitoringa sistēmas IT risinājumi ļauj realizēt būtiskas prasības prasmju pārvaldībā: prasmju identificēšanu un vienotu definēšanu, prasmju pārredzamību un kategorizēšanu, prasmju un prasmju saistīto komponentu pārredzamību, prasmju apguves un vērtēšanas vienotas pieejas īstenošanu mācību procesā, prasmju salīdzināmību, pamatojoties uz prasmju apguves līmeņošanas pieeju, prasmju mērķorientētu plānošanu, prasmju un saistītās informācijas

dokumentēšanu, kas ir datu uzkrāšanas un sistematizēšanas pamatā, personalizēta prasmju e-portfolio izveidošanu.



3.attēls. Prasmju Monitoringa Sistēmas Modelis (raksta autoru gatavots)
Figure 3 Model of Skills Monitoring System (by authors)

Prasmju monitoringa sistēmas izstrādes un ieviešanas sākotnējie rezultāti

Prasmju monitoringa sistēmas centrālās komponentes ir prasmju katalogs, studiju programmas prasmju plāns, prasmju e-portfolio (izzīņa un apliecinājums).

Prasmju katalogs vienkopus reģistrē un uztur datus par unikālajām RSU veselības aprūpes studiju virziena studiju programmās apgūstamajām prasmēm, nodrošina pieejamību aprakstošai informācijai par prasmi un piekļuvi prasmju apguves un vērtēšanas saistošajiem materiāliem.

Prasmju kataloga integrācija studiju kursa aprakstos dod iespēju atspoguļot visas prasmes, kuras nodrošina noteikta studiju rezultāta sasniegšanu un, balstoties uz informāciju par studiju kursam piesaistītajām prasmēm, nodrošina iespēju ģenerēt studiju programmu prasmju plānus.

Būtiskākā informācija, kas tiek atspoguļota par katru no katalogā esošajām prasmēm ir: nosaukums, prasmes skaidrojums, atsauce uz prasmju apguvi pamatojošajiem dokumentiem, piederību konkrētai kategorijai, prasmes īstenošanas secīgo darbību apraksts, prasmes vērtēšanas kritēriji, prasmes apguves īstenošanai nepieciešamie studiju materiāli, kā arī cita informācija, kas nodrošina labāku prasmju apguves un vērtēšanas plānošanas organizēšanu.

Prasmju kataloga vairāku pakāpju pārvaldības modelis (prasmes sagatavotājs, prasmes atbildīgais, prasmei piekritīgās kategorijas atbildīgais un prasmju

kataloga pārvaldnieks) nodrošina prasmju katalogā esošās informācijas kvalitāti un regulāru kataloga satura aktualizēšanu.

Sākotnējie dati liecina, ka prasmju katalogs ietver 400 dažādu veselības aprūpes jomu prasmes, kas ir sakārtotas 17 kategorijās. Prasmju kataloga prasmju aprakstus veidojuši 18 docētāji no 17 struktūrvienībām. Katalogā reģistrētās apgūstamās prasmes ir pievienotas 24 studiju kursu aprakstiem.

Studiju programmas prasmju plāns atspoguļo, kādas prasmes, kādā apguves līmenī, kādā studiju programmas īstenošanas posmā un kura studiju kursa ietvaros tiek apgūtas. Studiju programmas prasmju plāns sniedz iespēju pārredzēt studiju programmā apgūstamās prasmes, izvērtēt studiju programmas prasmju plānā esošo prasmju saskaņotību ar studiju programmas rezultātiem, kā arī nodrošina iespēju pārliecināties par atbilstošu prasmju apguves un vērtēšanas plānojumu, lai izvairītos no apgūstamo prasmju nelietderīgas dublēšanās studijuursos un nodrošinātu prasmju apguves un vērtēšanas pēctecību. Prasmju monitoringa sistēmas ietvaros Studiju programmas prasmju plāns pieejams 27 veselības aprūpes virziena studiju programmai.

Prasmju e-portfolio nodrošina pārskatu par izglītojamā apgūtajām prasmēm un piešķirto apguves līmeni. Studiju procesā, balstoties uz prasmju e-portfolio datiem, studentam ir iespējams sekot līdzi savam prasmju apguves progresam. Jebkurā laikā ir pieejama izziņa par noteiktā periodā apgūtajām prasmēm un to apguves līmeņiem, savukārt absolvējot studiju programmu, students iegūst dokumentētu apliecinājumu, kurā atspoguļotas visas studiju programmā apgūtās prasmes tās augstākajā apguves līmenī.

Centrālo komponentu atbalstam saistītie IT risinājumi nodrošina Prasmju monitoringa sistēmas veiksmīgu darbību.

Kartēšanas sistēma nodrošina studiju programmas satura izvērtēšanu pret saistošo dokumentu prasībām, kā rezultātā tiek identificēti sasniedzamie studiju rezultāti, tostarp arī studiju programmas ietvaros apgūstamās prasmes.

Simulāciju tehnoloģiju resursu katalogs vienkopus nodrošina informāciju par simulācijā balstītas izglītības pieejas īstenošanai pieejamo aprīkojumu un materiāliem, kuri tiek piesaistīti Prasmju katalogā esošajiem prasmju aprakstiem un atspoguļo katras prasmes īstenošanai nepieciešamos resursus, kas ir pamats resursu racionālai plānošanai.

Simulāciju notikumu plānošanas sistēma atspoguļo visu simulācijā balstītus mācību notikumus un operatīvo informāciju to īstenošanas nodrošināšanai.

Prasmju monitoringa sistēmas koncepcija un IT risinājumi – esošo un potenciālo lietotāju vērtējumā

Prasmju monitoringa sistēmas izstrādes un ieviešanas laikā, balstoties interviju rezultātos, tika apkopots RSU docētāju un studentu, veselības aprūpes

iestāžu administratīvo amatu pārstāvjiem un veselības aprūpes jomas asociāciju pārstāvju, kā arī citu izglītības iestāžu pārstāvju viedoklis par prasmju monitoringa sistēmas koncepciju un izstrādātajiem IT risinājumiem. Apkopotie rezultāti liecina, ka:

– *Akadēmiskais personāls*

Atzinīgi novērtē: (1) vienotu mācīšanas un mācīšanās pieejas īstenošanu veselības aprūpes izglītībā; (2) prasmju līmeņošanu, kas ļauj salāgot prasmi un tās apguves līmeni ar sasniedzamo studiju rezultātu; (3) simulācijā balstītas pieejas integrāciju, kas nodrošina prasmju apguves īstenošanu drošā un kontrolētā veidā, ļauj iespējami objektīvi izvērtēt studenta sniegumu, kā arī novērtēt prasmju teorētiskas apguves posma rezultātus; (4) prasmju aprakstu, vērtēšanas kritēriju un saistošo materiālu koplietošanas iespējas; (5) viennozīmīgu prasmju nosaukumu definēšanu, nepieļaujot situācijas, kad viena un tā pati prasme pēc būtības tiek definēta atšķirīgi, kā arī prasmju kataloga vairāku pakāpju pārvaldības modeli, kas nodrošina prasmju katalogā esošās informācijas uzticamību, aktualitāti un kvalitāti; (6) studiju programmas prasmju plānu, kas ir galvenais orientieris prasmju pēctecīgai un saskaņotai apguves un vērtēšanas organizēšanai; (7) prasmju monitoringa sistēmas saistošos atbalsta IT risinājumus, īpaši kartēšanas instrumentu, kas nodrošina prasmju identificēšanu.

Vērš uzmanību, ka: (1) svarīgi atspoguļot ne tikai profesijai specifiskās praktiskās prasmes, kuras piekritīgas psihomotorajai jomai, bet arī kognitīvās un digitālās prasmes; (2) dažkārt problemātiski nodrošināt prasmes piekritību vienai konkrētai kategorijai prasmes starpdisciplinārā rakstura dēļ; (3) bez studiju materiāliem, kas nodrošina prasmes pareizu tehnisku izpildi, svarīgi attīstīt studiju materiālus, piemēram, simulāciju scenārijus utt., lai attīstītu spēju konkrētu prasmi, pielietot atbilstoši situācijai; (4) jāizvērs darba vidē balstītas mācīšanas un mācīšanās prasmju apguves un vērtēšanas pieeja (prakšu un rezidentūras ietvaros); (5) jāstiprina pedagoģiski metodoloģiskie aspekti prasmju apguves un vērtēšanas īstenošanā.

– *Studējošie*

Uzsver, ka: (1) studiju programmā ieplānoto prasmju saraksts sniedz izpratni par studiju programmas ietvaros kopumā apgūstamajām prasmēm un ļauj sekot līdzi prasmju apguves progresam, kā arī motivē paaugstināt noteiktu prasmju apguves līmeni; (2) Prasmju apraksti, vērtēšanas kritēriji un saistošie studiju materiāli nodrošina atbalstu prasmju apguvē; (3) simulācijā balstīta prasmju apguve ļauj gūt pārlicību par savām spējām pirms prasmju pielietošanas reālā darba vidē; (4) vienoti vērtēšanas kritēriji mazina subjektivitātes risku akadēmiskā personāla vērtējumā; (5) izziņa par apgūtajām prasmēm (studiju procesā) un apliecinājums par apgūtajām prasmēm (absolvējot programmu), sniedz pārredzamu un pierādāmu informāciju par sagatavotību profesionālo pienākumu veikšanai, kas veicina konkurētspēju darba tirgū.

Vērš uzmanību, ka: (1) nepieciešams paplašināt praktiski apgūstamo prasmju loku, turklāt ne tikai psihomotoro prasmju jomā, bet arī digitālo prasmju jomā; (2) svarīgi veicināt, ka studiju kursu aprakstiem pēc iespējas vairāk būtu pievienotas precīzi definētas apgūstamās prasmes no prasmju kataloga ar skaidru prasmes īstenošanas aprakstu un vērtēšanas kritērijiem; (3) nepieciešams paplašināt prasmju apguves iespējas digitāli virtuālā vidē; (4) prasmju e-portfolio būtu jāatspoguļo visas studiju programmā apgūtās prasmes; (5) apliecinājumam, kurā uzskaitītas studiju programmas ietvaros apgūtās prasmes un to apguves līmeņi, jābūt obligātam diploma pielikuma dokumentam.

– *Veselības aprūpes jomas pārstāvji*

Norāda, ka: (1) darba devējiem, augstākās izglītības iestādēm un izglītojamajiem svarīgi veidot vienotu izpratni par darba tirgū nepieciešamajām prasmēm, kā arī sagaidāmo prasmju izpildījumu reālā darba vides situācijā; (2) simulācijā balstīta prasmju apguve studentiem sniedz lielāku pārliecību par gatavību darbam ar pacientu, uzlabo pacienta drošību un veselības aprūpes kvalitāti; (3) nepieciešams attīstīt darba vidē balstītas prasmju apguves un vērtēšanas pedagoģisko pieeju; (4) veselības aprūpes jomā svarīgi topošajam un esošajam ārstniecības personālam apzināties, savukārt ārstniecības iestāžu pārstāvjiem pārliecināties par veselības aprūpes personāla gatavību un spējām īstenot prasmes reālā darba vidē; (5) izglītības iestādēm būtu jānodrošina iespēja darba devējiem vienkāršā un efektīvā veidā ziņot par darba vidē trūkstošajām vai pilnveidojamajām prasmēm.

– *Veselības aprūpes jomas profesionālo asociāciju pārstāvji*

Norāda, ka: (1) prasmju pārvaldības jautājumi ir aktuāli ne tikai pamatstudiju programmās, bet arī tālākizglītības ietvaros, īpaši ārstniecības personas resertifikācijas kontekstā; (2) nepieciešams pārskatīt prasmju nosaukumu definējumus un salāgot tos starp dažādām specialitātēm; (3) svarīga vienota, pierādījumos balstīta metodoloģija prasmju apguves un vērtēšanas īstenošanā, lai nodrošinātu standartizāciju veselības aprūpes pakalpojumu īstenošanā, tādējādi veicinot drošu un kvalitatīvu veselības aprūpi; (4) katras jomas atsevišķie risinājumi prasmju apguves un vērtēšanas pārvaldības īstenošanā būtu jāizvērs vienotā, koplietojamā sistēmā.

– *Citu izglītības iestāžu pārstāvji*

Atzīst prasmju monitoringa sistēmas lietderību un jēgpilnu pielietojumu izglītības sistēmā, vienlaicīgi uzsverot, ka prasmju pārvaldības sistēmai būtu jābūt koplietojamai.

Vērš uzmanību, ka svarīgi izveidot simulācijā balstītas izglītības pieejas metodoloģisko materiālu, kā arī turpināt attīstīt prasmju apguves un vērtēšanas metodoloģiskos aspektus, lai nodrošinātu prasmju apguves īstenošanas efektivitāti un prasmju apguves vērtēšanas objektivitāti.

Secinājumi Conclusions

Prasmju monitoringa sistēmas koncepts un IT risinājumi ir izstrādāti saskaņā ar izglītības attīstības nostādņu dokumentiem, tiesiskā regulējuma dokumentos minēto un augstskolas pedagogijas nostādnēm. Galvenie secinājumi ir:

1. Prasmju aktualitāte pieaug un aizvien lielāks uzsvars tiek likts uz to, ka nepieciešams harmonizēt mācību iestāžu, darba devēju un potenciālo darba ņēmēju izpratni par darba tirgū nepieciešamajām prasmēm.
2. Paradigmas maiņa izglītībā paredz prasmju izvirzīšanu priekšplānā, būtiskie aspekti, kam tiek piešķirta ievērojama nozīme, ir (1) prasmju apzināšana, kas balstīta darba tirgus vajadzību analīzē; (2) absolventu gatavības un spēju paaugstināšana pielietot apgūtās prasmes reālās dzīves situācijās; (3) prasmju pārredzamības un salīdzināmības nodrošināšana, lai uzlabotu izpratni par faktiskajiem studiju rezultātiem, ko persona apguvusi kvalifikācijas ieguves gaitā; (4) prasmju sistēmas pārvaldības stiprināšana, kas paredz pilnveidot prasmju politikas stratēģiju, uzlabot sadarbību ar iesaistītajām pusēm un veidot integrētu prasmju uzraudzības un informācijas sistēmu.
3. Jēdziens *studiju rezultāts* nav abstrakts, bet ietver konkrēti definētas zināšanas, prasmes un kompetences. Svarīgi nodrošināt visu studiju rezultātā iekļauto komponentu vērtējumu, nepieļaujot selektīvu pieeju to vērtēšanā.
4. Tiesiskais regulējums nosaka, ka kredītpunktu ieguve, kas ir pamats izglītību apliecināšanai, ir iespējama sasniedzot noteiktus studiju rezultātus, par ko liecina atbilstošs vērtējums. Savukārt, augstskolas viens no uzdevumiem ir īstenot savas iekšējās kvalitātes nodrošināšanas sistēmas, kuru ietvaros izveido un publisko tādus studējošo sekmju vērtēšanas kritērijus, nosacījumus un procedūras, kas ļauj pārlicināties par paredzēto studiju rezultātu sasniegšanu.
5. Mūsdienu izglītības paradigmu raksturo kompetencē balstīta studentcentrēta pieeja. Lai panāktu augstus studiju rezultātus un sekmētu studenta kompetences, nozīmīga loma ir studiju rezultātu formulēšanai, precīzi definējot, kas studējošajam ir jāzina, jāsaprot un/vai jādemonstrē mācīšanās procesa noslēgumā.
6. Teorijā, simulācijā un darba vidē balstīts mācīšanās un mācīšanās modelis nodrošina pēctecīgu zināšanu, prasmju un kompetenču apguvi, ievērojot izglītojamā individuālo sniegumu. Turklāt,

- simulācijā balstītā izglītības pieeja ļauj drošā un kontrolētā veidā sistēmiski izvērtēt teorētisko zināšanu apjomu un kvalitāti, noteikt spēju faktisko līmeni un prognozēt izpildījuma kvalitāti un atbilstību reālai darba videi, kas ir būtiski prasmēm veselības aprūpes jomā.
7. Prasmju līmeņošana atspoguļo pakāpenisku prasmju apguves procesu no zināšanām par atsevišķām konkrētām prasmēm un to vienkāršas novērošanas līdz prasmju praktiskai apgūšanai un spējai patstāvīgi pielietot noteiktā kontekstā.
 8. Prasmju monitoringa sistēmas IT risinājumi ļauj realizēt būtiskas prasības prasmju pārvaldībā: prasmju identificēšanu un vienotu definēšanu, prasmju apguves un vērtēšanas vienotas pieejas īstenošanu, prasmju salīdzināmību, pamatojoties uz prasmju apguves līmeņošanas pieeju, prasmju mērķorientētu plānošanu, prasmju un saistītās informācijas dokumentēšanu, kas ir datu uzkrāšanas un sistematizēšanas pamatā, kā arī personalizēta prasmju e-portfolio izveidošanu.
 9. Prasmju monitoringa sistēmas koncepcijas un IT risinājumu sākotnējo rezultātu vērtējums liecina, ka labi izveidota prasmju pārvaldības sistēma var: (1) harmonizēt izglītības pakalpojumu sniedzēju, darba devēju un studējošo izpratni par darba tirgū nepieciešamajām prasmēm; (2) nodrošināt vienotas, pierādījumos balstītas, mācīšanās un mācīšanas pieejas īstenošanu prasmju apgūvē un īstenošanā; (3) veicināt simulācijā balstītas izglītības pieejas integrāciju veselības studiju virziena studiju programmās; (4) veicina prasmju apguves un vērtēšanas metodoloģisko materiālu koplietojamību; (5) nodrošina saskaņotu un pēctecīgu prasmju apguves un vērtēšanas procesu; (6) ļauj sekot līdzi savam personīgajam prasmju apguves progresam, kas paaugstina izglītojamā motivāciju uzlabot prasmju apguves līmeni; (7) atspoguļo pārredzamu un pierādāmu informāciju par sagatavotību profesionālo pienākumu veikšanai, kas veicina konkurētspēju darba tirgū.
 10. Prasmju monitoringa sistēmas pilnveidojamie aspekti: (1) prasmju monitoringā nepieciešams iekļaut ne tikai profesijai specifiskās praktiskās prasmes, bet arī kognitīvās prasmes, caurviju - digitālās prasmes un citas prasmju grupas; (2) jāpilnveido pedagoģiski metodoloģiskie aspekti, balstoties padziļinātas izpētes rezultātos, prasmju apguves un vērtēšanas īstenošanai; (3) prasmju pārvaldība jāpaplašina, ievērojot visu izglītības līmeņu specifiku un jāizvērs vienotā, koplietojamā sistēmā.

Summary

The paradigm shift in education involves bringing skills to the foreground. The transition from a “lecturer-centered” approach to “student-centered” learning and teaching, with a focus on learning outcomes and the promotion of student competence, encourages greater attention to skills acquisition in the higher education process.

Skills are an important part of professional capital for the development and sustainability of any industry, therefore Riga Stradins University (RSU) is implementing an institutional level project “Skills Monitoring System” within the field of health care studies, which aims to develop a skills monitoring system model and appropriate IT solutions to ensure identification of skills, transparency, comparability, documentation and management.

In order to achieve the aim of the article, new type of interdisciplinary mixed type research was carried out. Aim of the research is to analyze and reflect the coherence of the RSU Skills Monitoring System concept with current education policy development, legal framework and basic principles of higher education pedagogy in skills acquisition and assessment in health care education, as well as to evaluate the initial results of the newly developed system.

The tasks are: 1) to provide a general overview of the concept of skills from the perspective of education policy development, from the perspective of legal regulation and the perspective of the basic principles of higher education pedagogy in the acquisition and assessment of skills; 2) describe the conceptual model of the skills monitoring system; 3) describe the initial results of the development and implementation of the skills monitoring system; 4) to summarize the evaluation of system users and to mark the aspects to developed further for the improvement of the skills monitoring system model.

The research base consists of (1) theoretical (policy planning documents and reports, legal regulation documents, literature sources and research) and (2) empirical (RSU students and lecturers, representatives of other educational institutions, employers and representatives of professional associations, newly created IT solutions) resources.

The concept of the skills monitoring system and IT solutions have been developed in accordance with the educational development documents, the legal framework documents and the theoretical assumptions of higher education pedagogy, ensuring the acquisition and improvement of skills of existing and future health care professionals, taking into account patient safety and health care quality.

The article focuses on promoting a more targeted and clearer management approach to skills acquisition and assessment in higher education and outlining future perspectives.

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ACTIVE LEARNING METHODS IN STUDIES: STUDENTS' OPINIONS AND EXPERIENCES

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Abstract. *Rapid changes in education and pedagogy are related not only to the global crisis caused by COVID-19, but also to other changes determined by globalization and technological convergence—labour mobility, changes in different professions and changes in teacher–student relations—that are also affected by intergenerational differences. Changes in the pedagogical paradigm, which are included in the content of the Paris Communiqué (2018) and outlined in many important educational development and planning documents, emphasise students' transition from being mere recipients of information to being participants actively engaged with new information in a learning environment. Following the identification of problems with a less frequent use of active participation methods in higher education, the University of Latvia implemented an Erasmus+ project entitled Entrance to Future Education (2017–2019). In this project, the authors summarized modern, inspiring, interactive, active engagement-oriented teaching/learning methods in higher education. During the project, several student focus groups were formed to discuss students' experiences with active engagement methods in studies, and a handbook with various student active engagement methods and games was created. In 2020, 106 students from different Latvian universities were surveyed about their understanding and experience in relation to these teaching methods in their studies. The results showed that, according to students, attitude and ardour are essential for engaging students with enthusiasm and interest in the study process. The results of the survey show the varied experiences of students, as well as different understandings of active learning methods. Students noted that they most often experienced various group projects in studies, presentations and various tasks outside the classroom, but relatively rarely used such methods as creative video making, active use of game elements and constructive feedback from peers.*

Keywords: *Active learning, Active learning methods, Learning environment, Student-centred learning.*

Introduction

Changes in the pedagogical paradigm of higher education are inconceivable without a change from a teacher-centred to a student-centred approach in the learning process. Principles of the student-centred approach are not only included in most important educational documents (Paris Communiqué, 2018; European

University Association, 2019; Standards and Guidelines for Quality Assurance in the European Higher Education Area, 2015), but are also an important factor in different teaching techniques to provide students with interesting and exciting learning in their studies. This approach is used at a time when the COVID-19 crisis has transformed the learning process such that schools have almost entirely switched to a distant learning style. According to the analysis provided by the report of the European Students' Union's *Bologna with Student Eyes 2018* (ESU, 2018), student-centred learning (SCL) is also an objective measure of quality among higher education institutions. Most findings provide evidence that teachers who use some elements of SCL saw students who were actively engaged in the learning process, were more aware of their responsibility and sense of autonomy, and learned from their own experience (Kok, 2014). Although the student-centred approach has been relevant for many years, many universities and faculty still face various challenges in reorienting their learning process in line with this approach (Sadler, 2012). Teachers have described challenges in putting this way of thinking into practice and lack innovative methods to engage students more fully in the learning process (Sadler, 2012). The ESU study also pointed out that quantitative data still show the problems in implementing this aspect (ESU, 2018). To promote the pedagogical competence of high-school teachers with regard to student-centred teaching and to give them practical tools to work with students, several universities from Latvia, Poland and Belgium jointly developed the project *Entrance to future education* (<http://efe-project.eu/>).

The current study was conducted with the aim of exploring students' experiences with active (engaging) methods in the study process in higher education. Specifically, the research questions governing the current study were:

- 1) What is the students' experience with active teaching/learning methods in the study process?
- 2) How often in the study process do students come into contact with active, engaging, motivating, student-centred study methods?
- 3) What are the students' recommendations for the improvement of the study process?

Student-centred Approach in Higher Education

The rapid development of research on a student-centred approach to learning began in the 1990s and 2000s (Burnard, 1999; Taylor, 2000; Bayeten & Kyndt, 2010; McCabe, 2014). The student-centred approach stipulates that education provision in all its aspects is defined by the intended learning outcomes and most suitable learning process, instead of the student's learning being determined by the education provided (EUA, 2018). In the context of the Bologna Process, student-centred learning is defined as "an approach that replaces transmissive

models of education with an outcome-based perspective implemented through ‘new approaches to teaching and learning, effective support and guidance structures and a curriculum focused more clearly on the learner’” (EHEA, 2009, p. 3). Students should take an active role in creating the learning process and responsibility for their own success and progress in the study process; so they could better benefit their personal learning and the quality of education for their institution (ESU, 2015).

Although a student-centred approach encourages students to have more responsibility for their learning and studies, researchers also emphasise the important role of lecturers and their differing understanding of the learning process, which highlights implications for ongoing practice (McCabe & O’Connor, 2014). The teacher’s position is defined as that of facilitator, whose role is to guide students in taking ownership of their own learning; however, teachers cannot always take this role for the duration of the class, and they often lack different engagement methods (Christersson et al., 2019). The relationship between teacher-centred and SCL environments from the student’s perspective has also been researched. Two different views of this relationship were found: the transactional view stresses the continuous renegotiation of educator and student roles, and the independent view emphasises student-centredness as independent features of learning environments (Elen et al., 2007).

Active Learning and Engaging Methods in Studies

Active learning is the process of involving all students in activities that encourage them to develop a deeper understanding of content by working with and reflecting upon the material being presented (EUA, 2019). Pedagogical methods have developed especially rapidly in recent years, with particular attention paid to active student involvement methods. These methods are often characterised by small group work, with a mix of various creative methods (Sursock & Smidt, 2010). Games, storytelling, short lectures, simulations, role-playing, incident process, portfolio development, visualisation, flipping classrooms, gamification, crossover learning, computational thinking, dialogic teaching and problem-based learning (PBL) have been described by several pedagogy researchers (Panke & Stephens, 2018; Heaysman, 2019). Also, different technology-embedded teaching/learning methods, e.g., blogging, podcasts, quizzes, tasks and interactive idea boards, are recommended as very effective for student active engagement in the learning process (Khairnar, 2015). These methods are particularly useful today, as all in-class processes have been paralysed by the COVID-19 crisis.

Some important factors that influence students’ engagement in the process of student-centred learning include sharing of experiences, positive relationships

with teachers and peer support (Chang, 2013). Previous studies also explored a positive correlation between teachers' educational, social and technological competency and their innovative teaching performance (Chang, 2013).

Several studies showed that students rated their own innovation competence as moderately high (Ovbiagbonhia et al., 2019). However, some also pointed out students' resistance to active learning; they described a variety of strategies to reduce student resistance, including several successful ways to implement the strategies (Tharail et al., 2018).

Still, some concerns regarding assessment methodologies remain. Assessments using SCL methods should include formative and regular feedback to allow both teacher and student to closely monitor the learning progress and reflect on it. Assessment should be defined through intended learning outcomes (EUA, 2018).

Innovative Active Learning Methods in the Project *Entrance to Future Education*

From 2017–2019, the Career Development Centre, University of Latvia (Latvia), in cooperation with partners from UC Leuven–Limburg (Belgium), Media & Learning Association (Belgium) and Humanitarian and Economic University in Lodz (Poland), initiated the Erasmus+ project, *Entrance to future education*, with the aim of highlighting teaching methods that activate, motivate, inspire and excite students and help them to develop the skills required in the 21st century labour market.

Forty different active learning methods have been tried and summarised in methodological material entitled *Student-centred Teaching Methods for the Development of 21st Century Skills*, developed based on research and focus group discussions with students and academics.

The methods were divided into two bigger groups: strategic approach and techniques/methods (see examples in Table 1).

The strategic approach included design thinking, which provides a solution-based approach; it is a way of thinking and working as well as a collection of hands-on methods. Peer assessment or peer review provides a structured learning process for students to critique and provide feedback to each other on their work and can comprise distinctive techniques. Techniques and methods are more concrete and could be used in different stages of learning.

Table 1 Examples of Active Learning (AL) Methods in the EFE Project

Strategic Approach	Techniques/Methods
Design thinking	Virtual exhibition
Creative project	Think-aloud–pair-share
Art-based scenario writing	Knowledge clips
Play projects	Documentary making
Flipped classroom	Clustering
Lecture capture	What? So what? Now what?
Peer assessment	Tell and sell
Video assessment	Genealogy of an idea
Virtual internship	3-2-1 processor
	Translate it!

Methodology

The authors performed during the project a qualitative study using 5 focus group discussions with students from University of Latvia. Focus groups with students were organized during the period from March to October. Focus group discussion sessions lasted for 54 (median) minutes. Focus group discussions were transcribed; the coding of all categories were performed according to themes that relate to the research questions (Which methods do students consider modern and innovative? What is the students' experience in using modern teaching/learning methods in the study process?). To address these study aims and research questions, quantitative data was collected through online questionnaires from a sample of 106 randomly selected students representing 18 different study programmes, including Management, Communication and Public Relations, Cyber Security and Programming, Psychology, Teacher Education, etc. from the University of Latvia, Vidzeme University of Applied Sciences, *Riga Technical University*, *Riga Stradins University*, *Liepaja University*, *Ventspils University of Applied Sciences* and *Daugavpils University*. Although type I error can never be avoided entirely, the investigator can reduce its likelihood by increasing the sample size (the larger the sample, the lesser the likelihood that it will differ substantially from the population) (Banerjee et al., 2009). The online questionnaire included different statements on students' assessment of the usefulness of the relevant teaching method in the study process and also of student's experience of the following methods. The teaching/learning methods were chosen from the EFE Manual for Academic Teaching Staff. Statements of opinion were evaluated on a 5-point Likert scale. Data was analysed through descriptive statistics—measures of frequency—in Microsoft Excel since the data was categorical in nature.

Findings and Discussion

The majority of the survey participants considered the use of creative communication methods in group work very useful (52%) (see Figure 1). An explanation for this distribution of preference can be found in the focus groups, where it was emphasized that group work is often present in each lesson and, in the students' opinion, is sometimes organized because of the method per se rather than to reach the goal.

Additionally, 59%, 34%, 4%, and 3% of the students considered creative methods for working together online (brainstorming, brainstorming tools, question games and other interactive tools) very useful, useful, somewhat useful, and not useful, respectively.

In the focus group discussion, some students indicated that their expectations are to be active participants in the study process. For example, one of the respondent comments about the study process: *"I and my course mates appreciate the methods used in the study process that lead to a creative path, such as searching for scientific answers to conflicting information, working with other classmates in a team, creating products or prototypes that can benefit society"*. The majority of respondents, totalling 58%, considered discussions and debates in small groups to be very useful, while 2% either considered the method not to be useful or did not know about it.

Peer review of classmates' work was considered to be either useful or somewhat useful by the majority of the students (33%), while creating videos, actively using multimedia, video production and active use of other multimedia was considered to be useful by most of the respondents (31%). In addition, 31%, 34%, 27% and 5% of the respondents considered creating joint presentations to be very useful, useful, somewhat useful and not useful, respectively, while 3% of the respondents did not know about this method.

The majority of the respondents considered study tours (37%) and case simulation, case-study situation simulation and case solving to be very useful (65%). Most of the students considered common study tasks and joint study tasks outside the classroom (39%) and the use of game elements (badges, prizes, and competition elements) to be a useful method of learning (see Table 1 below).

The results obtained in both the focus group discussion and the questionnaire reveal that students prefer active, interactive teaching and learning methods, which require active engagement, responsibility, problem-solving, decision-making, and self-assessment. The results are also in line with the active learning methods indicated in the literature (e.g., Nicolaides, 2012), such as the use of different types of games and their elements.

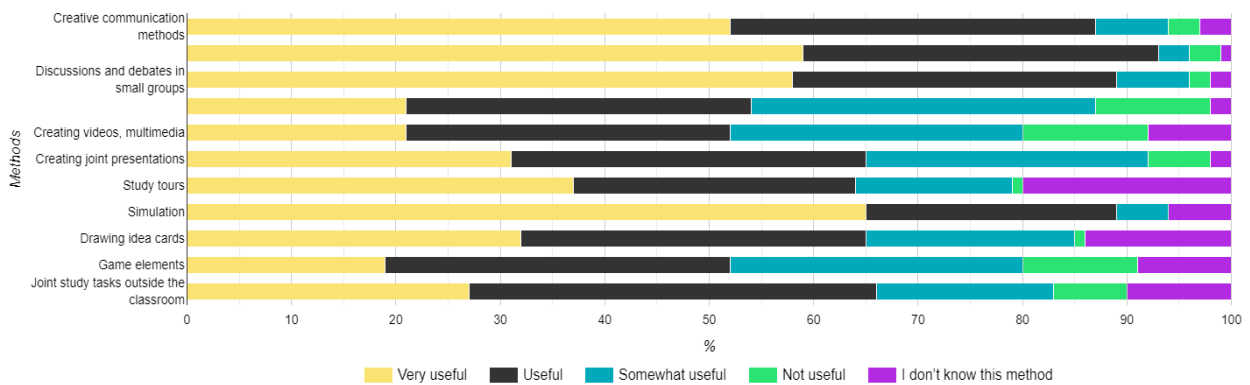


Figure 1 Summary Statistics of Student’s Opinion about AL Method’s Usefulness in Promoting Greater Student Involvement and Interest in Studies, % (n = 98)

In the analysis of students’ experience based on the frequency of methods used by their teachers (see Figure 2), the most frequently (very often) used student engagement method used by teachers was discussions and debates in small groups (32%). The involvement methods that students never or very rarely experienced in their studies were creating videos, actively use of other multimedia video production and active use of other multimedia (48%). It should be noted that also drawing idea cards (30%) most of the teachers rarely preferred use in teaching. Creative communication methods also are not so commonly used in group work – only 31% of students noted that their teachers use these methods often or very often. In addition, 6%, 24%, 26%, 35% and 9% of the teachers never, rarely, sometimes, often and very often (respectively) engaged students in creative methods for working together online. Peer review of classmates’ work was sometimes used by the majority of the teachers as an involvement method (32%), while creating joint presentations was used often (37%). Common study tasks and joint study tasks outside the classroom were sometimes (29%) used, while the use of game elements (badges, prizes, and competition elements) students were never (46%) experienced.

These results highlight a perceived contradiction between what a student appreciates as an interesting and exciting method and what they experience in their everyday studies as well as in-class learning as well in digital learning process.

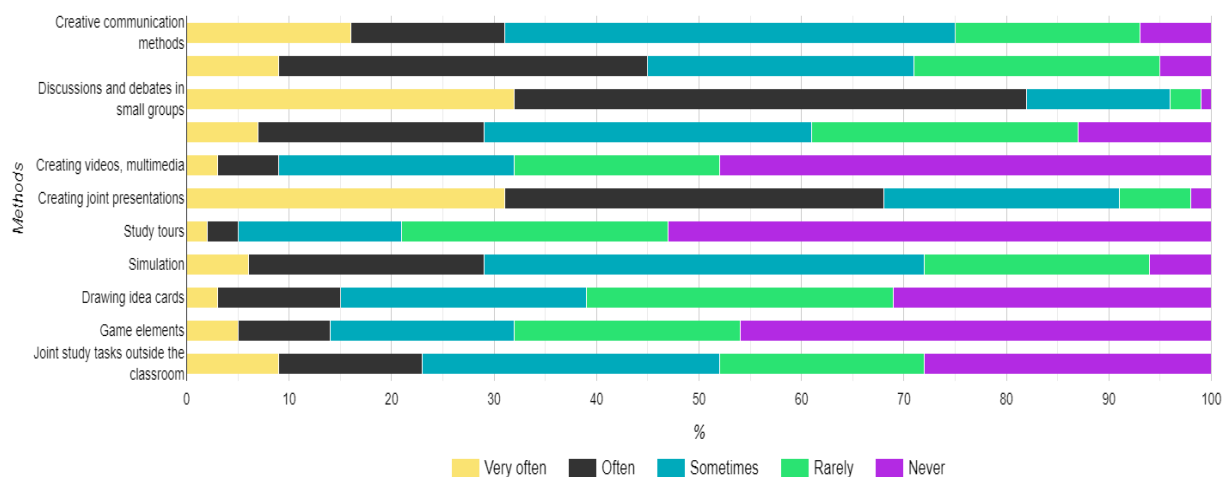


Figure 2 Summary Statistics of Students' Experience in Studies % (n=98)

Summarizing the obtained results, it can be seen that several active learning methods, such as creative methods, teaching tours or simulation methods, are evaluated as very useful and usable, but students experience much less in their learning process. However, the qualitative data of the focus groups reveal that students value teachers' interest and passion for subject, the ability to balance theoretical and practical knowledge, practical tasks related to real life and learning new experiences. Here is student's comment "Would love to go to an institution, or even to the market, for example, to observe, interview clients and sellers. Then, together with the group members, I would perform an analysis, connect with the theory, and come to the lecture with my presentation. I had to do something practical rather than just sitting in a lecture." Students in focus groups also raised an important issue regarding digital tools that academic staff might use to encourage students to engage in the study process and provide immediate feedback. Some students expressed their opinion as follows: "Introducing an electronic system for students' questions, e.g., Sli.do — a lecturer is talking, and students' questions appear on the screen, and afterwards, the teacher answers the questions or students discuss them. I immediately see a lively discussion. Even passive students ask questions. Using the tools, they can anonymously post questions from phones and vote on questions they like. Because often students forget that their words have power." The fact that students appreciate various creative active learning methods is already confirmed by literature sources (Panke & Stephens, 2018; Heaysman, 2019), as well as showing both the results of the questionnaire and the comments of the focus group, such as "I like creative work. To draw, to make. For example, we had to choose a topic and make a social advertisement. We wrote about the air in schools." or "I like: 1. compulsory practice, 2. creative exercises, 3. a lot of practical work." Students also appreciate

the teacher's enthusiasm in teaching process and the attitude towards students: *"It is important that the teacher is interested in working with every student."* *"Lecturer is welcoming the students with the attitude – "Wow, students!" Everyone could recall one lecturer who came to the first lecture, sat down on the table and showed Star Wars and Harry Potter"*. These comments also confirm the teacher's position as facilitator, whose role is to guide students in taking ownership of their own learning (Christersson et al., 2019).

Conclusions

Adoption of active learning by students in higher education allows the students to develop multiple skills and practices. Active learning has been advocated for by the majority of educators across the different countries not only because students are able to learn and reflect on their own experiences but also because they are able to achieve academic excellence with meaningful learning. Based on the data analysis conducted above, it is clear that simulation, case-study situation simulation, and case solving (case-study) are the most (very) useful involvement methods, while discussions and debates in small groups are the most frequently used student involvement methods among students of higher learning. Since the sample size was large enough ($n \geq 30$) and proper data analysis techniques were employed, the study results were considered to be statistically valid.

The obtained research data reveal that higher education institutions should pay particular attention to the contradiction between students' expectations regarding the study process and what they experience in reality. The results of the research indicate the need to diversify the teaching methods used, paying attention to the inclusion of simulations, games and creative work in the study process.

It have concluded that students as innovative and engaging methods mostly recognize those methods that allow them to take responsibility for constructing their knowledge, be creative and actively cooperate with peers. The study shows that a positive study environment in which high quality learning can be "experienced" is essential. Students believe that learning should not be limited to university walls, but should go beyond them, using the opportunity to explore real world problems where they occur. The study reveals a positive trend that academics want to learn new teaching methods and implement them in a study process.

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FORMATION OF READINESS OF FUTURE PRIMARY SCHOOL TEACHERS FOR ENVIRONMENTAL ACTIVITIES: CREATIVE ASPECT

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Abstract. *The article actualizes the issue of forming the readiness of students pedagogical university to environmental activities. Based on the world and domestic environmental documents, new creative educational directions of ecological content in higher pedagogical institutions are determined. We conducted a definitive analysis of main concepts of the study: «creativity», «environmental activities», «readiness» and proposed its own definition of the term «readiness for environmental activities» (protecting, preserving and restoring the natural potential of nature). We have carried out a historical review of the main creative ways of formation teachers readiness for environmental activities. The aim of the article is to prove the effectiveness of the formation of the readiness of students for environmental activities through creative methodological exercises. We have proposed a system of creative exercises and tasks that must be used in the complex «classroom work – extracurricular work – independent training». Creative exercises allow to expand the panorama of ecological thinking of students, to acquire the necessary knowledge through analysis and personal appropriation, to enrich one own methodical stock with original, non-standard tasks of natural and ecological subjects. We have revealed the specifics of the introduction of a system creative exercises of environmental content for future teachers of primary school. During the study we identified the criteria, indicators and levels (low, average, high) of readiness for environmental protection of future teachers, conducted a study on the basis of Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, (Ukraine), and Kamianets-Podilskyi National Ivan Ohienko University (Ukraine). We conducted an experimental study and found that the average level of readiness to environmental activities of future primary school teachers are vails in both universities, but Vinnitsia institute of high pedagogical education is the leader of high level, because students used a system of creative exercises in the educational process.*

Keywords: *readiness, nature protection activity, creativity, future primary school teachers.*

Introduction

Nowadays, the issue of the ecological crisis, which arose due to a careless, consumerist, pragmatic attitude to nature, is becoming relevance in the world. Humanity has realized the need for radical environmental measures, identified the need to conserve and restore natural resources. In addition, great importance is attached to environmental education of the younger generation as an effective means of overcoming the environmental crisis. That is why modern pedagogical institutions of higher education have received a priority task, which is to form the readiness of future teachers for environmental activities, starting from primary school. Primary school teacher can create ecological value in students on a spiritual level, develop the inner need for nature, save its resource from childhood and promote these desires throughout life. For the effective formation of readiness for environmental activities it is appropriate to use a variety of technologies, forms, methods and techniques in the creative aspect. Creativity allows students to perceive the environment in terms of beauty, perfection, sophistication, rationality, integrity. Creativity expands the panorama of thinking, develops imagination and fantasy, allows future teachers to rediscover the world of nature and helps to get to know child about it through the prism of aesthetic visuality, environmental safety, responsibility for the environment while living.

The purpose of the article is to prove the effectiveness of the formation of the readiness of future teachers for environmental activities by creative methodological tasks.

Research methods are theoretical: analysis of domestic and foreign scientific sources on the creative approach to the formation of readiness of future teachers for environmental activities; empirical: observation, testing, analysis of creative students works, their practical experience of organization of environmental activities with primary school pupils; methods of statistical research.

The Theoretical Background

The issue of forming the readiness of future teachers for environmental activities today has become especially acute in scientific spheres in Ukraine and scientists of the world. Environmental education helps to better understand the environment of their existence, to understand environmental problems, to deal rationally with their solution, thereby improving their living conditions and forming a stable civic ecological position (UNESCO, 2009). The issue of relevance of environmental activities is identified in the entire educational and legal framework of Ukraine. Thus, the State Standard of Primary Education defines the necessity for the formation of ecological competence of junior school pupils, which unites in itself natural knowledge, ideas about relationships in

nature, ability to behave humanely in the natural environment, empathize with its objects, the formation of natural values (Derzhavnyi standart pochatkovoï zahalnoi osvity, 2018). The Law "On Education" provides for the formation of ecological culture of the population, ideas about a healthy lifestyle, education of caring for the environment (Zakon Ukrainy "Pro osvitu", 2017). The Law of Ukraine "On General Secondary Education" states that the formation of competence in environmental sciences of students, the ability to environmental the ability to organize and implement environmental activities should be with the assistance of all participants of educational process (Zakon Ukrainy "Pro povnu zahalnu seredniu osvitu", 2020). The Law of Ukraine "On Higher Education" emphasizes that future professionals must take care of ensuring an environmentally friendly environment of their country, take care of the preservation of its resources (Zakon Ukrainy "Pro vyshchu osvitu", 2014). Detailed analysis of normative-legal educational system of Ukraine determines that the issue of formation the readiness of future teachers for environmental activities is extremely important, because today society requires an ecologically educated, humane personality. In the study (McKeown & Hopkins, 2009) identified that environmental education is the education of a sustainable society, because to deal with it, society must go through a difficult path of development, understand the causes of problems that arise and humanely approach their solution. M. Monroe determines that the attitude of the individual to the environment should be formed in the process of interaction of his emotional, volitional and intellectual spheres of activity (Monroe, 2002). V. Sukhomlynsky's pedagogical heritage is very important for the problem of formation of the readiness of future teachers for environmental activities activities with junior pupils. In "School under the blue sky" he offered to conduct "lessons of thinking in nature", which aimed to develop cognitive interest in the environment, to establish cause-and-effect relationships, learn to admire the beauty of nature and empathize with it. The teacher considered it necessary to observe the natural environment, use ecological games and conversations, excursions to the field, to the forest, to the river, to compose fairy tales about nature, to treat it with care (Sukhomlynskyi, 1977). D. Shepardson argues that teacher education should begin with opening the world to the environment, teaching them to track relationships, and drawing their own conclusions about the effects of human activities on the environment (Shepardson, 2007). N. Kazanishena insists that the professional readiness of teachers for environmental activities is formed in a combination of two interrelated factors – pedagogical and personal readiness (knowledge, value-motivating attitude to the environment, active citizenship in solving complex issues) (Kazanishena, 2011). S. Sovgira convincingly proves that the readiness of future teachers for environmental activities in primary school is created by a complex system of psychological and pedagogical, subject, special,

methodological, general cultural knowledge; ability to work with information, to generalize it at a high level, to participate in creative ecological and educational activities; a system of pedagogical skills that ensure the readiness of teachers for environmental activities on the basis of appropriate educational programs, etc (Sovgira, 2002). In Standards and Guidelines for Quality Assurance in the European Higher Education Area stipulates that the modern learning process requires creativity, finding new productive ways to solve problems, originality and non-standard thinking from both the teacher and the student (ESG, 2015). A. Maslow was the first who emphasized that creativity is the most universal function of a human, which leads to all forms of expression and is an important part of the self-actuating process (Maslow, 1970). Similar approach to this concept of creativity is used in the works by J. Renzulli; he defines creativity as a special feature of individual's behavior, expressed in the original ways of obtaining a product, achieving a solution of a problem, in new approaches to the problem from different points of view (J. Renzulli, 1981). S. Sysoeva insists that pedagogical creativity reflects the process of personal and professional realization of a teacher in professional environment. The essence, specifics, indications and distinctive features of pedagogical creativity are manifested in the personality-oriented developmental interaction of subjects in the educational process. S. Sysoeva highlights the main features of the future creative teacher: leadership, freshness, persistence, high self-organization, preparedness for risk, impulsivity, and independence of judgments (Sysoeva, 2006). Scientists (Demchenko et al., 2020) have proven that a creative approach is a condition for successful study in higher education.

Based on the analysis of scientific literature we have offered a number of creative tasks for future teachers at system "class activities – extracurricular activities – individual work" for the formation of readiness of environmental activities in primary school.

Class activities include morning meetings on environmental issues; solving environmental problems by arguing their position, discussion, debate; participation in ecological games, which involve the transformation of students into certain objects of nature and through the empathy of awareness, experience of their feelings and emotions; participation in environmental quests, web quests, ecological trails; conducting lessons "Natural Science" in the system of quasi-professional training, etc.

Extracurricular activities involve students in science, environmental groups; participation in creative environmental projects, which may include modeling of cleaning filters for reservoirs, inventing effective ways of sorting garbage, growing Christmas trees, etc .; screenwriting and participation in theaters of nature; creation of environmental cartoons; compilation of fairy tales, poems, legends on environmental issues; production of logos "I save nature", nature

protection signs, compilation of ecological calendars and dictionaries, selection of information for children's natural encyclopedia; participation in green nature protection patrols; participation in the national stage of the International competition of scientific and technical creativity "Eco Ukraine".

Individual work involves the compilation of mental maps based on the study of basic and additional literature; participation in environmental actions and projects; visiting botanical gardens, art exhibitions and museums of local lore, which demonstrate the beauty of the native land, acquaint with the features of natural objects; acquaintance with poetic works, viewing of videos and films on natural subjects; attending scientific conferences, participation in webinars and seminars, which address to the problems of environmental protection.

Methodology and Organization of the Research

During the study, we introduced a system of selected tasks of creative environmental content for 3rd year students majoring in 013 Primary School Education of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (VSPU, Ukraine) during the 2019-2020 academic year in classes "Natural science with teaching methods" during class activities, extracurricular activities, individual work of students, namely:

- elaboration of lecture material and additional literature by creating mental maps;
- use of ecological games "Fir tree ", "Ladybird", "Nature lover" during classes;
- creation of logos "I am a protector of nature", environmental signs;
- acquisition of children's encyclopedias in natural sciences, creation of ecological dictionaries and calendars;
- creating a gallery of nature, filling it with paintings, collections of poetry about nature, etc.;
- participation in the environmental project "Reach out to animals in severe frosts";
- participation in the quest "Seven colors of the rainbow";
- view webinars related to the work of a teacher in primary school in science lessons.

In the process of experimental research, we tried to determine the effectiveness of the proposed tasks and compared the results among two institutions of higher education: Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (84 future teachers), they worked on a system of creative tasks and Kamianets-Podilskyi National Ivan Ohienko University (K-PNU,

Ukraine) (96 students majoring in 013 Primary School Education, they studied they studied according to the general program).

To diagnose the readiness of future teachers for environmental activities in primary school, we have identified the following criterias and corresponding indicators, namely:

- *knowledge criterion* (covers theoretical knowledge of pedagogical and natural sciences; the ability to effectively select the necessary methods, techniques, forms of environmental work with primary school students, etc.);
- *activity criterion* (ability to develop own summaries of lessons and extracurricular activities in natural sciences for junior high school students; ability to organize and conduct mass environmental events; create your own methodological proposal for junior high school students);
- *acmeological criterion* involves the analysis of the desire and ability of future teachers to professional growth, self-improvement (desire to become a successful teacher, progressively move up the career ladder, be an innovator in teaching).

According to the criteria and indicators, we determined the levels of readiness of environmental activities of primary school teachers, namely:

- *low* (students have limited knowledge of pedagogical and natural sciences, they do not have sufficient methodological methods of skills and navigation to develop lesson plans in extracurricular activities, their organization and conduct; future teachers do not reflect and can not determine the prospects of any professional activities);
- *average* (students have sufficient knowledge of pedagogical and natural sciences, they are engaged in the development of their own methodological products, help primary school teachers to organize regular and extracurricular environmental work with students, strive for self-development);
- *high* (future teachers have a thorough knowledge of pedagogical and natural sciences, they are engaged in self-education, are able to independently develop a synopsis of a lesson or extracurricular activity for primary school pupils and conduct it; students seek professional self-improvement).

To diagnose the formation of readiness of future teachers for environmental activities according to the knowledge criterion, we asked respondents to be tested by the method of "Ecoerudit" (A. Levochkina, 2013) and tasks proposed by the Program for International Student Assessment (PISA) in 2015 to determine the ability to use acquired knowledge of natural sciences. To analyze the results

according to the activity criteria, we offered students to perform practical tasks according to the system of exercises (O. Groshovenko, 2018), to develop a lesson outline of the integrated course "I explore the world" and shoot a video with junior students. Examining the indicators of the acmeological criterion, we invited respondents to take the tests "Career Anchors" (E. Shane, 2011) and verbal associative method "EZOP" (Deryabo & Yasvin, 1996) to determine the natural values of future teachers.

Result of the Research

Diagnosis of the formation of the readiness of future teachers for environmental activities in primary school was conducted from 02 to 13 November 2020 in two pedagogical institutions of higher education in the Vinnytsia city and in the Kamianets-Podilskyi city simultaneously. Evaluating results of future teachers according to the knowledge criterion, we offered them 30 closed test questions developed by PISA and the method "Ecoerudit" (A. Levochkina, 2013). For each question, students had to choose the correct answer from the five suggested. After conducting calculations, we determined the level of knowledge of each student and proposed the following grading system: 1-25 points – the low level, 26-49 – average level and 50-60 – high level. We presented the summary data in the Table 1.

Table 1 Levels of Formation of Readiness of Future Teachers for Environmental Activities by the Knowledge Criterion

Institutions of higher education	Level		
	Low	Average	High
Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (Ukraine)	14,2%	58,5%	27,3%
Kamianets-Podilskyi National Ivan Ohienko University (Ukraine)	15,6%	62,6%	21,8%

Diagnosis determined that the average level is dominated by future teachers Kamianets-Podilskyi institution of higher pedagogical education, but the high level is dominated of Vinnytsia institution of higher pedagogical education. In general, their performance is more effective.

Assessing the activity criterion, we offered students 5 tasks with open answers (O. Groshovenko, 2018), who checked the formation of features of pedagogical activities of teacher with junior pupils in natural science lessons. For example, one of the tasks was to present the list of main methods for the formation of ideas of primary school pupils about the water cycle in nature.

The list of methods proposed by VSPU students was larger, it included such as teacher's explanation, viewing presentations and videos of a cognitive nature with subsequent discussion in pairs or groups, creating a plastic sketch about the journey of a drop, conducting research work, which involved making a mini-environment to observe the water cycle in nature, writing a fairy tale about the journey of a drop, etc. Among the students of K-PNU prevailed such methods as: teacher's explanation, work with a textbook and a notebook, making diagrams of the water cycle in nature, watching videos and presentations on a given topic, etc. Interpreting the results, we determined that all incorrect answers are evaluated at 0 points, partially correct answers from 1 to 5 points, all correct answers are evaluated at 6 points. Accordingly, students who scored points from 0 to 2 are at the low level, from 3 to 5 are at the average level and those who received 6 points are at the high level.

The next task was to evaluate the lesson plans of future teachers from the integrated course "I explore the world" and videos taken in working with pupils on these notes. The main criteria for evaluating student development were:

- correspondence of tasks to the stages of the lesson (from 0 to 5 points);
- competently selected methodological content (from 0 to 5 points);
- use of pedagogical innovative technologies (from 0 to 5 points).

The main criteria for evaluating student videos were as follows:

- ability to interest and stimulate all students in the class to be active (from 0 to 5 points);
- ability to depart from the lesson plan-summary if it is necessary for additional explanation, answers to pupils' questions, clarifications, etc. (from 0 to 5 points);
- realization of the aim of the lesson set in the syllabus in practice (from 0 to 5 points).

Future teachers of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University worked on task performance in schools of Vinnytsia: secondary school I-III degrees №8, secondary school I-III degrees №27 and secondary school I-III degrees №32. Students of Kamianets-Podilskyi National Ivan Ohienko University conducted lessons and extracurricular activities in schools of Kamianets-Podilskyi: secondary school I-III degrees №2 named after Taras Shevchenko, secondary school I-III degrees №6 and secondary school I-III degrees №1. The best works of students are posted on the YouTube channel of the Department of Primary School Education of VSPU.

Accordingly, for two tasks, future teachers had the opportunity to score maximum 36 points, we interpreted the results as follows: from 0 to 12 points – the low level, from 13 to 25 points – average level and from 25 to 36 points – high level. We presented the summary data in the Table 1.

Table 2 Levels of Formation of Readiness of Future Teachers for Environmental Activities in Primary School by Activity Criterion

Institutions of higher education	Level		
	Low	Average	High
Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University (Ukraine)	9,5%	58,4%	32,1%
Kamianets-Podilskyi National Ivan Ohiienko University (Ukraine)	18,7%	54,2%	27,1%

The diagnosis showed that the results of students of Vinnitsia institution of higher pedagogical education prevail over the results of students of Kamianets-Podilskyi institution of higher pedagogical education.

For the acmeological criterion, we offered future teachers to pass the tests "Career Anchors" (E. Shane, 2011). The test consists of 41 statements that need to be evaluated in order of importance from 1 to 10, where 1 is "not important at all" and 10 is "extremely important". The test reveals the following future career orientations of future teachers.

Accordingly, we classified students' answers as follows: if entrepreneurial motives and stability were in the lead, we evaluated the answer at 5 points, if students rated management, lifestyle integration, autonomy with the highest scores, we evaluated the results of their answers at 10; if the future teachers were dominated by such statements as: professional competence, service, challenge, then we evaluated their answers at 15 points. By offering students work on the verbal associative method of "EZOP" (Deryabo & Yasvin, 1996), we try to determine their attitude to nature, as a result, they should not exist and they are conscious to engage in environmental activities. "EZOP" is emotions, knowledge, protection and pragmatism. The "EZOP" technique involves 12 points, each of which contains a keyword, four indirect associations and another word that is far from meaningful to distract attention (for example, ELK – footprints, forester, stones, horns, trophy). The student's task is to circle the word that is most associated with the proposed). Analyzing the students' answers, we determined that the pragmatic attitude towards nature is evaluated at 5 points, emotional or cognitive at 10 points, and protective at 15 points.

Interpreting the results of the two tests, we determined that students who scored up to 10 points, according to the acmeological criterion, they are at the low level of readiness for environmental activities in primary school; if you scored up to 20 points, then at the average level, and if up to 30 – then at a high level. Summary data are presented in Table 3.

Table 3 Levels of Formation of Readiness of Future Teachers for Environmental Activities in Primary School by Acmeological Criterion

Institutions of higher education	Level		
	Low	Average	High
Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (Ukraine)	7,9%	54%	38,1%
Kamianets-Podilskyi National Ivan Ohiienko University (Ukraine)	20,8%	48%	31,2%

Generalized data showed that according to the acmeological criterion, the formation of readiness for environmental activities in future teachers of VSPU is higher.

After analyzing total results all criterias, we found that the indicators of environmental readiness protection in students of VSPU are more higher than in students of K-PNU (Figure 1).

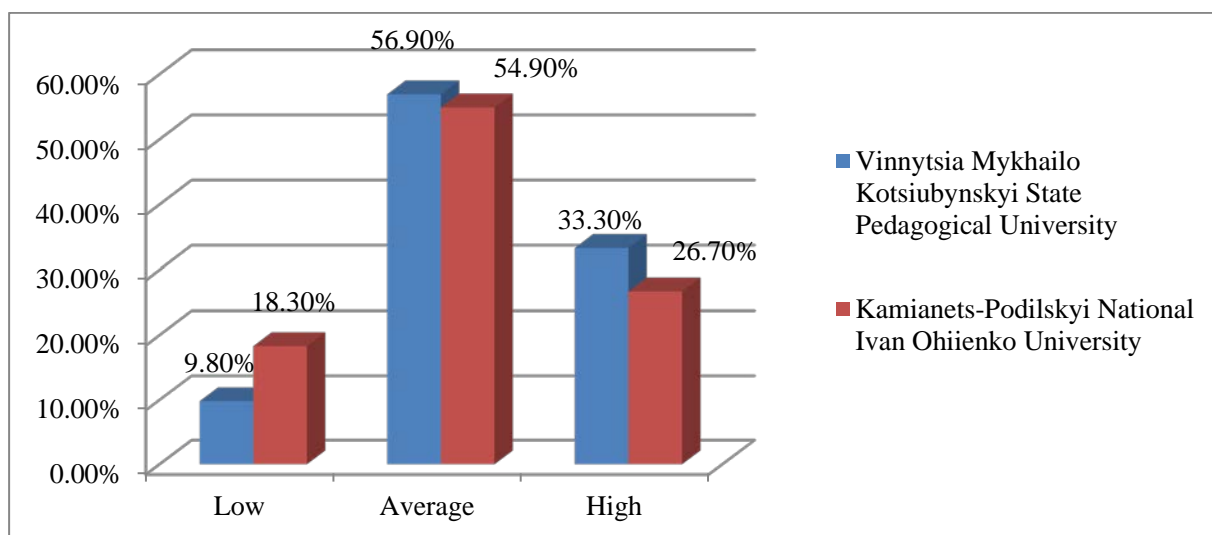


Figure 1 Levels of Formation of Readiness of Future Teachers for Environmental Activities in Primary School

We are convinced, that the successful results of students of Vinnytsia institution of higher education established due to the fact that future teachers (over 92%) are actively worked in the system of ecological creative exercises in the complex "class activities – extracurricular activities – individual work". Quarantine restrictions related to the COVID-19 pandemic did not particularly affect on the educational process of teachers: from March to June, future teachers theoretically processed the material, accumulated knowledge, classes were

conducted on the platforms Zoom and Google Meet; in July-August students conducted active phenological observations, collected photos, video material for future creative works on environmental issues; from September to November, students worked in extracurricular activities with younger students, involving them in environmental actions, projects.

Discussion

Nowadays, the issue of using creative exercises of forming the readiness of future teachers for environmental activities occupies a leading place in the work of higher pedagogical education institutions, but in the Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University it has acquired a special scale. Thus, in August 2020, I. Stakhova, O. Groshovenko, V. Imber held a performance for more than 60 teachers in Vinnytsia city (Ukraine) on environmental education of students. I. Stakhova has developed a training "Creative view of nature", which help future teachers to interactively organize environmental education of primary school pupils. O. Groshovenko and I. Stakhova developed the program of the club "Pryrodogray" for students. The following sections function in the club: research laboratory "EUREKA" (conducting observations, experiments, practical work); "STORY" studio (writing poems, fairy tales, short stories; creating cartoons; production of printed products: booklets, newspapers, magazines, comics); interactive school "WEB-NATURE" (development of web-quests, creation of pallets, blogs, electronic manuals, development of game platforms); creative biodesign workshop "FLASH FASHION NATURE" (creation of biodesign projects, design of flower beds, creation of ekiban); "SMILE" playground (development of ecological games, preparation of environmental projects and quests). In the context of computer science classes, V. Imber offers students to shoot or create their own cartoons of environmental content. In the lesson of "Environmental education" O. Demchenko invites students to present their own logos "I save nature", "Protection of nature" emblems, present poetry and paintings on environmental issues, etc. In the context of the Erasmus + project Jean Monnet module 620252-EPP-1-2020-1-UA-EPPJMO-MODULE "EU experience of soft skills development of preschool and primary school age children by theater activities in teacher training" O. Demchenko and I. Stakhova organizes a nature theater, invites primary school pupils and students to participate in the shadow theater, puppet theater on environmental issues and more. Results of the formation of readiness of future teachers in VSPU for environmental activities stimulated teachers of the K-PNU to use creative tasks in the system "class activities – extracurricular activities – individual work". So students took part in two ecological actions "Batteries, stop!", "We learn to sort garbage", work on creation of an animation "Flower of the sun" will begin soon.

Perspectives for the study and implementation of basic ideas in the educational process of =future teachers is the project "R.I.V.E.R." ("R.I.V.E.R", 2012). It is the acronym for Research Inside and Verify the Environmental Risk. This project brings a global perspective on a natural element which is so familiar to our students: the river. Through common enjoyable activities, students`ll share their findings with their counterparts. Future primary school teachers will realize the importance of the river in community life and will be able to involve students in environmental activities. Students choose one of the rivers, they`ll gather information about its historical, geographical, economic and cultural interests, work on the presentation and dissemination of information through a website or a blog.

Conclusions

The analysis of the scientific literature and the conducted research allowed to make the following conclusions:

- The global ecological crisis has posed new challenges to the world, aimed at eliminating the mistakes of the past, namely the preservation and restoration of the natural environment. The world community has begun to act in two directions: 1) environmental measures; 2) education of a humane and conscious younger generation capable of preserving and protecting the natural environment. It is in the context of the second direction the formation of the readiness of future teachers for environmental activities in primary school becomes especially relevant. In pedagogical institutions of higher education, they should form this readiness. We understand it as a complex personal education that reflects the system of methodological, environmental and socially significant knowledge.
- For the effective process of forming the readiness of future teachers for environmental activities, we have identified from the scientific and methodological literature creative tasks, which completed the system "class activities – extracurricular activities – individual work", including environmental games, projects, quests, theater nature, acquisition of environmental literature for children, etc.
- The effectiveness of the proposed tasks was tested by us through a study involving 180 respondents of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University and Kamianets-Podilskyi National Ivan Ohienko University. In the educational process of students, we introduced environmental tasks in the system "class activities – extracurricular activities – individual work", students of K-NPU studied

according to the usual educational program. The results showed that the formation of readiness of future teachers for environmental activities is higher in students of VSPU (indicators: low – 9,8%, average – 56,9%, high – 33,3%) than in students of K-PNU(indicators: low – 18,3 %, average – 54,9%, high – 26,7%). Thus, our proposed system of creative environmental exercises is effective.

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СПЕЦИФИКА ФОРМИРОВАНИЯ ПРОФЕССИОНАЛЬНЫХ КОМПЕТЕНТНОСТЕЙ БУДУЩИХ УЧИТЕЛЕЙ ИСТОРИИ

Specifics of the Forming of the Competencies of the Future History Teachers

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Abstract. *The aim of the article is to define the specifics of formation of future history teachers' professional competencies. Research competencies are seen among preferential ones, which are to be acquired by higher education applicants of the educational qualification Master in Secondary Education (History). The empirical basis of the research is the results obtained by instructors of the Department during teaching the special courses "History of Stalinism" and "History of New Independent States". The article highlights methodological techniques and practices, implemented by educationalists in the process of teaching the mentioned special courses, aiming at forming professional competencies of students obtaining Master's degree. Using the materials of the laboratory "Studying the Soviet Past of the Stalin's Era" (audio and video recordings of interviews with women from villages in Zhytomyr Region, who were raised in the conditions of the Stalin's regime) is the peculiarity of the educational process. The focus of attention is the methodology of organization of students' work with archive sources, scientific literature and narrative texts.*

Keywords: *competency, research competency, competency-based model of education, educational and methodological practices, higher education modernization, methodology.*

Введение *Introduction*

В течение последних десятилетий в глобальной образовательной системе наблюдается процесс трансформации предметно-знаниевой модели образования в компетентностную, что предполагает превращение студента из объекта образовательного процесса в субъект «собственной образовательной деятельности и профессионального становления» (Zablotska, 2008). Компетентностный подход в современном образовании выступает как насущная необходимость формирования творческих личностей, специалистов, владеющих «актуальными интегрированными знаниями, способностью к их постоянному совершенствованию, к анализу профессиональной ситуации и рефлексии» (Hutsu, 2013).

Естественно, что внедрение компетентностно-ориентированного подхода в практику образовательного процесса детерминирует активное обсуждение его базовых принципов в рамках деятельности международных организаций, работающих в сфере образования, в частности ЮНЕСКО, ЮНИСЕФ, ПРООН, Европейского пространства высшего образования (ЕПВО) и др. Так, в Римском Министерском Коммюнике, подписанном 19 ноября 2020г. участниками встречи представителей стран ЕПВО, определено, что стороны обязуются придерживаться следующих принципов, способных поддержать устойчивую, сплоченную и мирную Европу: инклюзивность, инновационность и взаимосвязанность. В соответствии с документом, инновационность предусматривает «использование новых и более согласованных методов и методик обучения, преподавания и оценки, тесно связанных с исследованиями» (Final Draft of the Roma Ministerial Communique, 2020). Такой подход к организации современного образовательного процесса видится как необходимое условие усиления профессионального образования, подготовки компетентного специалиста, способного адекватно реагировать на вызовы нового времени.

Предметом нашего исследования является характеристика опыта применения учебно-методических практик, используемых преподавателями Житомирского государственного университета имени Ивана Франко (Украина), с целью выработки у магистров-историков профессиональных компетентностей, необходимых для осуществления научно-исследовательской работы, умения работать с историческими источниками.

Теоретические и методологические основы исследования *Theoretical and Methodological Basis of the Research*

В контексте рассмотрения исследуемой проблемы значение имеет теоретико-концептуальное определение и осмысление таких базовых понятий, как «профессиональные компетентности» и «компетентностный подход». В современной научной литературе тема технологии формирования компетентностей и их оценивания, сущностного наполнения этих дефиниций продолжает оставаться активно обсуждаемой. Существуют разные подходы к традиции исследования компетенций, среди которых, в частности, выделяют «бихевиористский, общий и когнитивный» (Mulder, Weigel, & Collins, 2006, p.69). Исходя из того, что перечень компетентностей не статичный а изменяется в соответствии с требованиями современного времени, исследователи этой проблемы предлагают их анализ в разрезе образовательной системы отдельных европейских стран: Англии (Handley, 2003), Германии (Rauner & Bremer, 2004), Нидерландов (Biemans, Nieuwenhuis, Poell, Mulder, Wesselink, 2004), России (Fedorov, Metelev, Solov'ev, Shlyakova, 2012) и др. В Украине дискуссия вокруг вопроса о введении компетентностного подхода развернулась в начале 2000-х годов. Подавляющее большинство исследователей (О.Пометун, О.Заблоцкая, В.Химинец, В.Луговой, О. Овчарук и др.) в целом разделяет мнение своих зарубежных коллег, что компетентностный подход выдвигает на первое место не информированность студента, а умения решать возникающие проблемы. Такой подход направлен на подготовку будущих специалистов практиков, которые не только должны обладать определенным объемом знаний и навыков, но и уметь применять их в учебных или жизненных ситуациях.

Поскольку предметом нашего исследования является профессиональные (предметные) компетентности будущего учителя истории, считаем нужным выделить научные подходы к их определению. В перечень профессиональных компетентностей «по истории можно отнести следующие: личностная; психолого-педагогическая; самообразовательная (психологический, методический, профессионально-прикладной компоненты)» (Zotova, 2010, p.181); «речевая; информационная; хронологическая; логическая; пространственная; аксиологическая» (Pometun, 2007). Подавляющее большинство исследователей сходятся во мнении, что учитель истории должен не только обладать определенным объемом знаний, умений и навыков выполнения определенных задач, но и комбинацией личностных качеств и характеристик, которые позволяют ему принимать эффективные решения в проблемных ситуациях и демонстрировать морально-ценностное

отношение как к обществу в целом, так и к отдельному человеку в частности.

Обзор методик, используемых на кафедре всемирной истории *Review of the Methods Used on the Department of the World History*

Составляющие профессионально-педагогической компетентности учителей-историков имеют определенные доминанты, обусловленные спецификой исторических дисциплин и методики их преподавания. Задача высшего учебного заведения заключается в том, чтобы способствовать выработке у соискателя высшего образования ряда компетентностей, благодаря которым он сможет профессионально анализировать получаемую информацию, обучать своих учеников систематизировать и оценивать исторические процессы, рассматривать события и явления в контексте конкретного исторического фона. Отсюда вытекает необходимость освоения дополнительного аспекта профессиональных компетентностей - умение работать с историческими источниками.

Исследовательская компетентность соискателя высшего образования формируется на всех этапах его образовательной подготовки. На первых курсах он знакомится с основами научной деятельности, прорабатывая отдельные исторические первоисточники. Впоследствии у него появляется исследовательский интерес, сфера его научных интересов сужается до одной или нескольких проблем, над которыми он работает. На завершающем этапе обучения студент-магистрант, как правило, уже имеет собственный опыт научно-исследовательской работы, знаком с алгоритмом поиска и обработки исторических источников, умеет их систематизировать, использовать в процессе учебно-воспитательной и научной деятельности.

В соответствии с учебным планом соискателей высшего образования образовательной квалификации магистр среднего образования (История) Житомирского государственного университета имени Ивана Франко, кафедра всемирной истории обеспечивает преподавание двух специальных курсов - «История сталинизма» и «История новых независимых государств». В процессе учебной деятельности, направленной на их изучение, руководителями спецкурсов значительное внимание уделяется формированию у будущих учителей-историков исследовательской компетентности. С этой целью содержание учебных программ этих дисциплин предусматривает изучение различного типа исторических источников для характеристики определенного исторического явления или события.

Содержание спецкурса «История сталинизма» направлено на формирование у студентов-историков четкой научной и гражданской позиции относительно проявлений неосталинизма в любых формах (Starodubets, 2020). В связи с высоким уровнем идеологического компонента в структуре сталинизма как явления, мы столкнулись с проблемой выбора методологических подходов к его изучению и интерпретации. Это побудило разделить курс на несколько смысловых модулей, что позволяет глубже и более полно охарактеризовать основные составляющие сталинской эпохи.

В первой части спецкурса сталинизм рассматривается как разновидность тоталитаризма, определяются общие и отличительные черты с другими тоталитарными обществами и политическими системами. В ходе обсуждения проблемы сущности сталинизма как явления, студенты используют не только труды зарубежных историков, представителей различных концепций освещения советской истории, но, что очень важно, работы теоретиков украинского национально-освободительного движения. В частности, труд выдающегося деятеля ОУН и теоретика украинского национализма Н. Сциборского «Сталинизм» (Stsiborskyi, 1942), написанный в 1938г., то есть в период зарождения культа личности Й. Сталина.

Преподаватель обращает внимание соискателей на алгоритм работы с данным текстом. Первым шагом должно быть определение автора исторического источника с учетом его социального происхождения, политико-идеологических взглядов, отношения к советской власти. Следующая позиция - где и при каких обстоятельствах написано и опубликовано произведение. Акцентируется внимание, что понимание исторического фона, панорамы событий, в условиях которых писалась работа, служит дополнительным аргументом в пользу его объективного анализа. Непосредственная работа над документом предусматривает его прочтение (интерпретации), разделение на смысловые части и их анализ. На завершающем этапе работы с исследуемым текстом используется метод синтеза, который предусматривает «соединение компонентов сложного явления, создание новой конструкции с определенной целью, определенной функцией и по определенному плану исследователя» (Kryvchuk, 2017, p. 58). В данном случае, исследователи определяют авторское (Н. Сциборского) видение сущности сталинизма и его основные признаки, сравнивают точку зрения автора работы на это явление с дефинициями других исследователей, в том числе современных.

Изучение проблемы не исчерпывается работой студентов на семинарских занятиях. Широко практикуется написание магистрантами научных работ по обозначенной проблеме, подготовка и проведение публичных мероприятий, таких как историко-культурологический диспут

««Высокое» и «низкое» в искусстве (культура как инструмент манипуляции общественным сознанием в условиях тоталитарного режима)». Главная цель такого рода мероприятий не только в распространении, популяризации тех или иных событий, но прежде всего в том, чтобы побудить молодых людей к анализу получаемой информации, критическому подходу к любому историческому источнику, способствовать формированию у них национальных и общечеловеческих ценностей, толерантного отношения и уважения к другим народам. Таким образом, использование различного методологического инструментария позволяет раскрыть сущностные характеристики сталинизма как разновидности тоталитаризма. Осознание онтологической обусловленности насилия в рамках функционирования сталинского режима, способствует формированию у молодого поколения критического отношения к проявлениям неосталинизма в любых формах.

Изучение спецкурса «История сталинизма» основывается так же на методологических принципах антропологического и социального подходов. В структуру курса включен блок вопросов по организации повседневной жизни советского человека в контексте взаимодействия двух ключевых актеров - государства и общества, особенностей функционирования государственных институтов, выполнявших роль ретрансляторов идеологических установок большевистской партии.

В процессе подготовки к семинарским занятиям студенты прорабатывают комплекс архивных источников, научной литературы и нарративные тексты, на основании чего предлагают свой вариант видения повседневных практик различных слоев населения в 1930-х и 1940-х годах.

В архиве Лаборатории по изучению советского прошлого сталинской эпохи, которая функционирует на кафедре всемирной истории, хранятся аудио- и видеозаписи, собранных студентами исторического факультета. Это интервью сельских женщин Житомирщины, детство которых проходило в условиях сталинского режима. С одной стороны, собранные аудио- и видео-материалы служат наглядной иллюстрацией повседневности сельского населения, а с другой, они позволяют рассмотреть социальную действительность прошлого через призму опыта определенных социальных групп, отношение к которым долгое время было предвзято нейтральным или негативным. Помимо этого, в процессе осуществления полевых исследований, студенты приобретают опыт проведения интервью, обработки собранных материалов и, что не менее важно, «открывают» для себя историю своей семьи.

Отдельно остановимся на методике использования такого типа нарративных источников на семинарских занятиях по «Истории сталинизма». В процессе изучения темы «Голодоморы 1932-1933 и 1946-1947 годов как один из видов государственного террора»,

исследователи, опираясь на фундамент знаний, должны уметь анализировать события, во-первых, в контексте характеристики антигуманной сущности сталинского режима, во-вторых, не только сквозь призму трагедии собирательного образа «народа», но и отдельно взятого «маленького человека». Например, перед студентами ставится задача, на основании предложенных воспоминаний, охарактеризовать положение сельского населения в период 1932-1933 и 1946-1947 годов. Предполагаемый алгоритм опроса: Какие обороты речи используют опрашиваемые женщины для описания своих переживаний? Передают ли они их отношения к упомянутым событиям? Кто был объектом террора и почему? Каким было отношение крестьян к политике коллективизации? Отличалось ли оно в 1930-е и 1940-е годы?

Приводим отрывки анализируемых текстов:

1. «Могу рассказать о Голодоморе 1933 года то, что мать только его пережила. Людей подбирали с улиц, на телеги ложили. Почти все село вымерло. Мать рассказывала, что у ее родителей было 18 детей, всего 6 выжило, 7 за зиму вымерли ... чистый голод, те кто остался, то своих ели. Когда мой прадед умирал, он говорил: «Мне и так время пришло, а вы молоды, не бойтесь ешьте меня» ... вот такой был голодомор, что людей ели (Zapysano 27.12.2017 r. v s. Yosypivka Starokonstantynivskoho raionu Khmelnytskoi oblasti vid Vasyliuk Marii, 1931 r.n).

2. Колхоз был построен где-то в самом конце 1920-х годов. Власти приняли постановление о начале коллективизации. Они считали, что люди будут счастливы, и коллективизация пройдет быстрым образом, беспрепятственно. Но не сложилось, как хотелось. Поэтому в колхоз сначала пошло очень малое количество людей. Но к тем, кто не пошел в колхоз облагали так, что они не могли этот налог оплатить. Не просто не хотели, а не могли, не имели возможности. Поэтому были созданы группы активистов, из тех кто ушел в колхоз, и под руководством уполномоченного ходили по домам к тем, кто не уплатил налогов и забирали все, что попадало под руки, так выбивали долг перед государством» (Zapysano 30.12.2017 r. v s. Sadky Zhytomyrskoho raionu vid Hryshenchuk Halyny, 1938 r.n.).

Несомненно, использование такого типа исторических источников является важным в контексте формирования у соискателей степени магистра исследовательской компетентности. В отличие от работы с документальными текстами, обработки устных рассказов требует от исследователя высокого уровня развития критических навыков. Важно, чтобы историк повседневности мог выделить через индивидуально-персонифицированный срез времени особые нюансы, оценки исследуемого, составить из частного более полную картину общего.

В процессе изучения учебной дисциплины «История новых независимых государств» работа с историческими документами так же является обязательной составляющей образовательного процесса. Структура курса предполагает блочное освещение процессов формирования и развития стран, которые возникли на рубеже 1980 - 1990-х годов на обломках бывшего Советского Союза. Это страны Центральной Азии; страны Балтийского региона, Закавказья и т. д. Такая методика основывается на широком использовании в процессе изучения отдельных тем дедуктивного метода научного познания - от общего знания определенной системы вещей к установлению отдельного, единичного.

Например, более глубокому пониманию сути трансформационных процессов в современных странах Центральной Азии способствует ознакомление студентов с основными положениями таких важных документов как Национальные стратегии развития каждой из этих стран (*Strategii i programmyi Respubliki Kazahstan*). При рассмотрении вопроса «Общественно-политические процессы в Узбекистане» соискателям предлагается для обсуждения «Доклад о соблюдении прав человека в Узбекистане за 2019 год» (*Doklad o soblyudenii prav cheloveka v Uzbekistane za 2019 god*). Работа над документом осуществляется по следующему алгоритму; прежде всего студенты должны определить автора документа; 2) выяснить причины и основания для его создания; 3) выделить основные составляющие документа; 4) охарактеризовать (на основании изученного материала) позицию официальных органов по уровню развития гражданского общества в государстве, обратить внимание на серьезные изменения в этих процессах в течение последних лет (или после смерти И. Каримова с 2016 г.); 6) определить насколько объективной, беспристрастной есть информация, помещенная в документе. В результате анализа документа, студенты должны сформулировать собственные выводы относительно ситуации в Узбекистане по соблюдению прав человека на 2019 г.; определить проблемы в сфере общественно-политической жизни, масштабы положительных изменений и тенденций, обусловленных работой властных структур государства; позицию Посольства США в Узбекистане относительно обозначенной в документе проблемы.

Применение такой методики представления нового материала, во-первых, способствует выработке у соискателей навыков исследовательской работы с историческими источниками. Во-вторых, позволяет преподавателю расширить рамки достижения образовательной профессиональной цели: от простого усвоения темы до «превращения обучения в процесс межличностного общения, при котором преподаватель и студент являются равноправными субъектами этого процесса (принятие идей ценностно-

смыслового равенства обучаемого и обучающего)» (Zubanova, 2010, p. 110-111).

Выводы *Conclusions*

Таким образом, необходимым условием модернизации образования является применение компетентностного подхода в процессе подготовки будущих учителей-историков. Выпускник педагогического вуза должен обладать определенным набором профессиональных компетенций, что служит залогом успешного формирования его личностной целостной внутренней профессиональной структуры. Вызовы динамично меняющегося современного мира ставят перед учителем задачи, реализация которых требует от него умения анализировать, систематизировать события и факты, которые происходят «теперь» и «здесь», давать аналитическую оценку, самое главное, находить способ донести это ученикам в доступной и приемлемой для них форме.

Исследовательские компетенции являются одними из приоритетных в общем перечне профессиональных компетенций, которые должен освоить соискатель высшего образования образовательной квалификации магистр среднего образования (История). Их формирование осуществляется путем применения различных методических приемов и практик в процессе преподавания спецкурсов. Анализ результатов работы магистрантов с архивными, документальными, нарративными источниками показал, что использование такого рода методики проведения семинарских занятий способствует выработке у соискателей исследовательских компетентностей и росту их интереса к научно-исследовательской деятельности. Перспективным направлением дальнейших исследований, по нашему мнению, может быть изучение динамики формирования исследовательской компетентности соискателей высшего образования в условиях бакалаврата.

Summary

Over several decades the global educational system has been experiencing a process of transformation of subject-knowledge education model into a competency-based one, when a student becomes the subject of his / her “own educational activity and professional development”. The competency-based approach is aimed at forming creative individuals, professionals possessing topical integrated knowledge and being able for constant improving of the latter.

The subject of the research is characterizing the experience of using educational and methodological practices, implemented by instructors of Zhytomyr Ivan Franko State University (Ukraine) in order to develop professional competencies of the students obtaining

Master's degree in History, necessary for conducting scientific and research activities. Special attention is paid to the peculiarities of forming future history teachers' research competency.

The Department of World History provides teaching of the special courses "History of Stalinism" and "History of New Independent States" for the Master's education level of training history teachers. In the process of education much attention is paid to organize students' work with different types of historical sources.

A pedagogical higher education establishment graduate is to possess a set of professional competencies, essential for successful formation of his / her individual holistic inner professional structure. The present challenges a history teacher with tasks, the realization of which requires abilities to analyze, systematize the events and facts, make analytic assessment, and above all, find a way to deliver these abilities to students in an acceptable and accessible form.

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THE LEADERSHIP OF EDUCATION RESEARCHERS IN LITHUANIAN UNIVERSITIES

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Abstract. *The article gives overview and analyses the changes and development of scientific research on educational sciences in Lithuanian universities in the period of 1990–2004. The prepared and successfully defended dissertations show positioning of the research field of educational sciences: the leadership of education researchers is reflected by the diplomas of habilitated doctors and certificates of pedagogical title of professor. The statistical overview and evaluation of doctoral dissertations in the research field of educational sciences (social sciences) in the period of 1990–2004 reveal that training of education researchers occurred both in separate universities and in the networks of universities. The distribution of researchers in Lithuanian higher education is also discussed. The statistical data on habilitated doctors in social sciences and doctoral dissertations in education defended in the period of 1990–2004 illustrate the need to develop researchers of highest qualification in Lithuanian universities. The case study of Lithuanian University of Educational Sciences allows revealing the leadership of education researchers in training of doctoral students.*

Keywords: *university, educational science, researchers, dissertation, leadership.*

Introduction

After the restoration of independence in Lithuania in 1990 education was seen as the most important factor of society's modernisation. Well-educated society ensures high quality of life and efficiently responds to the global changes of contemporary world. Therefore, higher education marks the priority of society for quality education. Phenomena of changing society predetermined need for intensive research in the field of social sciences and particularly in education and training of education researchers. It was important for the inner development of Lithuania and for preparation to integrate into EU. "Developing European culture and creating a single European higher education area, a particular attention is allocated to such institutions as universities" (Laurutis, Gumuliauskienė, 2003, p. 207). Following the Lithuanian Qualification Framework, the qualification of the doctor of science is assigned to the highest Level 8 (Resolution of the Government of RL, 24 August 2011). The requirements for qualification of this level are in line with the criteria of the European Union.

The article analyses the contribution of separate Lithuanian higher-education institutions to training of education researchers and their role as leaders in

educational science. Employing theories of leadership, the role of researchers in education of doctoral students is analysed. Up to now the theory of leadership has been linked to interaction between the andragogue and learners (Adomaitienė, Zubrickienė, 2012, p. 10–24.). Over the recent years, the role of the principal as a transformational leader in the process of school change and manifestations of teacher's transformational leadership (Leithwood, Jantzi, 1990; Leithwood, Jantzi, 1999; Navickaitė, Janiūnaitė, 2012; Anderson, 2008) have been analysed. Though the majority of research studies (MacBeath, Myers, 1999; Martinez, 2004; Leithwood, Jantzi, 2006; Rupšienė, Skarbalienė, 2010; Kelley, 2011; Bujokaitė [Ratkevičienė], 2013) focused on the teacher's leadership, the expression of leadership of researchers in higher-education institutions has not been analysed in a substantive way. Acknowledging a considerable contribution of researchers to "training of doctors in education, discussions of methodological approaches, highlighting the relation between the object and the method, opening new research areas" (Teresevičienė, 2012, p. 55), it is important to evaluate the leadership of education researchers. The leadership of education researchers is a critical dimension (Santos, Horta, 2018) in the creation of knowledge since it represents the starting point of a process that embeds individual researchers' (and the communities that they identify themselves with) interest for shedding light on topical unknowns, intrinsic and extrinsic factors underpinning that motivation, and the ambition and scope of what a research endeavor can bring.

The leadership of education researchers has to be investigated for several reasons. Firstly, this allows evaluating contribution to education of researchers in educational science, discussion of methodological approaches and opening of new research areas. Secondly, this expands the limits of cognition of educational phenomena, enables essential understanding of the current situation of the educational sciences and factors predetermining the quality of educational reality. Leadership of education researchers creates prerequisites for forecasting the perspectives of development of educational sciences in universities. The most important role in education research is assigned to universities. Evaluating the situation of education and training, education research carried out in Lithuanian universities as well as young researchers educated by experienced ones play a significant role.

The research object: the leadership of researchers in the research field of educational sciences.

The goal: to investigate the leadership of education researchers in Lithuanian universities.

The objectives:

To characterise training of education researchers in Lithuanian higher education.

To highlight spread of education researchers in Lithuanian universities.

To illustrate expression of leadership of education researchers analysing establishers of the tradition of educational sciences in Lithuanian University of Educational Sciences.

The logic sequence of the article consists of characterisation of training of education researchers in Lithuanian universities, highlighting the spread of education researchers in universities, expression of leadership of education researchers through the case study of one university.

Theoretical research is based on the provisions of transformational leadership emphasising the transformational influence on the followers and encouraging them to pursue higher goals (Bass, 2008; Northouse, 2009). Implementing their activity goals, the leaders in educational sciences not only completed necessary organisational assignments but also motivated their followers for new research. Relation-oriented leadership is people focused, inspirational, persuasive, and intellectually stimulating (Bass, 2008). The transformational leader convinced his followers to transcend their self-interest for the sake of the organization, while elevating “the followers’ level of need on Maslow's (1954) hierarchy from lower-level concerns for safety and security to higher-level needs for achievement and self-actualization” (Bass, 2008, p. 619). In this context the leadership of education researchers is revealed as an essential potential of the research field of educational sciences (social sciences) with the power to influence the reality of education and to implement separate directions in educational changes aiming at sustainability of education and education progress.

The data for the article were collected employing theoretical research methods – mainly analysis of scholarly literature and educational documents, analysis and generalisation of archival documents of one university. Seeking to completely substantiate the analysed object, the quantitative method of secondary data analysis was used. Analysing the habilitation and doctoral dissertations registered in the period of 1990–2004, the spread of education researchers in Lithuanian universities was investigated.

The set of the data analysed in the article embraced 208 doctors in educational sciences (social sciences – according to the approved classification of sciences, social sciences (S000) make up one of the branches of sciences. Educational sciences (07 S) are among its eight areas), and also groups of researchers, who defended dissertations in educational science in Vilnius Pedagogical University (VPU) (later – Lithuanian University of Educational Sciences, LEU) in the period of 1993–2004: a) candidates of pedagogy with diplomas of doctors of science nostrified in Lithuania, b) doctors in educational sciences by 2004; c) holders of diplomas of habilitated doctors by 2004; d) holders of certificates of the professor’s pedagogical title.

Consolidation of Educational Sciences and Training of Education Researchers in Lithuania

At the end of the 20th century, educational science underwent considerable qualitative changes in Lithuania. Various educational phenomena, such as education, self-education, pedagogy, andragogy, upbringing, training, teaching, learning and others, were intensively analysed. The broader term “educational science” (educology) replaced the term “pedagogy”. The conception about the educational sciences as an integrated science investigating education and self-education of an individual, all his/her life both from the perspective of direct education process and from that of education as a complex phenomenon with educational systems realising it was established (Jucevičienė, 1997). The educational sciences have acquired aspects of fundamentality, its essential methodological characteristics have been formulated, and institutional nature of education has undergone changes. A more universal conception of the object of educational sciences, which integrates issues of management of education, educational policy, educational sociology and economics and others in an interdisciplinary way, is characteristic of this modern paradigm. The role of the nucleus is ascribed to educational sciences in the modern paradigm (Mialeret, 1985; Jucevičienė, 1997).

Prior to the restoration of the independence of Lithuania a big number of researchers worked in the Institute of Scientific Research on Pedagogy, where currently prominent Lithuanian researchers on pedagogy – professors, habilitated doctors B. Bitinas, L. Jovaiša, A. Katinienė, V. Rajeckas, V. Šernas, J. Uzdila, J. Vaitkevičius, M. Barkauskaitė worked next to Dr. J. Laužikas and Dr. M. Lukšienė. Thus, the activities of the Institute of Scientific Research on Pedagogy intensified scientific research in pedagogy, enhanced maturity of staff’s research qualification and their leadership. Improving research qualification revealed the tendency of specialists’ going to other higher education institutions (Movement of researchers from Institute of Scientific Research on Pedagogy to other institutions: to VSPI (Z. Pilkauskas), to ŠPI (B. Bitinas), to VSU (L. Jovaiša, later A. Šoblinskas, V. Aramavičiūtė), to VGTU (V. Šernas, M. Gylienė, L. Vaitkūnienė, V. Treigienė), to VSPI (a whole squad, indeed: S. Vyšniauskas, M. Barkauskaitė, S. Jankevičius, R. Kontvainas, V. Glebuviene, J. Galkauskas, J. Unčiurys, J. Uzdila, J. Žilionis, A. Vilkas, etc.). The majority of them were appointed to the posts of heads of dean’s offices or other divisions. Using the experience acquired in the Institute, they accumulated research results and created methodologies, some of them wrote and defended their habilitation dissertations and became professors, and significantly contributed to the development of science of pedagogy (Dobrovolskis, 2009, p. 197). The scientific researchers, who started work in the Institute of Scientific Research on Pedagogy, spread to higher education institutions to continue their

research and teaching activities. Vilnius State University (VSU), Vilnius State Pedagogical Institute (VSPI) and Šiauliai Pedagogical Institute (ŠPI) became the centres of gravity for the science of education. After the restoration of independence of Lithuania on the 11th March 1990, reforms of teaching and administrative work in higher education schools were implemented and some institutions underwent reorganisation and changed their names.

The reforms in training of education researchers in the period of 1990–2004 can be divided into separate stages linking them with the decades in the development of the independent state. The first period (1990–1992) is related to consolidation of the science of pedagogy at the university and to the preservation of unique and significant heritage of pedagogy. The object of the science of pedagogy was limited to issues regarding relation of the goal, educational means and educational outcomes of children education (from infancy to adulthood) (Karčiauskienė, Vaitkevičius, Bitinas, Rajeckas, 1993). At that period the purpose of traditional pedagogy was to directly analyse interaction of and in education. The second period (1992–2003) is related to the legally assigned right to grant the doctor's degree in research and study institutions (Resolution of the Government of RL, No. 739, 9 October 1992). At that period training of education researchers was organised both in separate universities and university networks. The distinguished periods illustrate the developmental tendencies of the pedagogy science in Lithuanian universities and potential trends of expression and development of leadership of education researchers.

Disposition of the Field of Educational Science and Leadership of Universities

After the restoration of independence, the Commission of Nostrification of Research Degrees and Titles formed under the Research Council of Lithuania reviewed and evaluated all the dissertations defended during the soviet period. Conducting teaching activities and developing their research, the researchers defended their habilitation works in several Lithuanian universities. During the analysed period the majority of defended habilitation dissertations were prepared by researchers from Vilnius Pedagogical University (previously – Vilnius State Pedagogical Institute) together with those from Šiauliai University (previously – Šiauliai Pedagogical Institute) (see: Fig. 1).

From 1983 to 1992 146 dissertations were defended all in all and 15 of them were defended to obtain the degree of *doctor habilitatus*. The geography of pedagogical researchers prepared during the first decade of independence is rather broad. The biggest number of dissertations were written and defended by specialists in Vilnius Pedagogical University: 8 dissertations for the degree of habilitated doctors and 9 doctoral dissertations. Having investigated the topics and content of the dissertations defended by 1992, Voverienė (1995) made a conclusion that only 3.6 % of the dissertations defended in pedagogy aimed at propagation of ideology

of the Communist party, at ideological and atheistic education of school children (Voverienė, 1995).

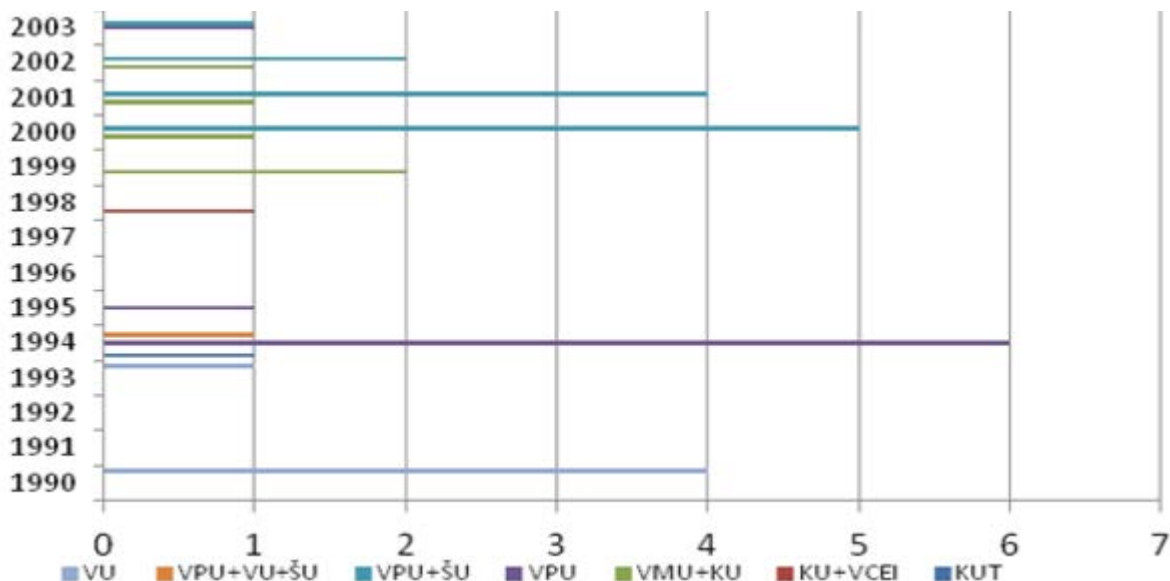


Figure 1 *Recognition of the Diplomas of Habilitated Doctors in the Period of 1990–2003*

In the period of 1993–1995 P. Šapokienė P. Karoblis, B. Bitinas, V. Rajeckas and M. Karčiauskienė were the first to be conferred the diplomas of habilitated doctors. Seeing numerous problems occurring in educational activities and the system of education in general, such researchers as B. Bitinas, V. Rajeckas and M. Barkauskaitė initiated targeted activities towards increasing the number of education researchers. V. Rajeckas states that during the first decade of the independence more than 130 doctors of science were prepared (Rajeckas, 1999). The total number of dissertations in pedagogy, which were defended in Lithuania, exceeded the numbers in the other Baltic countries, i.e. in Estonia and Latvia taken together, as well as in Belarus. The number of habilitated doctors in pedagogy in Lithuania reached the level of such a big nation as Ukraine.

Evaluating the topics of written dissertations, it can be stated that the dissertations elaborated on the issues of all the elements of the (Lithuanian) school system and some aspects of Western democracy, philosophy. Distinguishing common features of dissertations in pedagogy, it can be concluded that the majority of dissertations were research works of experimental character, which analysed practical activities of school, teacher and schoolchildren relations, and results of school performance (Vaitkevičius, 1992). The research in dissertations targeted at European democracy and followed philosophical pluralism prevailing in the Western world.

In 2010 the Research Council of Lithuania published the digest of dissertations defended in the national universities (*Lietuvos mokslo potencialas*). The alphabetic list of researchers' names in educational sciences (07 S), social sciences, consisted of 709 researchers. It should be pointed out that in the period of 1995–1998 doctoral dissertations in educational science were defended in several higher education schools: in Klaipėda University (in 1995), in Kaunas University of Technology (1996, 1997), Vilnius Pedagogical University and Šiauliai University (1998). Since 2000 dissertations have been defended in all Lithuanian universities.

The data presented in Figures 1 and 2 show that VU, VMU, KUT, KU played a significant role in the research field of education. That statistical data show that from 1993 to 2004 134 diplomas of doctor in educational science were granted in Lithuanian universities (out of them 33 dissertations, 24.5%, were defended in LEU).

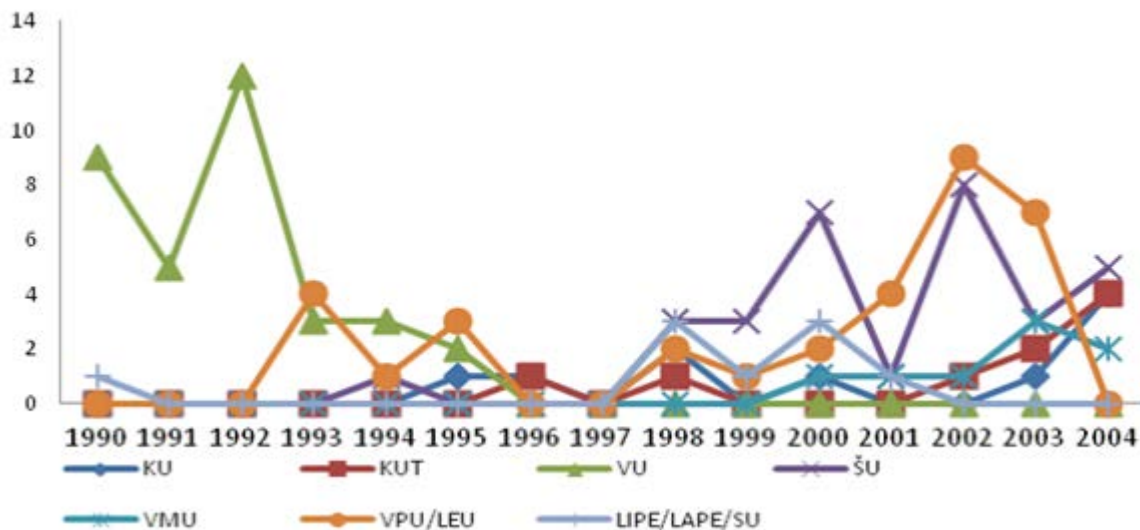


Figure 2 Defence of Doctoral Dissertations in Separate Universities in the Period of 1990–2004

Since 1996 the possibility of developing educational science has been handed to the consortium of universities. It has resulted in joint doctoral studies in such networks as: Vilnius Pedagogical University, Vilnius University, Šiauliai University; Vytautas Magnus University and Klaipėda University; Kaunas University of Technology and Vilnius University (see: Fig. 3).

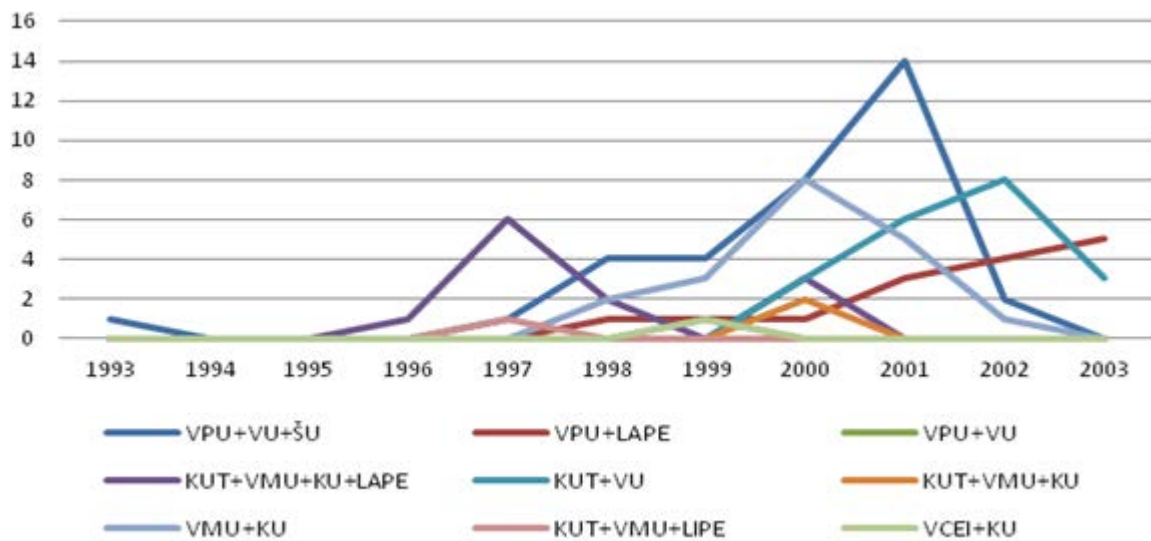


Figure 3 Preparation of Researchers in the Joint Doctoral Study Programme in Educational Science in the Period of 1993–2003

The disclosed data on doctoral dissertations defended in Lithuanian universities confirm that the basis of education researchers consists of the ones, who defended their doctoral dissertations after the restoration of independence. There emerged a possibility of initiating change and development of pedagogical and research potential, which, in its turn, would influence the quality of the whole system of education. The doctoral studies in the educational sciences (social sciences) encouraged development of teachers' educational, social, managerial and other competences. The doctoral studies in the universities established conditions for acquisition of broader, more modern and up to date educational, social, humanities and cultural education. The last decade of the 20th century was almost unique in the transformations of old educational conceptions and development of new ones. Participating in joint projects of national universities or international research, doctoral students acquired broader competences and possibilities in educational reforms, contributed to scientific, social and cultural development of Lithuania. Having defended their dissertations, doctors of educational sciences entered institutions of educational policy making and engaged into activities of research centres improving the quality of provided consultations and solving integral educational problems. Conducting new research education researchers expanded the educational sciences by new theories and changed the reality of education. Nurturing the national area of higher education, education researchers created a unified culture of education and self-education. Undergoing training doctoral students had extraordinary possibilities of continuing own professional career in different Lithuanian higher education schools. Lithuania's integration into the area of EU higher education led to investigation of such educational areas as the

quality, accessibility of education, curriculum, openness and efficiency (The Concrete Future Objectives of Education Systems, 2001). It should be emphasised that revealing their leadership abilities highly qualified teachers demonstrated their determination and power to improve the quality of education.

Increasing numbers of students in universities resulted in enhancement of teachers' qualification. In some cases a half and sometimes a third of teaching staff members consisted of holders of doctoral degree or *doctor habilitatus* (Švietimas, 2001). Having defended their dissertations, employees of universities really took the leaders' positions.

The Growth of Education Researchers

The preparation and defense of doctoral dissertations were preconditioned by the links of universities with the particular subsystems of education, the specialists to which a higher education institution trained. The universities with pedagogical profile trained doctors, who analysed problems of primary, basic and secondary and higher-education institutions in their dissertations but at the same time focused more on creation, consolidation and substantiation of new teaching methods and methodologies (Barkauskaitė, Martišauskienė, Česnavičienė, 2006, p. 10–17).

The period of leadership of education researchers in 1992–2003 was marked by the publicly announced Conception of Lithuanian Education (1992). Approaching retrospectively the cultural and social reform of education, the value-based and paradigmatic transformation, i.e. transition from the classical to liberal education, is highlighted. According to Ž. Jackūnas (2006), the Lithuanian National Revival Movement (Sąjūdis), which started in the year of “perestroika”, gave birth to aspirations for educational reform based on need of freedom and democracy. After the restoration of Lithuanian independence, favourable conditions were established for providing an individual with education that responds to current needs and development of relevant abilities and moral foundations. By 1996 the proportion of dissertations defended in pedagogy made up 20% of the total number of dissertations. The dissertations prepared during that period were mainly of applied character and based on the data acquired during pedagogical experiments on experience of school activities. According to the research areas, the dissertations are distributed in the following way: the biggest number of dissertations were prepared on issues of didactics (18), physical education and sport (11), theory of upbringing (9), vocational guidance (8) and history of pedagogy (7) (Vaitkevičius, 1997, p. 336–339). More than forty research theses were prepared on issues of school-work.

Though this can be regarded as a rather significant contribution to the development of the science of pedagogy, the holistic aspect was not reflected in the dissertations on reforms of general education schools. Each defended dissertation

addressed local issues of school activities not connecting them into systems, not embracing all the structural parts of the pedagogical process as an integral system; not considering opinions, needs, possibilities of schoolchildren's parents, society, teachers and even schoolchildren themselves as well as conditions for learning and teaching.

Fundamental research strengthened and the publishing of scientific educational journals significantly increased. The Catalogue of Scientific Journals (2011) presents scientific educational journals published in Lithuania: "Pedagogika" [Pedagogy] (Vilnius Pedagogical University), "Acta Paedagogica Vilnensia" (Vilnius University), "Mokytojų ugdymas" [Teacher Education] (Šiauliai University) and others. The science of pedagogy was enriched with research on the history of Lithuanian school. A new area of pedagogical research, i.e. comparative educational science, appeared. Four dissertations, which analysed the systems of western countries (the USA, Switzerland, Denmark and France) were defended. At that period the most considerable attention was paid to research on problems of family and children's education in the family. "Education and training are analysed according to different levels and types of educational institutions (early childhood and pre-primary, primary, secondary education, higher education and studies), according to groups of different age (childhood pedagogy, adult education), according to peculiarities of population (special, social pedagogy, education of the gifted), according to educational paradigms (teaching and learning, liberal and social democratic education, etc.). Creativity, value education, learning strategies, efficiency of learning methods, subject-specific abilities and others are frequently chosen as the object of research" (Teresevičienė, 2012, p. 57).

Doctoral studies in pedagogy (educational science) were implemented in as many as seven higher education schools. The first inter-university network completing joint assignments and after evaluation of internationalisation of research, stated that emergence of international doctoral studies is inevitable (Rekomendacijos. Tarpuniversitetinės edukologijos doktorantūros sukūrimas, 2008, p. 181–182). It was decided to strengthen interuniversity cooperation and to improve the quality of doctoral dissertations emphasising originality, interpretations, conceptuality and methodological foundations of the research. The scientific supervisors in the universities decided to assign more attention to identification of exceptionality of educational sciences and to research on specifics of national research. The procedures for admission to doctoral studies changed and it was decided "to emphasise problems relevant to the strategy of policy on education and higher education as well as to consider the experience acquired by entrants and problems important in practice" (Teresevičienė, 2012, p. 58).

In the first decade of the 21st century Vilnius Pedagogical University remained the main teacher training institution in Lithuania. At the end of 1999 there were 52 doctoral students in the Faculty of Pedagogy and Psychology (Rajeckas, 1999). The

following comparison can be provided: 1 habilitation dissertation and 5 doctoral dissertations were defended in Klaipėda University; 6 doctoral dissertations – in the Institute of Pedagogy; 3 habilitation and 1 doctoral dissertations – in Šiauliai Pedagogical Institute; 2 habilitation and 2 doctoral dissertations – in Vilnius University; 1 habilitation and 3 doctoral dissertations in Kaunas University of Technology. A number of trained researchers are teachers-practitioners, who have pursued their teaching careers. The choice of themes of dissertations was preconditioned by the relevant issues of the period. The dissertations defended in Klaipėda University analysed the problems of national education in the primary school in the period of 1918–1940 and moral education of children in rural community in the period of 1900–1940. Other dissertations aimed at analysis of educational issues: revelation of development of children’s worldview in the Lithuanian primary school on the basis of educational programmes in 1918–1998; an analysis of pedagogical aspects of Catholic schools in Lithuania in the periods of 1918–1940 and 1991–2009, influence of national minorities on development of gymnasiums in Lithuania and on present secondary school. In the second period it was important to analyse the necessity of educational reform and its tendencies. Responding to global challenges of contemporary world, doctors in education committed to significant contribution to changes in own society. Lithuania’s integration into the EU education area predetermined the following areas of research as “education quality, accessibility, curriculum reform, openness, efficiency” (The Concrete Future Objectives of Education Systems, 2001). Analysing the essence of the quality of education, a particular attention was paid to improvement of European learning standards and quality of teacher preparation. In such context more young researchers entered the area, whose training was organised in different Lithuanian universities.

Knowledge, information and ability to creatively apply them in the context of European educational dimensions have become social economic capital and a prerequisite for successful activity of an individual. In this context doctoral studies highlighted such general competences as critical thinking, efficient communication, group or team work, problem solving techniques, permanent learning, research skills and creativity. Teachers’ activities in the society are becoming more and more visible and implementation of doctoral studies through shared leadership is influencing and changing society. “The Strategic Guidelines on Development of Lithuanian Education. The Guidelines for Education. 2003–2012.” (2002) outlined the priorities, goals and objectives of the Lithuanian education, forecast measures and resources necessary to develop an efficient, sustainable system of education in Lithuania, which is accessible to all and ensures lifelong learning. Developed doctoral studies in educational sciences created prerequisites for the planned renewal and reforms of the educational system. Newly trained education researchers

represent all the educational institutions and become mediators-leaders initiating changes in education and society.

The Expression of Transformational Leadership in Lithuanian University of Educational Sciences

The leading role, readership of researchers, scientists in the field of education in transformation times can be shown via some personal examples. An educational scientist – leader – is a responsible, creative professional of pedagogy, who is focussed on sustainability principles and lifelong learning and whose activity is based on solid value-based foundation. J. Laužikas is one of such professionals. This was a scientist, who worked in the university, insistently and publicly concentrated own attention and that of communities on the quality of education. During the soviet period this teacher taught the history of Western European pedagogy and supervised students' scientific works in VSPI. The essence of educational interaction of Professor J. Laužikas and his students has been to implement lifelong learning, to ensure the quality of education and sustainability of progress. The Professor made it possible for three gifted graduates (M. Karčiauskienė, A. Grabauskienė, J. Vaitkevičius) from the Department of Pedagogy were sent to post-graduate studies to the then Leningrad. During the post-graduate studies close links with other post-graduate students V. Rajeckas and B. Bitinas were established. In such a way scientific activities of professor J. Laužikas contributed to development of young nurturers of democratic pedagogy.

Having acquired experience, A. Grabauskienė, B. Bitinas, V. Rajeckas and J. Vaitkevičius later became heads of departments. They were concerned about teacher training and sought constructive changes. Their personalities had influence on others while creating future visions. After earning their degree of habilitated doctor, B. Bitinas, M. Karčiauskienė, J. Vaitkevičius and V. Rajeckas created conditions for strong expression of leadership in the academic community, pursued higher teaching/learning quality and were highly committed to implementation of the mission of education. It is obvious that charismatic features were characteristic of mature education researchers. Such features have impact on the surrounding people and create significant and positive changes, which turn ordinary employees into transformational leaders. Leaders play the main role accelerating changes but in educational sciences the followers of transformational leadership, i.e. doctoral students, and their supervisors are inseparable. Vilnius State Pedagogical Institute started a new period in development on 20 May 1992, when the Supreme Council of the Republic of Lithuania granted the status of the university to the Institute. After 1993, when training of research personnel was reformed, many students successfully defended their doctoral dissertations in educational sciences at VPU (Defenders: E. Trečiokienė, L. Rupšienė, J. Vaičiūnaitė, T. Tamošiūnas,

L. Lukošūnienė, D. Dvarionas – scientific supervisor Prof. B. Bitinas; A. Rauckienė, R. Vaivada, Z. Žebrauskienė, L. Railienė, M. Gaigalienė, V. Indrašienė, A. Šventickas – scientific supervisor Prof. V. Rajeckas; V. Lamanauskas, V. Grincevičienė, R. Makarskaitė, J. Armonienė, P. Kuprys, R. Jautakaitė, R. Malinauskas – scientific supervisor Prof. J. Vaitkevičius; G. Šmitienė, R. Pocevičienė – scientific supervisor Assoc. Prof. A. Grabauskienė). It has to be mentioned that over the first decade of the independence the family of habilitated doctors (in educational science) significantly increased (E. Adaškevičienė, A. Ažubalis, Z. Bajoriūnas, J. Dailidienė, J. Galvydis, A. Katinienė, R. Laužackas, K. Pukelis, J. Skernevičius, L. Šiaučiukėnienė and J. Uzdila earned their degree). The development of competences of education researchers showed that the majority of researchers are elderly people. Understanding such leadership of education researchers, it is expected that “this will enable to ensure application of research results in daily practice in the field, will encourage the dialogue between researchers and practitioners, will activate provision and receiving of feedback, will establish possibilities of conducting new and high level research in educational science” (Teresevičienė, 2012, p. 56).

It is obvious making reference to the previously described second period of the growth of education researchers (1993–2003), when the second generation of followers of education researchers-leaders got matured. These were researchers, who earned their degree of habilitated doctor in the second decade of the independence and actively worked in the university. In the context of transformational leadership, education researchers M. Barkauskaitė, R. Vasiliauskas, A. Raslanas and E. Martišauskienė are related to an exceptional form of influence. They are distinguished by personal features, which inspire doctoral students and motivate them for intellectual growth. Transformational leaders encourage followers to do more than it is usually expected from them (Northouse, 2009, p. 151–152). The abovementioned education researchers became examples for their followers, who understand strengths of doctoral students, inspire them and encourage to assume more responsibility. Habilitated doctors in educational sciences mobilised their potential strengthening positions in the research field of educational sciences (social sciences) and were concerned about the quality of dissertations in educational sciences. Researchers became the figures of authorities to the followers inspiring and motivating the latter for improvement. In the second period the culture of transformational leadership of education researchers was obviously and consistently developed in the university.

Later transformational leadership acquired forms of shared leadership. Shared leadership starts spreading in the community of the university. This leadership is not aimed at formal leaders only – it embraces actions of various people working in an organisation.

This means that developing shared leadership, all the community members including teachers, administrative staff and students can be regarded as leaders. Such leadership is perceived not as a role of a single individual but also as an ability and capability to take on the role of a leader when necessary. Shared leadership can take a form of an activity, which is shared or implemented by any member of an organisation (Harris et al., 2010). Sharing of leadership in a higher education institution is one of the ways, which help to increase efficiency, to strengthen management and to improve outcomes of research and studies. Thus, shared leadership of education researchers is relevant seeking improvement of the quality of performance of an educational school. This leadership helps to avoid domination of one individual over other people. Developing shared leadership, the head of an institution grants more powers to other employees and sometimes delegates function of own performance to them. Sharing leadership a different member of an organisation becomes a leader depending on the situation and on the individual's possession of specific competences or abilities in a particular situation. Such leadership means that members of an organisation are ready to assume leader's work and responsibility. At present the features of shared leadership are obvious in the university and they are visible implementing educational programmes, projects or research as well as training doctoral students. Developing shared leadership of education researchers attempts are made to enhance employees' responsibility, self-confidence and trust in colleagues, promote cooperation and strengthen motivation for teaching/learning of the whole community.

Analysing the case of Lithuanian University of Educational Sciences it was established that the generation of education researchers who matured under conditions of transformational and shared leadership are able to freely and fully participate in maturing and developing social sciences.

Having earned their *doctor habilitatus* or doctor's degrees at Lithuanian University of Educational Sciences, education researchers also spread to other Lithuanian universities. The greatest number of education researchers have continued their research careers at the following universities in Kaunas: rector Prof. K. Miškinis and A. Dumčienė, head of the Pedagogy and Psychology Department, in the Institute of Physical Culture; Kaunas Technological University – Assoc. Professor V. Bajorienė; Vice-rector K. Pukelis, Professor of Department of Education Science, in Kaunas Vytautas Magnus University; Assoc. Prof. G. Klimovienė, head of the Department of Languages in Aleksandras Stulginskis University. Several researchers worked at Klaipėda University: English Philology Department Assoc. Prof. I. Sabaliauskaitė, Head of the Educology Department Assoc. Prof. V. Raudys, Assoc. Prof. A. Rauckienė. Several outstanding education researchers develop educology at Šiauliai University; they include professor V. Lamanuskas, L. Rupšienė, and L. Šiaučiukėnienė. A large number of researchers remained at Vilnius State Pedagogy Research Institute; there educology

is fostered by V. Voveris, Z. Tarvydienė, A. Grybauskienė, R. Vasiliauskas, M. Barkauskaitė, R. Matlašaitienė, V. Bortkevičienė, R. Vaivada, Z. Žebrauskienė, A. Šventickas and other researchers.

It is worth to give a short overview of scientific schools established by some prominent education researchers of Lithuanian University of Educational Science, which nurtured many researchers, who became leaders in research and development of educational sciences as themselves so via their PhD students.

During the analysed period issues of educational sciences go beyond the field of traditional pedagogy. The research problems expanded to such “spheres as civic society, virtual and information networks, business, politics, community, social groups of various interests” (Teresevičienė, 2012, p. 55). At present the quality problems, competence development and change have become relevant as well. The doctoral dissertations of the last decade have been of diverse themes, working researchers and lecturers have their scientific research areas and involve their doctoral students into them (Teresevičienė, 2012, p. 57). However, at the same time “scientific research on teacher education, systematic nature of education research seeking to coordinate systemic changes in society, embracing all the main problems, individuals from all the social layers and developmental groups” (Barkauskaitė, 2008, p. 16) are insufficient. It is critical (Gore, 2017) to reconcile differences within educational research if we are to ensure the strength of the field and support the next generation of researchers to make a more profound impact on schooling and society.

The discussed periods illustrate the tendencies observed in the growth and leadership of education researchers at Lithuanian University of Educational Sciences. The first period (1983–1992) is related to the preservation of unique and significant legacy of pedagogy and consolidation of the pedagogy science at the university. At that time this institution was engaged not only in the preparation of students for their doctor’s degree but also in the recognition (nostrification) of formerly awarded academic degrees. Thus, statistical data evidence an increase both in the number and maturity of education researchers. The second period (1993–2003) shows a minor but almost stable decrease in the number of students seeking the doctor’s degree at the university. At the same time the growth of academic personnel becomes evident – having earned their doctor’s diplomas, researchers write their *doctor habilitatus* degree works or earn their pedagogical titles of professor. The singled out periods of education researchers’ growth illustrate a stable condition of the educational sciences within the research area of social sciences at the university. Training of doctoral students and professional growth of colleagues were in hands of prominent educators – leaders. Taking into account the research field of educational sciences (social sciences), it can be stated that the culture of transformational and shared leadership has formed in the universities over a long period of time. The significance of Lithuanian University of Educational Sciences (earlier – Vilnius Pedagogical University), as an important institution of

education researcher training, has been revealed. This is a higher education establishment, which differed from the other Lithuanian research institutions because research on school pedagogy was carried out there. The growth of the number of education researchers was significant in the university – in the period of 1993–2004 208 diplomas of doctor's degree in educational sciences and 31 certificates of the pedagogical title of the professor were issued. The education researchers, who were granted diplomas of habilitated doctors and doctors in this university spread to other Lithuanian universities. The focus is (Lan, 2020) to enhance the disciplinary independence of educology and regard it as the foundational project for the development of contemporary educology.

The distribution of education researchers – leaders in Lithuanian universities evidences real possibilities of not only competent representation of the research field of educational sciences (social sciences) but also of suggesting changes and practical solving challenges imposed on the school or education in general.

Conclusions

At the end of the twentieth the educational sciences underwent significant qualitative changes. The term “pedagogy” was replaced by the term “educational sciences” (educology). The conception was established about educational sciences as an integrated science that investigates education and self-education of an individual all his/her life both from the perspective of direct education process and from that of education as a complex phenomenon with educational systems realising it. In the beginning of the 21st century the educational sciences have acquired aspects of fundamentality and its essential methodological characteristics have been formulated.

The maturity of the educational sciences as a result of the quality of pedagogy science highlighted the growth of education researchers in Lithuanian universities. Vilnius State University (VSU, currently VU), Vilnius State Pedagogical Institute (VSPI, currently LEU), Šiauliai Pedagogical Institute (ŠPI, currently ŠU) became the first centres of gravity for the science of education. Training of education researchers in separate universities and their consortiums over a quarter of a century is linked with protection of heritage relevant to pedagogy, consolidation of position of the science of pedagogy and stable training of doctoral students.

The majority of doctoral dissertations were defended in all the Lithuanian universities implementing doctoral studies in educational sciences in the period of 2000–2002. Having evaluated the number of defended dissertations the leadership of certain universities is revealed. Next to such universities as Vilnius University (VU), Vytautas Magnus University (VMU), Klaipėda University (KU), Kaunas University of Technology (KUT), Šiauliai University (ŠU), Lithuanian University of Educational Sciences (LEU) played a significant role in training of education

researchers. From 1993 to 2004 Lithuanian University of Educational Sciences (LEU) issued one third of the doctor's diplomas in educational science.

The distinguished periods illustrate the developmental tendencies of the science of pedagogy in Lithuanian universities, the turnover of education researchers and potential opportunities for expression and development of leadership. The period of 1990–2004 was marked by well-defined leadership of education researchers in universities. Education researchers, who earned their degrees of *doctor habilitatus* and doctors in Lithuanian Universities of Educational Sciences (earlier – Vilnius Pedagogical University) spread in other Lithuanian universities. The broad geography of researchers in pedagogy and educational science, who were granted the doctor's diplomas in Lithuanian Universities of Educational Sciences (earlier – Vilnius Pedagogical University) evidence the manifestations of transformational leadership. Having acquired the doctor's diplomas, the researchers leaders have been working in a targeted way towards habilitation degrees and professor's pedagogical titles. Education researchers in Lithuanian universities have access to real possibilities of competent representation of the research field of educational sciences (social sciences) but also of solving challenges imposed on the school or education in general.

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EVIDENCE-BASED PRACTICE TEACHING INTEGRATION IN COLLEGE NURSING STUDIES: HISTORICAL AND LEGAL ASPECTS

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Abstract. *To better understand and analyze the education of evidence-based practice, it is necessary to review the context and premises of the formation of evidence-based practice itself. The beginning of the evidence-based practice movement in the teaching of health professionals' dates back to 1910 and looking at the health care system; first, there was evidence-based medicine. In 1990, Sackett's initiative at McMaster University in Canada, it was decided to change the term "evidence-based medicine" to "evidence-based practice" (Mackey & Bassendowski, 2017; Thom & Eaves, 2015). In nursing, the beginning of evidence-based practice is linked to the reforms of nursing science and practice by the first nursing researcher, Florence Nightingale, from 1854 to 1910, although the term of "evidence-based practice" was not yet known at the time. The professional training of nurses as one of the leading health professionals is related to health policy and the development of nursing science. The European Qualifications Framework (EHEA) defines the expected learning outcomes for professionals with a bachelor's degree, including the skills to find, evaluate, reflect, and apply scientific information in practice (Bologna Working Group, 2005). Despite international and national recommendations, it is difficult for many higher education institutions to refine the steps of teaching evidence-based practice in nursing study programs. These difficulties are revealed by the ambiguity in the definition of the concept of evidence-based practice (Horntvedt et al., 2018).*

The problematic question is: What is the basis for integrating evidence-based practice training into college nursing study programs?

The study is based on the scientific literature review.

Keywords: *evidence-based practice history; evidence-based practice; evidence-based practice teaching; nursing education.*

Introduction

The world is in a period of rapid change characterized by technological and social progress. Whatever the scale of the system is, if it does not adjust to the changing environment, it is doomed to stagnation. This also applies to the higher education system: in order to achieve the quality of studies, it is necessary to take into account the needs of the labor market and the guidelines of the European Union

(Jović, Knežević, Skrobić, Matavulj, & Vučković, 2015). Nursing education is one of the open systems that can only be viable by changing, depending on environmental challenges.

Given the ever-changing nature of health care, new ideas are being developed to improve patient care: new technologies are being introduced, more effective drugs are being discovered, treatment and nursing methods are being developed, and evidence-based practice is becoming increasingly valuable in nursing education (Kang, Kim, Kim, You, Choi & Hwang, 2016; Wilson & Klein, 2012).

Quality of nursing education organization also affects assimilation of evidence-based practice. As Lithuania moves to a higher level of training for nursing professionals, it is possible to see the current gap between theory and practice, which may widen further without taking action by reviewing the education of nurses themselves and the design of study programs. To avoid this gap, all evidence-based practice training steps must be included in nursing training programs as this is a key medium developing nursing students' professional knowledge, skills, and clinical approach (Lehane, Warren, O'Riordan, Savage, Drennan, O'Tuathaigh, Hegarty, 2017).

Evidence-based practice is one of the latest paradigms in nursing education. It is a nursing practice where nurses make decisions of clinical nursing based on the evidence of the research, the nurses' clinical experience, taking into account the patient's needs and wishes (Melnyk, Fineout-Overholt, Giggelman & Cruz, 2010).

In countries with a deep tradition of nurse training, the education of evidence-based practice and its integration into curricula began a debate about it about two decades ago (Melnyk, Fineout-Overholt, Giggelman, & Cruz, 2010; Larsen, Terkelsen, Carlsen, & Kristensen, 2019) and in Lithuania, the education of nurses' evidence-based practice is an understudied field.

Despite the World Health Organization (Martins, Baptista, Coutinho, Fernandes & Fernandes, 2018), recommendations of the International Clinical Simulation and Training Nursing Association (INACSL) (INACSL Standards Committee, 2016), description of the Lithuanian Nursing and Midwifery Study Field (2015), the provisions of Directive 2013/55/EU of the European Parliament and the Council and the Guidelines of the Lithuanian National Nursing Policy 2016-2025 (National Nursing Policy ..., 2016), refined evidence-based practice training steps in nursing study programs for many of the country's higher education institutions is difficult to achieve. These difficulties are revealed by the ambiguity in the definition of the concept of evidence-based practice (Horntvedt, Nordsteien, Fermann, & Severinsson, 2018).

The problematic question of the article is: what is the basis for integrating evidence-based practice training into college nursing study programs?

Methodology of Investigation

The literature review was planned and written in accordance with PRISMA (Preferred Reporting Item for Systematic Review and Meta-Analyses) requirements for the preparation of a systematic review. In order to answer the problematic question of the article – in 2020 February-June a targeted literature search was conducted in EBSCO and ScienceDirect databases. The following keywords were used for the first search: evidence-based practice history; evidence-based practice teaching; nursing education other similar terms. Scientific information was also collected by reviewing the bibliographies of articles selected for analysis, and by reviewing related or similar articles.

Articles were selected for analysis using the following selection criteria: 1) the scientific article was published in a peer-reviewed scientific journal; 2) full text article in English; 3) due period - articles published in 2000-2020; 4) the article analyzes the history of the development of evidence - based practice and the legal aspects of its integration into the study process.

To ensure the validity of the literature review of the scientific literature was: formulated criteria for inclusion and exclusion of publications; all scientific publications meeting the selection criteria are included in the list of analyzes and analyzed. Such criteria - the research methods used in the article, the country where the research took place - were not relevant for the selection. 15 out of 142 article were included in this review. Nine article that were included in the analysis were descriptive (3; 6; 15; 17; 22; 26; 27; 28; 29), four used a quantitative research strategy (19; 20; 23; 24), one for qualitative research (2) and one for mixed research (11).

Articles selection process graphically illustrated in Figure 1.

The four-phased approach of Grove, Burns, & Gray (2012) for reviewing literature is used: skimming, comprehension, analysis and synthesis of sources.

Skimming involves reading the titles, summary and keyword to decide which articles to include or exclude. The articles included are peer reviewed, original products that describe the history of the development of evidence-based practice and the legal aspects of its integration into the study process. The articles excluded are based on assessing the knowledge of nurses and nursing students about evidence-based practice. It is important to note that the literature review by the authors is limited to articles reviewing the reasons for the formation of evidence-based practice and to analyse the legal basis for the integration of evidence-based practice into nursing study programs. Comprehension takes place by critically reviewing the articles, understanding the content, taking notes about main themes. Analysis implies categorizing the articles in relation to the research question. The authors repeated this stage several times. The data articles are listed in Literature Summary Table in order to systematically review, analyze, summarize and

interpret the obtained results. During the analysis of the material presented in the articles, the data of author and year, purpose, framework, results and findings were included. Synthesis of sources involved clarifying the mean of the information in order to answer the research question.

In order to assess the legal basis for the application of evidence-based practice, international (n=4) and national (n=2) documents governing the teaching of evidence-based practice in nursing programs were analyzed.

The data obtained during the analysis are interpreted based on the ideas of B. M. Melnyk's (2011) evidence-based theory of nursing practice.

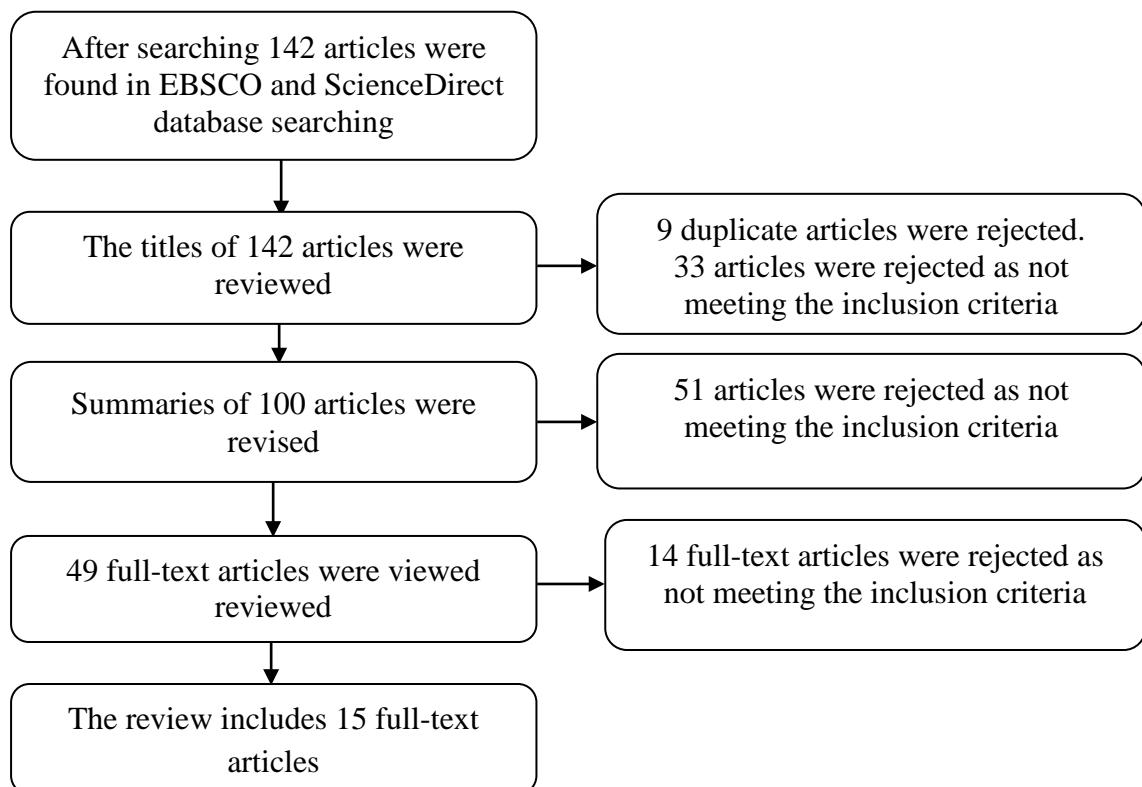


Figure 1 Articles Selection Process

Research Results

The main issues raised during the analysis of the articles are discussed below:

- The historical context of the formation of evidence-based practice;
- Legal basis for the integration of evidence-based practice teaching in nursing studies

The historical context of the formation of evidence-based practice

The beginning of the EBP movement in health care education dates back to 1910, when the North American Medical Association approached researcher

Abraham Flexner with a request to investigate the quality of health care training in U.S. and Canadian medical schools. 155 medical schools were included in the study field (Steglitz, Warnick, Hoffman, Johnston, & Spring, 2015). The results of the study showed that more than half of the medical schools participating in the study provided insufficient clinical training for specialists, and the education of the specialists themselves was not based on any scientific evidence. Based on a study conducted by A. Flexner (1912), he formulated a quality standard for the training of health care specialists, which many medical schools of the time did not implement in the study process. As a result, in 1935, more than half of all medical schools that participated in the study closed as unable to prepare practitioners. This study by Flexner is seen as the beginning of evidence-based practice in the education of health professionals as it has led to educational reform related to the training of these professionals in the United States and Canada (Steglitz et al., 2015).

Looking at the health care system first started talking about *evidence-based medicine*. The majority of the literature shows the beginning of *evidence-based practice*, originally known as evidence-based medicine, back to Archie Cochrane in the 1970s (Mackey & Bassendowski, 2017). Until the dissemination of substantiated research publications, people believed that making decisions about patient care is an individual choice by the doctor. It was believed that each doctor thinks correctly and makes the right decisions (Melnik, Fineout-Overholt, Giggelman, Cruz 2010). A. Cochrane 1972 argued that healthcare systems have limited resources and should therefore only use proven and effective treatments and that doctors' decisions about patients' treatment were unreasonable and based on the disease but not on the individual patient's case (Stavrou, Challoumas & Dimitrakakis, 2014; Steglitz et al., 2015; Dawes, Summerskill, Glasziou, Cartabellotta, Martin, Hopayian, Osborne, 2005; Melnyk, Gallagher-Ford, Long et al., 2014).

Twenty years later, in 1992, funding for the Cochrane Center has been approved by the UK National Health Service; to facilitate the dissemination of the results of randomized surveys. 1993 center name was changed to Cochrane collaboration and brought together fifteen Cochrane collaboration centers on all continents. The activities of these centers cover all areas and specializations of medicine. Their common goal is to find and present the most reliable, scientifically proven facts for the treatment of specific diseases (Stavrou et al., 2014).

While A. Cochrane's researchers worked to evaluate the significance and importance of clinical research in evidence-based practice, Canadian researcher David Sackett analyzed the meaning of the concept itself. D. Sackett (1990) argued that the previous decision to link evidence-based practice only to the application of best treatment methods in clinical practice is wrong, and it does not

reflect its deep meaning and purpose. This practice includes critical thinking by healthcare professionals, patient-centered clinical decisions, patient safety ensuring, and aspects of the emotional state of the patient and his/her loved ones. Therefore, in 1990, at the initiative of D. Sackett at McMaster University in Canada, it was decided to change the term "evidence-based medicine" to "evidence-based practice". Sackett, Rosenberg, Muir, Haynes & Richardson (1996) defined its term as follows: "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients" (as cited Mackey & Bassendowski, 2017, p. 5). Scientists (Melnik, 2012; Steglitz, 2015; Dawes, 2005) later analyzed the concept of evidence-based practice and argued that this description of evidence-based practice has changed insufficiently and is used to this day. As noted by A. Mackey & S. Bassendowski (2017) this change seeks to ensure that evidence-based practice is used not only by physicians but also by nurse, psychologists, and all other health care professionals to achieve the common goal of a holistic approach to patient health, well-being and its improvement.

Thus, evidence-based practices have become more widely discussed in order to improve the quality of services provided by healthcare specialists and to ensure the best possible health status for patients. However, this is not sufficient to explain the main processes of evidence-based practice and to distinguish the evidence-based process from the evidence-based outcome. It needs to be clearly defined: what the concept of evidence-based practice itself means, what evidence-based practice skills are required and what the curriculum should be, which sets out the necessary steps for education evidence-based practice (Dawes et al., 2005).

2003 in Evidence-Based Practice Conference "Signposting the future of EBHC" in Sicily, Italy, a communique was adopted. As mentioned Dawes (2005) in this communique stating that: „all health care professionals need to understand the principles of evidence-based practice in action, complement evidence-based policies, and have a critical attitude to their own practice and to evidence. The teaching of evidence-based practice should, as far as possible, be integrated into the clinical setting and routine care so that students not only learn the principles and skills, but learn how to incorporate these skills with their own life-long learning and patients care" (Dawes et al., 2005, p. 2).

Following the adoption of this communique a directive 2005/36/EU on the recognition of professional qualifications, which defines the educational requirements of doctors, nurses, and other regulated health care professionals, was prepared by the European Parliament and the Council in 2005 (Directive of the European Parliament and the Council..., 2005).

Evidence-based practice evolved from Florence Nightingale in 1854-1910 with her reforms in nursing science and practice, although at that time, the concept

of “*evidence-based practice*” was not yet known. F. Nightingale applies this practice in her work to achieve the best possible results in the nursing process and to improve the education of nurses. She argued that there is a lack of knowledge of nursing theory in practice and professional nursing teachers in schools, nurses must learn from their practice by describing, analyzing each case of nursing, and submitting the analysis to the teacher (Selanders & Crane, 2012).

With the development of nursing science worldwide, evidence-based practice has become its foundation. Since 1998 the magazine “*Evidence-Based Nursing*” began to be published for nurses and nursing students, containing main articles with expert comments, focusing on main conclusions of research and their impact on nursing practice. And in 2011 nursing researcher B. M. Melnyk formulated the concept of evidence-based practice in nursing: “*evidence-based nursing practice should be a problem-solving approach to clinical practice that integrates a systematic search for, and critical appraisal of the most relevant evidence to answer a burning clinical question. It should take into account, for example, one’s own clinical expertise, patient preferences and values*” (Melnyk, 2012, p. 5). In later published studies C. J. Thompson (2016), H. Saunders et al. (2018) defined three main components of evidence-based nursing practice: *best evidence, clinical experience, and patient preferences*.

Legal basis for the integration of evidence-based practice teaching in nursing studies

The professional training of nurses as one of the main health care professionals is related to health care policy and the development of nursing science. The European Qualifications Framework for Higher Education (EHEA) defines the expected learning outcomes for professionals with a bachelor’s degree, including the skills to find, evaluate, reflect, and apply scientific information in practice (Bologna Working Group, 2005). The International Code of Ethics for Nurses also emphasizes that nurses must know and apply research findings in their clinical practice (International Council of Nurses (ICN), 2012).

In 2013 a directive 2013/55/EU of the European Parliament and the Council is issued, which partly changes directive 2005/36/EU, and in which eight key professional competencies for nurses is defined, highlighting the need for training in evidence-based practice. The directive states that after completing nursing studies, the professional must independently identify the necessary care, plan, organize and carry out the care of treated patients to improve professional practice through the application of science-based general nursing knowledge and skills.

In 2015, in Lithuania, a description of the study field of Nursing and Midwifery is being prepared, which defines general and specific learning outcomes to be achieved by a graduate of the Nursing study program. The description of the field of study also highlights the acquisition of evidence-based

practice skills. And the new Lithuanian National Nursing Policy Guidelines for 2016-2025 anticipates three priority directions of nursing development: improving the quality of care and patients safety, planning the need for nurses, and improving competencies and the implementation of evidence-based solutions in nursing science (2016, p. 4). Considering these guidelines, the training of nurses must be based on the interaction between the nurses' practice, their teaching methods, and research.

The whole legal framework would seem to provide a basis for future nurses to acquire evidence-based practice skills. However, in 2019 at the initiative of the European Commission wide coverage research was conducted in order to assess changes of the general practice nurses education (it is one of the sectoral professions defined in directive 2005/36 /EU). This research appears that: *“In Lithuania, the knowledge and skills acquired by a nurse and the subjects of study programs should be clearly linked to the professional competencies set out in the directive (Article 31 (7) of the Directive). There is not a clear definition of what the concepts “Evidence-Based Practice” and “research” mean. It is not sufficient to include “research knowledge”. Evidence-Based Practice is much more than research; it is also the use of research in the practice, patients’ needs, patients’ perception, etc.* (SARK. Workshop Feedback Report, 2019).

Why it is so substantial for nurses to learn to apply evidence-based practice? B. M. Melnyk, L. Gallagher-Ford, L. E. Long et al. (2014) specifies evidence-based practice nursing principals: *“when performing nursing activities, nurses follow the best available evidence, clinical decisions based on science-based facts proven in clinical trials, the individuals needs of the patient are taken into account in the development of the nursing plan“*. And in applying traditional nursing practice, nurses are guided by the authority's opinion, personal knowledge and experience, and the traditions of performing nursing actions. However, not updated knowledge is rapidly aging, personal experience is limited, the views of authorities can vary, and traditions can also vary greatly from country to country and from institution to institution. If implementing evidence based practice nursing, the individual needs of the patient are taken into account, it is applying the same methods in traditional nursing even to patients with the same disease are inefficient (Melnyk et al., 2014). Nursing study program which content is based on the steps of the evidence based practice training gives the study program its uniqueness; emphasizes the effective development of student's knowledge and skills; improves clinical competencies, communication, and critical thinking skills; creates conditions for students to achieve a higher level of study results. (Cordeau, 2012; Edeer & Sarikaya, 2015; Hung et al., 2019).

Conclusions

Evidence-based practice is one of the paradigms of nursing education, focused on developing the ability of future professionals to make clinical decisions based on the best available research evidence, nursing clinical experience, taking into account the patient's wishes and needs.

The application of evidence-based practice in the nursing education is linked to the prioritization of the importance of clinical trials and the needs of patients to ensure the quality of services.

By discussing the concept of evidence-based practice from a historical perspective, we can clearly see the links between evidence-based practice and nursing education and practice. Teachers have every opportunity, regulated by law, to fully integrate and improve the teaching of evidence-based practice in nursing study programs. It is important that the training of nurses encourages commitment to evidence-based practice and the strengthening and maintenance of competence in lifelong learning.

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UKRAINIAN-LATVIAN COMPARATIVE STUDIES ON UNIVERSITY EDUCATION: COMMON EUROPEAN VALUES AND CURRENT CHALLENGES

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Abstract. *Knowledge on universal values in general and common European values in particular and their influence on the process of providing university education to current and future generations may become a basis for building a cohesive world community. In that context, university education has an invaluable role to play. To live in peace and harmony for years to come, people should acknowledge and respect the diversity within the global society. This will be possible only if the content of higher education programmes in universities throughout Europe provides the next generations with insight into European and world culture and multiculturalism. This is most evident now when all the nations of the world have expressed their willingness to help each other in combating the Covid-19 pandemic placing the highest value on the person. In this regard, the article is aimed at investigating the problems Ukrainian and Latvian students face as a result of current challenges caused by the Covid-19 pandemic, providing some scientifically backgrounded ways of their overcoming and reducing their negative consequences. The problems whose essence was found out through conducting a web-based questionnaire were generalized by means of content analysis method. Research sample included 109 Latvian students and 98 Ukrainian students.*

Keywords: *common European values, current challenges, Latvian and Ukrainian students, university education.*

Introduction

Since the beginning of the third millenium the contemporary world community has been facing a lot of challenges. Thus, for instance, apart from globalization, anxiety about immigration, low economic growth, demographic changes and rising wealth inequality, increase in consumption, all countries in the world have to confront the Covid-19 pandemic. These challenges can be

overcome by understanding the role and importance of universal human values and common European values in particular as the background of young adults' education, on the one hand, and, on the other hand, by equipping them with profound theoretical knowledge and practical skills necessary to enter the labour market.

After implementing online learning since March 2020, "the initial optimism was gradually diminishing due to the emerging problems with computer hardware, outdated software, difficulties with streaming information (sound, image or video recordings), because not all students had access to broadband Internet and many of them also had older versions of computers..." (Juszczak & Kim, 2020, p. 116). Taking into account these changes that are happening throughout the world and are reflecting adversely on the quality of higher education, more and more scholars are wondering what type of future there is for European societies (Almazova et al., 2020; Reeskens et al., 2020; Sahu, 2020; UNESCO IESALC, 2020; Watermeyer, 2020). In this connection, one of the biggest challenges closely connected with educational systems throughout the world is channeling the efforts of academic institutions to provide all possible ways and means of ensuring quality education for all students and due to pandemic situation ensuring quality online education (Willems, 2019). It will be possible only if the process of online teaching and learning is organized bearing in mind "the instructional design principles that flow from human cognition" (Sweller, 2020, p. 1), otherwise it is unlikely to be effective. Searching for points of convergence in improving quality of higher education and in making access to online education easier for students is one of the major tasks of higher education institutions both in Latvia and Ukraine.

The research and training experience that has already been gained by educators, sociologists, philosophers and psychologists in the field of higher education shows that one of the most perspective and effective ways for providing students with high-quality online education and preparing them for life in the present-day global society is university training based on universal human and common European values such as human dignity, freedom, democracy, equality, the rule of law and respect for human rights to them. Knowledge on universal human values in general and common European values in particular and their influence on the process of providing university education to current and future generations may become a basis for building a cohesive world community (Malykhin, Aristova, & Kovalchuk, 2019). In that context, university education has an invaluable role to play. To live in peace and harmony for years to come, people should acknowledge and respect the diversity within the global society. This will be possible only if the content of higher education programmes in universities throughout Europe provides the next generations with insight into European and world culture and multiculturalism. This is most evident now when

all the nations of the world have expressed their willingness to help each other in combating the Covid-19 pandemic placing the highest value on the person. To prove the ideas mentioned we would like to provide some examples obtained by researchers from different countries who investigated the same topic during the previous year. Thus, W. Bao claims that after transition to online learning, Chinese students, on the one hand, experienced some problems connected with the «lack of self-discipline, suitable learning materials, or good learning environments when they are self-isolated at home» (Bao, 2020, p. 114) and, on the other, with the inability of computer servers to host a large number of users and with the shut downs of online educational platform because of overload (Bao, 2020). The problems identified, in M. Bao's point of view, may have an adverse effect on the quality of education. The same idea is expressed by M. Czerepaniak-Walczak (2020). Claiming that “the right to education is the universal right of any person” (M. Czerepaniak-Walczak, 2020, p. 58), M. Czerepaniak-Walczak comes to the conclusion that the closure of academic institutions influences “the most marginalized and vulnerable students, mainly from the poor areas and low cultural capital” (M. Czerepaniak-Walczak, 2020, p. 59) and affects the exercise of right of children, young people and adults to quality education which is considered one of the most important common European values. In this regard, the article is aimed at investigating the problems Ukrainian and Latvian students face as a result of current challenges caused by the Covid-19 pandemic, providing some scientifically backgrounded ways of their overcoming and reducing their negative consequences.

Methodology, Participants

In this study, the participants were 109 Latvian students from Rezekne Academy of Technologies (Rezekne, Latvia) and 98 Ukrainian students from Kyiv National University of Technologies and Design (Kyiv, Ukraine), Taras Shevchenko National University of Kyiv (Kyiv, Ukraine), National Aviation University (Kyiv, Ukraine), Kamyanets-Podilsky Ivan Ohienko National University, (Kamyanets-Podilsk, Ukraine). The survey was conducted in October-December 2020.

Instrument and Procedure

The team of researchers developed a web-based questionnaire. The choice of the web-based questionnaire was explained by the fact that after implementing physical-distance measures including the closure of higher education institutions is was considered one of the most relevant methods for collecting data. The web-based questionnaire was designed to investigate the problems Ukrainian and

Latvian students faced as a result of current challenges (the Covid-19 pandemic) and contained open-ended questions. Open-ended questions were used mainly because of the need to understand if the problems encountered affected the exercise of research participants' right to quality education which was considered one of the most important common European values and if there were some positive changes which made it possible to provide some scientifically backgrounded ways of overcoming current challenges and reducing their negative consequences. Ukrainian and Latvian students were asked to answer the following open-ended questions:

1. *Can you list all the problems and difficulties you face as a result of the transition of the face-to-face learning in the online learning format and explain what way they influenced your academic performance?*
2. *Can you list positive changes connected with transition of the face-to-face instruction in the online learning format and explain what way they influenced your academic performance?*

Table 1 demonstrates the socio-demographic information about Ukrainian and Latvian respondents.

Table 1 Socio-demographic Information about Ukrainian and Latvian Respondents

<i>Ukrainian respondents</i>			<i>Latvian respondents</i>		
<i>Variable</i>	<i>Number (N=98)</i>	<i>Percentage (100%)</i>	<i>Variable</i>	<i>Number (N=109)</i>	<i>Percentage (100%)</i>
<i>Gender</i>			<i>Gender</i>		
Male	16	16.33	Male	11	10.09
Female	82	83.67	Female	98	89.91
<i>Bachelors</i>			<i>Bachelors</i>		
First year	44	44.90	First year	41	37.61
Second year	10	10.20	Second year	15	13.76
Third year	16	16.33	Third year	18	16.51
Fourth year	9	9.18			
<i>Masters</i>			<i>Masters</i>		
First year	4	4.08	First year	14	12.84
Second year	5	5.10	Second year	13	11.93
<i>PhD students</i>			<i>PhD students</i>		
First year	2	2.04	First year	2	1.84
Second year	6	6.12	Second year	4	3.67
Third year	2	2.04	Third year	2	1.84
Fourth year	–	–			

Source: own study
N=207

Data Analysis

The data from the web-based questionnaire which contained expanded answers to the open-ended questions were generalized by means of content analysis method. The use of content analysis method enabled the researchers to indentify ten problem categories and eight categories connected with positive changes which ultimately enabled to provide some scientifically backgrounded ways of overcoming current challenges and reducing their negative consequences. The calculation of descriptive statistics helped researchers inteFrprete the percentage distribution obtained.

Results

The obtained results regarding the problems Ukrainian and Latvian students face as a result of current challenges (the Covid-19 pandemic) are demonstrated in Table 2.

Table 2 Problems Connected with Current Challenges (the Covid-19 Pandemic) according to Ukrainian and Latvian Students

Groups of respondents (N=207)	Categories									
	Internet quality (N)	Weak digital infrastructure (N)	Study-related stress (N)	Lack of in-person interaction (N)	Academic mobility restrictions(N)	Deterioration of emotional well-being (N)	Lack of immediate feedback (N)	Sense of insecurity (N)	Health problems (N)	Material well-being (N)
Ukrainian students (N=98)	78	58	34	73	26	14	47	30	20	43
Latvian students (N=109)	69	51	19	52	28	8	21	–	7	22

Source: own study
N=207

Figure 1 summarizes and compares Ukrainian and Latvian respondents’ opinions on problems connected with current challenges (the Covid-19 pandemic).

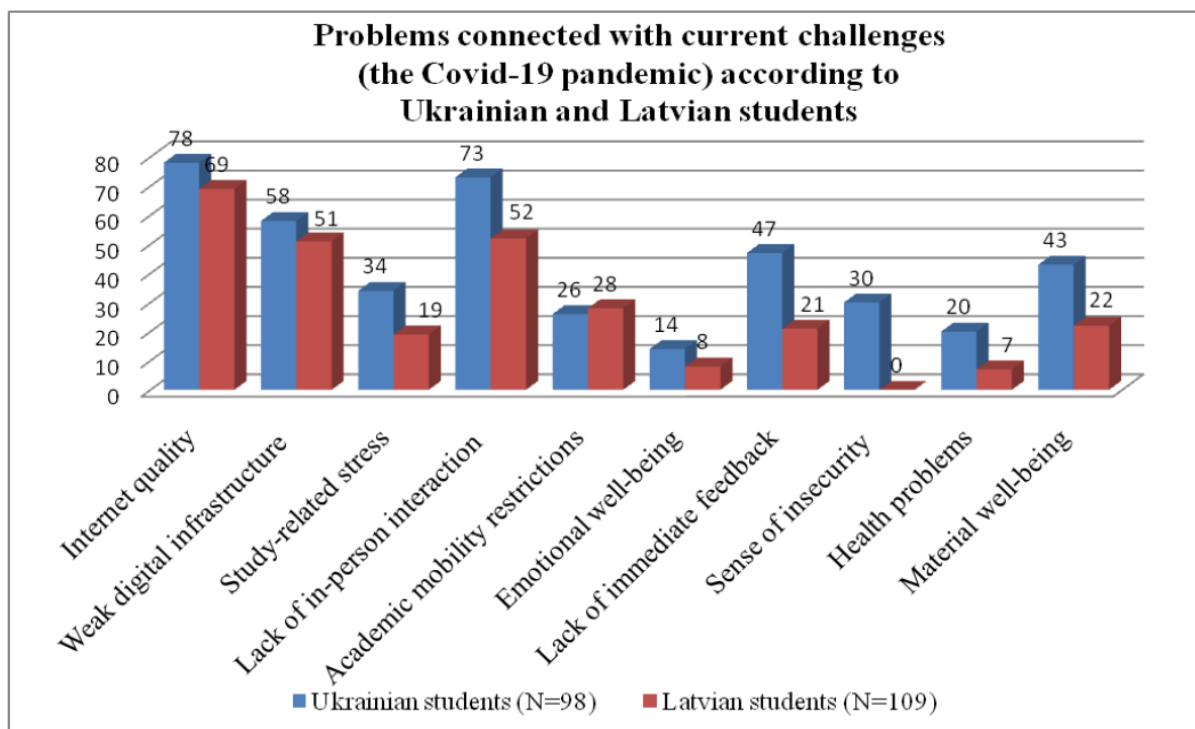


Figure 1 Comparison of Opinions on Problems Connected with Current Challenges (the Covid-19 Pandemic) among Ukrainian and Latvian Respondents

According to the obtained results, 79.59% of Ukrainian respondents and 63.30% of Latvian respondents mentioned that the one of the main problems they faced was the quality of the Internet. Poor Internet quality made it almost impossible for many Ukrainian and Latvian students to join online lectures, seminars, workshops and to use various telecommunication apps in real time. What is more, they found it difficult to submit their homework and various assignments on time. In terms of the Covid-19 pandemic, this problem significantly restricts the quality of Ukrainian and Latvian students' training, affects their academic performance and the exercise of their right to education. For 59.18% of Ukrainian respondents and 46.79% of Latvian respondents the weak digital infrastructure of higher education institutions and the lack of a single open-source learning platform became a serious problem for equipping them with necessary knowledge and skills. Replying to the questions, 14.29% of Ukrainian students and 7.34% of Latvian students claimed that their emotional well-being had been deteriorated. Most of them associated it with the increased workload and the necessity to do much work independently. 74.49% of Ukrainian students and 47.71% of Latvian students believed that the physical-distancing measures imposed violated their right to freedom of movement. And although they understood the severity of situation, they were very concerned that they could not communicate with their peers in person. The obtained results clearly show that

the introduction of physical-distancing measures including the closure of higher education institutions in both countries and the replacement of face-to-face instruction by online learning greatly contributed to the sense of insecurity among Ukrainian respondents (30.61%). This was not true in the Latvian students' responses (0.00%). The closure of borders also had adverse consequences on higher education since many students were unable to take part in academic mobility programs in person. This information was indicated in responses of 26.53% of Ukrainian respondents and 25.69% of Latvian ones. In this regard, taking into account the fact that university education is also designed to create favorable conditions for positive cooperation of students with their peers from different countries, we believe that providing students with online programs of academic mobility universities develop their intercultural competences and realize their right to gain quality higher education fully. 47.96% of Ukrainian respondents and 19.27% of Latvian respondents stated that the lack of immediate feedback on the work done had a negative impact on their academic performance. They explained that it was very difficult to correct something quickly or to understand what was wrong because you could not immediately consult you university lecturer in person (due to time limitations or Internet connection problems). Moreover, after you had to wait for lecturer's remarks for a definite period of time, it was not always clear what he/she wanted and you again had to wait in order to ask questions that concerned you most. 20.41% of Ukrainian respondents and 6.42% of Latvian respondents indicated that they had started suffering health problems (mostly impairment of vision, headaches, cervical osteochondrosis) because of spending too much time in front of computers. One more thing that caused a heavy impact on the right of students to university education was poor material situation. We found out that 43.88% of Ukrainian students and 20.18% of Latvian students had to share a computer with a younger brother or sister. Some respondents also indicated that the capacity of their computer was not enough for downloading programs they needed etc.

Apart from the problems Ukrainian and Latvian respondents faced as a result of the transition of face-to-face instruction to online learning, the survey made it possible to identify some positive changes that helped researchers provide some scientifically backgrounded ways of overcoming educational problems caused by the Covid-19 pandemic and of reducing their negative consequences. The research findings concerning the positive changes connected with current challenges (the Covid-19 pandemic) are given in Table 3.

Table 3 Positive Changes Connected with Current Challenges (the Covid-19 Pandemic) according to Ukrainian and Latvian Respondents

Groups of respondents (N=207)	Categories							
	Organizing guest lectures (N)	More time for family (N)	No positive changes (N)	Improvement of personal time management (N)	Accessibility of free online course (N)	Expanded scope of cooperation (N)	Improvement of media literacy (N)	Improvement of digital competence (N)
Ukrainian students (N=98)	57	47	7	19	60	38	25	68
Latvian students (N=109)	69	31	–	6	41	29	23	84

Source: own study
N=207

An illustration of comparison of Ukrainian and Latvian respondents’ opinions on positive changes connected with current challenges (the Covid-19 pandemic) can be seen in Figure 2.

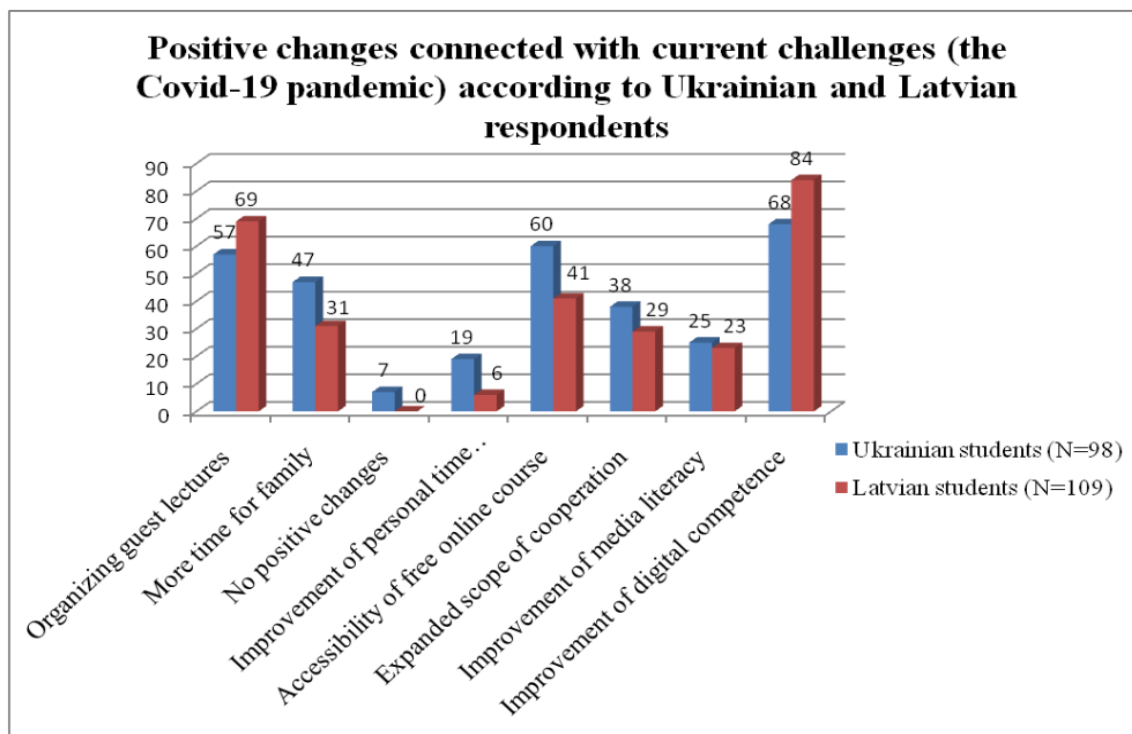


Figure 2 Comparison of Opinions on Positive Changes Connected with Current Challenges (the Covid-19 Pandemic) among Ukrainian and Latvian Respondents

Thus, 58.16% of Ukrainian respondents and 63.30% of Latvian respondents indicated that one of the positive changes that happened during coronavirus crisis was the increase in the number of various guest lectures. In respondents' opinion, organization of guest lectures enabled them to improve their intercultural competence, to become more tolerant, to take more than one perspective and not to be afraid to articulate their point of view. 47.96% of Ukrainian students and 28.44% of Latvian students mentioned that the imposition of restrictions on movements enabled them to spend more time with their family members and to understand the value of family communication. 7.14% of Ukrainian respondents did not feel any positive changes. For 19.39% of Ukrainian students and 5.56% of Latvian students the transition to online learning was the time for improving their personal time management since they had to learn how to organize their time effectively. 61.22% of Ukrainian respondents and 37.96% of Latvian respondents indicated that they could enlarge their theoretical knowledge and improve their practical skills doing free online courses. 38.76% of Ukrainian students and 26.61% of Latvian students believed that the use of various telecommunications apps expanded the scope of cooperation between peers, enabled them to network and discuss some issues with peers from different groups. 25.51% of Ukrainian students and 21.29% of Latvian students managed to improve their media literacy. They explained that the need to process huge amounts of information on the Internet taught them to apply critical thinking in order to recognize fake news and to select the most relevant information. One of the greatest achievements for 69.39% of Ukrainian students and 77.06% of Latvian students was the improvement of their digital competence. This enabled them to use advanced information technologies for communication and study.

Recommendations and Conclusions

The results of the research clearly show that despite numerous educational problems Ukrainian and Latvian students had to face as a result of introduction of physical distancing measures including the closure of higher education institutions, their negative consequences can be reduced. Analysis of the survey results and corresponding findings made it possible to provide some scientifically backgrounded ways of overcoming current challenges caused by the Covid-19 pandemic and reducing their negative consequences:

1. The use of present-day information technologies holds the promise of inviting guest lecturers from different countries regardless of their location and organizing guest lectures, online conferences, webinars and various e-discussions. Thus, the borders are becoming increasingly blurred and this way of online instruction allows knowledge to be disseminated more widely. Moreover, the use of different telecommunication apps offers new opportunities for giving binary

lectures and workshops by experts from two countries. It allows students to expand their professional expertise and to enlarge their knowledge of various cultures.

2. Improvement of online learning platforms and university's digital infrastructure enables university lecturers to use various online teaching and learning methods in order to equip students with a wide range of competences necessary for succeeding in life, to improve the communication between university lecturers and students, to engage students in informal learning activities. Moreover, the obtained results showed that the sudden transition of face-to-face instruction to online learning influenced students' desire to develop their digital skills and enhanced their motivation to improve the level of their digital competence.

3. For those who have ongoing Internet connection problems, the opportunity to re-do a poor assignment, to give an extension per term can positively influence the academic performance, improve the motivation to study and reduce the level of stress and anxiety. In this case questions remain, however, regarding the students' academic dishonesty and how to fight it.

4. Taking into account the fact that university lecturers along with students found themselves in a completely new situation and did not have the advanced digital skills or detailed knowledge of how to teach students in online mode only, universities should promote online training courses for university lecturers to develop their digital competence, to combine various forms, methods and means of online instruction for those who do not have proper Internet access, to instruct them how to use different online teaching and learning methods and free telecommunications apps, to film and disseminate video-lessons among those students who have no opportunity to join online classes in real time. This will help university teachers feel more confident in providing students with theoretical knowledge and practical skills, create favorable conditions for teacher-teacher interaction and strengthen the bond of trust between colleagues.

The study confirms that university education based on such cultural values as peace, tolerance and openness to others, cultural diversity, social equality, progress and innovation, will contribute greatly in training a generation of students imbued with humanistic values. What is more, the present day university education can play an invaluable role in providing the next generations with insight into European and world culture and multiculturalism.

To sum up, although the problems which arose during the coronavirus pandemic have affected the exercise of Ukrainian and Latvian students' right to quality education, we state that the systems of higher education in both countries responded promptly to all the changes connected with the transition of face-to-face instruction to online learning, tried to prevent the decrease of educational

level and to provide equal opportunities by making full use of their educational resources.

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PROJECT-BASED LEARNING DURING ONLINE EDUCATION: CASE OF THE MASTER PROGRAM ON BUSINESS MANAGEMENT IN THE DIGITAL ECONOMY

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***Abstract.** In the article, we will share the experience of implementing PBL at the Master program on Business Management in the Digital Economy held in Saint Petersburg University. Specific conditions for the PBL organization are highlighted. First, digital transformation process is quite difficult to realize in companies, as no clear methodology for its implementation exist yet. Second, pandemic left the only opportunity for online communication, and all usual administration and education processes had to be changed. The experience is structured and presented with recommendations for similar projects.*

***Keywords:** business management, digital transformation, distant learning, economic and management education, master programs, project-based learning, university-industry cooperation.*

Introduction

Due to global threats and digital technologies, the internal and external environments permanently change. Very often theory and methodology are not able to catch the changes, especially in the economic and social studies. That is why the practical component has to be included into the learning processes at the master's level. The universities use different forms of convergence between studying and real life, among them are workshops, internship, master classes, simulation games, and project-based learning (PBL).

Project-based learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge. In this context, Buck Institute for education distinguishes the following PBL objectives (Buck Institute for Education PBLWORKS, n.d.):

- Integration of knowledge and skills from various areas.
- Autonomous learning and solving unstructured problems.
- Teamwork.
- Self-evaluation and self-criticism.

In management and entrepreneurship, PBL has got an important role, as managerial and entrepreneurial skills are better trained on the base of real projects. Analyses of the latest articles have shown that the following PBL issues are studied: PBL curriculum, students' motivation, wicked problems solving (Kłeczek, Hajdas, Wrona, 2020), project teachers' self-efficacy (Choi, Lee, Kim, 2019), PBL outcomes and effectiveness measurement (Guo et al., 2020), and other PBL benefits and problems for education process. PBL issues in the context of collaboration between universities and business are almost not concerned.

Studies of cooperation between universities and industry present the independent research area. Most authors consider cooperation between business and the universities in the context of open innovation facilitation, joint research and equipment usage, common funding, and mutual contracts, students' internships etc. For instance, the paper (Ankrah, AL-Tabbaa, 2015) distinguishes some reasons why small and medium companies are interested in cooperation with universities. Mostly the interest is led by external factors such as government stimulation, access to universities facilities and students, economy of resources. Attracting students' teams supervised by the University teachers for business problem solving is not of great attention. Meanwhile, technology growth and integration during the last decade caused significant shifts in the society and economy development. Changes in consumer expectations and behavior, new business processes and business models, new corporate culture and new competencies led to emerging new companies and induced incumbents to transform.

Existing companies need expertise in digital transformation, and academia collective competencies (students' fresh views, energy and mobility coordinated and nourished with professors' theoretical background and practical experience) have a huge potential for business transformation. In this context, realizing digital transformation projects with the help of academia converge to project-based learning objectives, and cooperation has benefits for both.

In turn, pandemic of Covid-19 caused the need in distant communications of different types. It means that all stages of PBL (finding a business partner, discussing the project details, communication between students and a company, controlling and assessing students' work) must be conducted online. (Secundo et al, 2021) paid attention that a small number of studies analyze digital technologies in entrepreneurship education.

Thus, the idea of the article is to show how project-based learning was organized in the sphere of digital transformation under conditions of distant communication.

Project-based Learning in Saint Petersburg University

In Saint Petersburg University, we have several programs using project-based learning. Among them are short program Management of Innovation development and Entrepreneurship supported by the President of Russia (duration 7 months) and Master program on Business management in the Digital Economy (27 months).

The Presidential program curriculum consists of traditional courses on economics, management and innovation activity as well as large block of interactive classes (master classes, soft skills trainings, real and simulation business games, business seminars etc). One of the key parts of the program is development and defense of a business project. When applying for the program, potential students have to present a viable innovation project (oriented to internal or external clients) to be transferred into a solid business plan at the end of the program. During their study, students are involved in different educational areas (marketing, strategy, finance) and must prepare relevant parts of their projects. For instance, after studying marketing block, they develop and defend marketing analysis and marketing strategy of a company. Finally, they present and defend a whole project in front of a special commission including CEO, CFO, CDTO and other top managers from different industries.

Here are examples of some project titles defended during the last years:

- Establishing an innovation company for recycling urban ores
- Creating of small energy generation network for industrial companies
- Implementing unified electronic user pass for sport clubs in Saint Petersburg
- Digital transformation of the open wire lines service and management

So, the program is not just project-based but project-centered. Therefore, there is no difficulties with finding a business partner with a project relevant enough to the program learning aims.

Another program, Business management in the Digital Economy, is more fundamental and at the same time rather new – it started in 2018 and aimed at preparing professionals able to realize business transformation in the digital economy. According to the UNCTAD Report (Building Digital Competencies to Benefit from Frontier Technologies, UNCTAD, 2019), the top managers in the digital economy need the new competences: knowledge of key technologies and digital business models, abilities to establish a digital culture, develop digital transformation strategy, understanding business processes, setting tasks for employees, creating an ecosystem. Besides them, they have to acquire soft skills: business intelligence in decision making, continuous collaboration and interaction with ecosystem participants, ability to work under stress and assist for colleagues.

Besides economics and management fundamentals, students solve cases, participate in master classes and work in small analytical groups. The program curriculum assumes 4 project seminars each semester, where students work on practical training like problem-based and project-based activities. Therefore, the core idea of the program is to develop the digital transformation strategy on the base of project-based learning, and finding relevant projects is of extremely importance. Moreover, it requires highly motivated top managers which are ready to share detailed information for analysis and open for communication.

The authors (Parrado-Martínez & Sánchez-Andújar, 2020) notice, that in higher education, project-based learning is usually associated with sciences such as engineering, medicine or psychology, while in the field of economics and finance it is presented purely, mostly for undergraduate students, and has the general idea to improve the following competences: planning and organizing skills; teamwork and cooperation competence, information management ability, oral communicative competence and creativity and innovation competences.

In our program, the project-based learning has to meet the following objectives:

- Show the digital readiness of companies in Russia
- Connect business strategy with the digital strategy
- Demonstrate that digital is a tool, not the aim
- Use business process description as a base for digital transformation
- Make focus on the client-oriented approach
- Apply digital technologies for communication

Digital Transformation Impact on Management

Having a great experience in business consulting and analytics, we have to note that the most crucial challenges for company management are caused by the processes of digitalization and digital transformation. Very often, terms digitization, digitalization and digital transformation are used as identical while they are significantly different. Thus, digitization is the process of converting analog/physical things (paper documents, microfilm images, photographs, sounds, signals, health records, location data, identity cards, etc.) into a digital format. In its turn, the principal result of digitalization is an integration of digital and physical, connectivity of company functions, and data driven decision making (I-Scoop, n.d.).

As for digital transformation, it is not just about disruption or technology. It concerns value, people, optimization and the capability to rapidly adapt to the changing environment through an intelligent use of technologies and information. Digital allows to better understand business processes and clients demands and

elaborate effective strategic initiatives (Westerman, 2017). Digital transformation makes impact on three organizational areas: external (customer experience and lifelong client value), internal (business processes, decision making and organizational structure, an organization as a whole (market segments and business functions) (Ismail, Khater, Zaki, 2018).

Being complex, digital transformation processes in companies cause the problems with projects choosing and structuring:

- Fast changes in economic, technological and legal environment require specific approach to company strategizing, management and communication
- Lack of common understanding of digital transformation processes among business community causes mistakes in strategic management
- Insufficient regular management in the most SME leads to very low level of their digital readiness
- Difficulties with finding University instructors with the relevant experience in digital transformation

Project-based Learning during Pandemic

In 2020, pandemic has led to extreme extension of distant teaching and learning in Russia and over the world. Results of the survey conducted by the International Association of Universities demonstrated that 85% of the HEI representatives and 85% of international students answered that presential classes had been replaced by online methodologies, totally or partially; 12% of the responding HEIs suspending their classes completely, were developing online methodologies and self-study means of learning (IAU, 2020).

The same situation has been observed in Russia: in 2 weeks after lockdown start, over 80% of universities (450 universities) in Russia went to distant or hybrid form of education. Totally, during several weeks, 95% students from over the Globe had to start distant or hybrid learning (Ministry of Science and Higher Education of RF, 2020).

Pandemic caused some difficulties in PBL organization. Among them are:

- Finding the relevant company (business partner)
- Conducting interviews with top and middle management
- Structuring the business problems and setting the learning tasks
- Organization of distant communication between students and company employees
- Supervising and controlling the students' activities during the project
- Preparing and presenting the final report.

We had to use distant communication modes such as Zoom, social networks (Facebook, VKontakte, messengers (WhatsApp, Telegram), and email.

Finding Business Partners for PBL

Usually, different methods are used for finding a partner. They may be formal or non-formal, using university employees' connections, or official university contacts. Different forms and structures for university and business cooperation are described in (Ankrah, AL-Tabbaa, 2015). Internet browsing also gives us information how universities communicate with business: for example, in Rowan University website (Rowan University, n.d.) one can find a column where potential partners can choose the project area: business and marketing plans, social media strategy, business strategies etc. Information about the company and the project details is submitted electronically via interactive portal. Further project interaction with students, faculty and mentors is also organized distantly with a cloud-based tool EduSourced.com

Our University has a highly centralized structure, and the Economic Faculty has a special department organizing business internships and work placement for students, they have a plenty of agreements with companies. However, usually companies need students for short period tasks, or for conducting routine operations, while we required projects. Moreover, we required digital transformation projects.

The problem is that we have neither special department nor website for projects search. We decided to use social networks as a tool of attracting partners. The choice was made between two popular social networks in Russia: Vkontakte and Facebook. The first is larger in scale, while the second one consolidates older users with higher income (see Table 1) and is positioned as business network. As we were searching for a top positioned manager of a solid company, Facebook was chosen as a communication platform. We joined several groups in Facebook consolidating starters and professionals in digital transformation and made an announcement about our project. Soon after we got two offers from companies and accepted one of them.

Table 1 Users' Characteristics of Social Networks

Social network	Number of users in Russia (Globe)	Monthly number of authors	Monthly number of messages	Age >35	Users income
Vkontakte	73 mln (97 mln)	28,7 mln	496,2 mln	33,4%	Average and above — 71,4%
Facebook	39,7 mln (2,7 bln)	1,6 mln	56,2 mln	66,7%	Average and above — 77,7%

Sources: (Brand Analytics, n.d.)

Project Participants Description

The client: middle machine-building company, 450 employees, involved in digital transformation. They expected students to have a fresh view and to offer effective digital tools for the company management and operations. It means that the top management initially was highly motivated in cooperation with the University and our team.

16 second year Master students. Distribution of their current work sphere: retail – 3, food production – 3, Telecom and ICT – 5, Oil and Gas – 3, construction – 2. Their job in the company: ICT – 4, business analytics – 4, marketing and sales – 5, other – 3.

By the end of the project, they have finished the following courses:

- Strategic Marketing Management
- Management Accounting and Analysis
- Management in the Digital Economy
- Business Economics in the Digital Age
- Investments Evaluation in the Digital Economy
- Business Processes Modeling and Management
- Operations Management and Supply Chain Management
- Leadership and Management
- Strategy of Digital Transformation
- Digital Marketing
- Business Information Analysis
- Data Analysis
- Information Security
- Two project seminars on studying external and internal environment for digital transformation.

Thus, we can conclude that the students have been fundamentally prepared for understanding business processes, analysis and management techniques, economic and financial issues in the digital economy. Moreover, almost all of them were fully employed in large and small companies, so they have their own experience for solving practical tasks in different fields.

Project supervisors. The project was supervised by two persons: associate professor in Business Finance and Management with experience in project management and consulting and financial officer from the large public company with experience in teaching. Both make a common research on digital transformation in companies. They were also motivated and inspired, as they found a business partner and started a project for the Master Program which was also initiated by them. That is why all burden of the project organization has fallen on the supervisors.

Project Realization and Outcomes

Usually, educational project realization consists of the following steps: team formation; project briefing; problem restatement and identification; project consultation; demonstration; project report submission; peer assessment; self-reflection; IPBL exit survey (Syafiq et al, 2020)

We structured the project work in the same manner (see Table 2). However, we have to note that the preparatory stage was rather long, due to the reasons highlighted above. First, the company needed recommendations for implementing digital technologies, and the project supervisors had to understand the actual state of operations and management in the company as well as to evaluate its digital maturity. Therefore, we analyzed internal documents, initiated a survey and conducted interviews with managers of all functional departments which were combined into 8 working groups. It made possible to understand company's strengths and weaknesses, threats and opportunities and prepare a plan for students' work.

Table 2 Project Work Stages: Description and Duration

	Stage	Description	Participants	Duration
1	Preparatory stage	Interview with the company top and middle managers	seminar supervisors	3 weeks
		Information analysis and problem formulation		
		Planning the curriculum		
2	Introduction	Virtual tour at the company	students seminar supervisors other professors	1 week
		General meeting with the company tops		
		Setting business tasks by the company functional managers		
3	Organization	Forming students' teams	seminar supervisors	1 week
		Integrating them into the company functional working groups		
4	Realization	Getting tasks from seminar supervisors	students seminar supervisors	4 seminars during 8 weeks, one seminar in 2 weeks
		Accumulation and analysis of information in groups, tasks fulfillment		
		Preparing presentations		
		Discussion at seminars		
5	Reporting	Integrating and summarizing results	students seminar supervisors	2 weeks
		Preparing the report		
		Presenting results for the company tops		

Authors of the article (Kłeczek, Hajdas, Wrona, 2020) have shown that students need the regular supervision during the project, it allows them to better understand aims, analyze relevant information and offer viable solutions. Also, they suggested to divide a complex project into smaller tasks, for better students managing volume and diversity of information. In our group, the project was realized in iterations. Students had to prepare and present the results of their work at each seminar (4 times during the project period). After the class discussion, they were given another assignment for the next 2 weeks. It allowed to apply the outcomes got by other teams for solving problems at another stage. Also, students' assessment was clear, as it was possible to control students' contribution at every stage.

We worked on the project in different ways: analyzing the external environment according to 5 forces by Porter/ 6 forces by Grant, describing internal business processes, determining bottlenecks and potentials, analyzing the best managerial and technological practices, offering technological and organizational solutions.

Usually, to evaluate the work at the end of the course, each group should do an oral presentation of the results with the real documents that they collected. (Parrado-Martínez & Sánchez-Andújar, 2020). As we described above, students collected documents, conducted interviews and fulfilled special tasks during the period of 8 weeks, and we discussed their work at each seminar.

Finally, students prepared the complex report with recommendations and presented it at the online meeting with the company.

The final report structure was as follows:

1. SWOT-analysis, competitive strategy elaboration and decomposition
2. Marketing: analytics, promotion, organization and tools
3. Production: organization, planning and digitalization
4. Legal affairs: document flows and information system implementation
5. Quality measurement and control organization
6. Recommendations for human resources search and management
7. Procedures for financial analysis, planning and budgeting
8. Suggestions for organizational structure improvement
9. Recommended information systems and communication technologies.

Also, we elaborated an instructors' guide for organization of PBL at the Economic Faculty.

Conclusions and Recommendations

When realizing digital transformation project in the distant format, it is necessary to pay attention to the sticking points:

- 1) Insufficient general and strategic management, low company's readiness for digital transformation. The company asked us to offer

transformation plan and digital tools, however, we had to recommend significant improvements in management and business processes as a necessary stage before digital transformation.

- 2) Under conditions of digital transformation, a learning project becomes a consulting project. It means that students learn from the company as much as the company learns from them. Therefore, attracting professors for regular consulting of students during the project is needed. Students need assistance of professors competent in different fields (marketing, finance, business process modelling, quality management etc). To solve the problem, some additional professors besides seminar supervisors should be assigned for expertise within the project.
- 3) When regular communicating with the company employees, students suffered from the delay with the response to their inquiries for necessary information. It is quite obvious, because people in the company are usually busy with their current work. However, to solve the problem, it is sensible to accurately fix the time for response from the company.
- 4) The curriculum and classes design have to be changed while distant learning. Online meetings with students should be frequent and flexible, sometimes on-demand, with opportunity to clarify all urgent questions. Supervisors should support communication between students and the company
- 5) During regular studying period, time of one semester (4 months) is rather limited for deep analysis and preparing detailed reports. To solve it, students should have time free of other courses and tasks, or such a complex project should be divided into sub-projects.

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НАУЧНО-ОБРАЗОВАТЕЛЬНЫЙ КЛАСТЕР КАК МЕХАНИЗМ ИННОВАЦИОННОГО РАЗВИТИЯ СТРАНЫ

Scientific –Educational Cluster - Mechanism of Innovative Development of the Country

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Abstract. *The role of the innovative community of education, science, production in growth and development is scientifically substantiated in the article. The regularity of the formation of innovation, innovation centers, innovation environment in the interrelation of the essence and content of the term cluster is highlighted. The main decision of the problems connected with increase of integration of educational efficiency and industrial sphere is possible under condition of formation educational-economical clusters, where core of this establishment are higher educational institutions, as universities create human potential of innovative development, and also involved in fundamental and applied research investigations.*

Keywords: *Innovational development, educational-economical cluster, human potential.*

Введение Introduction

На нынешнем этапе кризиса и перестройки глобализации научный дискурс, который касается всех социально-экономических дисциплин, кажется, находится в фазе существенного изменения положения (Asheim, Grillitsch, & Trippel, 2016; Laudicina, & Peterson, 2016). Фокус, кажется, смещается с точки зрения традиционной экономической географии и регионального развития для изучения местной динамики, так как последний подход может синтезировать отдельные пространственные уровни в глобальной перспективе (Vlados, Deniozos, Chatzinikolaou, & Digkas, 2019).

Эффективность национальной экономики определяется в первую очередь степенью развития инновационных процессов, для которых в равной мере важными компонентами являются как получение новых знаний, так и передача их в производственную и социальную сферу экономики. В настоящее время наука, образование и производство развиваются по направлениям, которые в большинстве случаев не

связанным друг с другом. В этой связи, требуется создание и разработка механизмов управления инновационным развитием, способных обеспечить более высокую степень взаимодействия образования, науки и производства. Развивать механизмы такого взаимодействия целесообразно на основе формирования экономических кластеров.

В современном мире кризиса и реструктуризации глобализации производство и передача знаний имеют решающее значение для всех социально-экономических организации. В основополагающей работе Gibbons et al. (Gibbons, 2000; Gibbons, Limoges, Nowotny, Schwartzman, Scott, & Trow, 1994), появился новый способ производства знаний (режим 2), который является междисциплинарным и отличается от традиционного режима 1 производства знаний. Режим 1 достиг своих пределов толкования, включая социальные ценности, концепции и методы, правила и стандарты, которые были установлены Ньютоновской (или Позитивистская) моделью и навязанные ей критерии обоснованности и научной практики. На втором уровне это относится к необходимости по-разному воспринимать концепцию кризиса, двигаясь в направлении структурного и эволюционной точки зрения вместо «конъюнктурной» (Vlados, Deniozos, Chatzinikolaou, & Demertzis, 2018a).

В этом контексте эволюционные связи университетов, отраслей, правительств, приближенные к теории кластеров, имеют решающее значение для производства новых знаний. Поэтому в современной научной дискуссии об инновациях сформировавшаяся система кластеров начинает набирать значительную популярность.

Термин «кластер» заимствован из английского языка (cluster, буквально – «расти вместе»). Согласно классическому определению, в основе которого лежит подход М. Портера, кластер представляет собой группу географически соседствующих взаимосвязанных компаний и связанных с ними организаций, действующих в определенных сферах, характеризующихся общностью деятельности и взаимодополняющих друг друга (Porter, 1993).

Кластер – это совокупность сосредоточенных в одной географической области организаций одной или нескольких отраслей, добровольно взаимодействующих на долговременной основе, получающих за счет этого взаимодействия синергетический эффект, конкурирующих на основе знаний и оказывающих воздействие на инновационное развитие региона (Maskell, Lawrenson, 2003; Porter, 1988).

Как показывают результаты анализа мирового опыта, кластеризация имеет явные преимущества в процессе активизации инновационного развития. Эти преимущества достигаются за счет локализации и интеграции

субъектов в кластере, использования потенциала кластерной инфраструктуры, а также вертикальных и горизонтальных связей в передаче знаний, опыты, проведения совместных научных исследований и т.д.

Как было отмечено выше, уровень развития подсистемы генерации знаний напрямую влияет на результаты инновационного развития как региона, так и страны в целом. Серьезную проблему представляет сложившаяся в настоящее время в Республике Узбекистан, ситуация неэффективного использования ресурсов в сфере образования (переизбыток выпускников по одним специальностям и недостаток по другим) и науки (большая часть знаний остается невостребованной рынком, научные исследования и разработки идут не по заказам бизнеса, низкий уровень коммерциализации нового знания). Имеет место разобщенность образования, науки и бизнеса. Учитывая современную тенденцию в Республике Узбекистан по формированию региональных кластеров, представляется, что формирование региональных образовательных кластеров является возможным вариантом решения данной проблемы (Goldstein, 2008).

Участниками кластера могут выступать компании-производители, компании поставщики, образовательные учреждения, НИИ, финансовые институты, государственные органы, а также организации по сотрудничеству (Usmonov, 2018; Laryugin, 2005). Получая возможность быстро и постоянно обмениваться информацией, совместно использовать уникальное оборудование, знания и технологии, участники кластера ускоряют внедрение инноваций и модернизацию. Создание кластеров, как промышленных, так и образовательных находится на начальной стадии. Недостаточно четко проработаны механизмы формирования образовательных кластеров (определение состава кластеров, концепция их развития, инструменты управления и оценки эффективности), что и обуславливает актуальность темы исследования (Rakhimov, Dusmuhamedova, 2015; Usmonov, Rakhimov, 2015; Usmonov, Rakhimov, Dusmuhamedova, 2016).

Методология и предпосылки для кластеров в системе высшего образования

Methodology and Prerequisite for Clusters on Higher Education System

В настоящее время существует множество проблем в сфере социально-экономического характера, препятствующих инновационному развитию Республики Узбекистана.

Например, комплекс научных исследований и коммерциализация результатов НИР, который является решающим механизмом развития инновационной экономики:

- низкий уровень финансирования НИОКР как со стороны бюджета, так и со стороны крупного бизнеса (отношение затрат на НИОКР к доходам компаний в 2015 г. составило 0,05% - в 30 раза ниже, чем в западных фирмах) свидетельствует об отсутствии экономических стимулов к повышению инновационной активности (Usmonov, Rakhimov, Dismukhamedova, 2017);
- недостаточное развитие организационно-экономических механизмов взаимодействия участников инновационной цепочки приводит к усилению разрыва между числом созданных и фактически внедренных изобретений, часть которых интенсивно вывозятся за границу;
- самым сильным ограничением инновационного развития являются неэффективные механизмы интеграции науки, образования и производства;
- наличие эффективных институтов посредничества между производителями и потребителями НИОКР, создание благоприятного экономического климата для осуществления инновационных процессов обуславливают инновационное развитие.

В условиях перехода страны на инновационный путь особое значение приобретают создание и развитие инновационных центров, способных не только генерировать технические идеи, но и доводить их до коммерциализации на внутреннем и внешнем рынках. Развитие национальной экономики на инновационный путь развития связан с масштабными вложениями инвестиций в человеческий потенциал. Требуется максимальный труд в области образования, обеспечивающих поступательное развитие общества, а это, в первую очередь, сфера образования и науки.

Создание новых высших образовательных учреждений в регионах, открытие современных направлений образования и специальностей по подготовке кадров, а также заочных и вечерних отделений, увеличение квот приема в высшие образовательные учреждения являются важными реформами в этом направлении.

Вместе с тем сохраняется ряд проблем, препятствующих повышению качества образования в высших образовательных учреждениях, обеспечению активного участия данных учреждений в осуществляемых в республике широкомасштабных реформах, преобразованиях в социальной и экономической сферах, в частности: высшие образовательные учреждения не превращены в центры для обмена мнениями об инновационных и технологических идеях, не созданы необходимые условия для проявления инициативности профессорско-преподавательского состава, молодых

ученых и студентов по системному изучению, анализу и внесению предложений по решению имеющихся проблем и недостатков в соответствующих сферах.

На примере в период перехода страны в рыночные отношения послевузовское образование направлено на обеспечение потребностей общества в научных и научно-педагогических кадрах высшей квалификации, удовлетворяющих творческое воспитание и профессиональные интересы личности, деятельность организуется как обучение в докторантуре, а также самостоятельное соискательство в высших учебных заведениях и научно исследовательских учреждениях (институты старших научных сотрудников, самостоятельных соискателей).

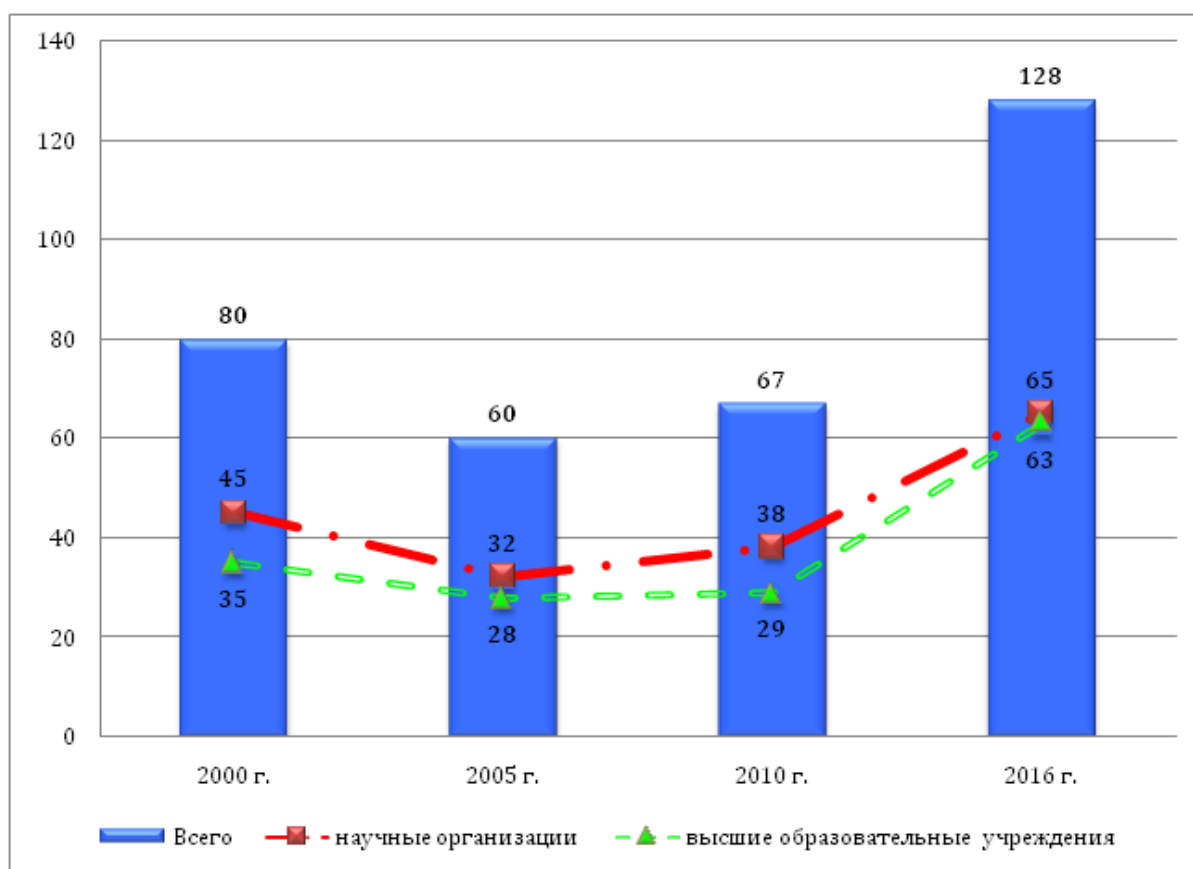


Рисунок 1. Число учреждений, осуществлявших деятельность по подготовке докторантов (2000-2016 годы)

Figure 1 The Number of Institutions that Carried out Activities for the Preparation of Doctoral Students (2000-2016)

К 2019 году число учреждений, осуществляющих деятельность по подготовке докторантов составило 228 единиц и увеличилось в 2,6 раза по сравнению с 2000 годом. В 2019 году к числу учреждений, осуществляющих

деятельность по подготовке докторантов, входят 95 высших учебных заведения.

Процесс инновационной интеграции захватывает и преобразует все уровни особенно экономического образования, систему и дополнительную инфраструктуру вуза и производства.

В настоящее время экономическая политика направлена:

- на создание бизнес идей и содействие подготовке соответствующих специалистов для разработки новых бизнес проектов;
- на дополнительные создание рабочих мест;
- на осуществление посреднической деятельности организации взаимодействия наука и бизнес.

За последние годы в стране осуществлена целенаправленная масштабная работа по созданию свободных экономических и малых промышленных зон, включая формирование прочной нормативно-правовой базы, регламентирующей их деятельность, широкой системы налоговых, таможенных льгот и преференций, способствующих привлечению в развитие свободных экономических и малых промышленных зон иностранных и отечественных инвестиций.

В целях создания наиболее благоприятной деловой среды для привлечения иностранных и отечественных инвестиций в создание современных высокотехнологичных производств по глубокой переработке минерально-сырьевых и сельскохозяйственных ресурсов, обеспечивающих выпуск конкурентоспособной качественной продукции с высокой добавленной стоимостью, востребованной на внешних рынках, а также комплексного и эффективного использования производственного и ресурсного потенциала регионов республики, организации на этой основе новых рабочих мест и повышения доходов населения.

В целях коренного совершенствования качества образования в высших образовательных учреждениях, обеспечения их активного участия в осуществляемых в стране широкомасштабных реформах, а также последовательной реализации задач, определенных в Стратегии действий по пяти приоритетным направлениям развития Республики Узбекистан в 2017- 2021 годах.

Своем ведении высшие образовательные учреждения, следующие дополнительные задачи: обеспечение активного участия высших образовательных учреждений в широком обсуждении проектов нормативно- правовых актов и программ, направленных на ускоренное развитие регионов, отраслей экономики.

По данным опроса работодателей, проведенного Всемирным Банком в 2014 г., более 55% предприятий не сотрудничают с учреждениями

образования (Usmonov, Rakhimov, 2015). Следует выделить проблемы, связанные с повышением эффективности интеграции образовательной и производственной сферы:

1. несогласованность рынка труда и рынка образовательных услуг;
2. дефицит квалифицированных рабочих, особенно в высокотехнологичных и инновационных областях;
3. неоправданно растянутые сроки подготовки рабочих;
4. социальная незащищенность выпускников образовательных учреждений, низкий престиж рабочих профессий;
5. неравенство доступа к высшему образованию;
6. несоответствие учебно-материальной базы образовательных учреждений современным технологиям производства;
7. не разработанность нормативного обеспечения взаимодействий между образовательными учреждениями и потребителями образовательных услуг.

Кардинальное решение обозначенных проблем возможно при условии формирования образовательных кластеров, в центре которых находятся высшие учебные заведения, так как именно вузы создают кадровый потенциал инновационного развития, а также проводят фундаментальные и прикладные исследования.

Обеспечение развития кооперативных связей вузов и академической науки становится важнейшим условием сокращения сроков поступления научных знаний в учебный процесс с передового рубежа науки, особенно в области исследований.

Формирование научно-образовательных консорциумов, технопарков, научно-образовательных кластеров на базе университетов Узбекистана и других вузов должна стать программной целью развития научно-производственной инфраструктуры образования, интегрированной с высокоинтеллектуальными формами образовательных услуг.

Первый технопарк в Узбекистане был создан в Ташкенте в 2017 году. Начало реализации государственной программы по созданию в Узбекистане технопарков в сфере технологий было положено Президентом Республики Узбекистан в Указе от 5 июня 2017 года № УП-5068 «О создании инновационного технопарка в Яшнабадском районе города Ташкента».

Научно-образовательный кластер, как объект инновационной инфраструктуры, представляет собой механизм территориальной (республиканской, межгосударственной) интеграции науки, образования и производства для развития инноваций путем концентрации на единой территории специалистов адресного профиля деятельности (научных работников, профессорско-преподавательский состав вузов и инженерно-технических работников предприятий). При этом большое внимание

уделяется взаимодействию научно-образовательного кластера с промышленными предприятиями, функционирующими в данном регионе.

К примеру, перед текстильной и легкой промышленностью страны ставятся конкретные задачи, а именно, с 2021 года перейти к стопроцентной переработке хлопка-сырца для производства готовой продукции с высокой добавленной стоимостью. На основе применения достижений современной науки и техники, информационно-коммуникационных технологий необходимо разрабатывать принципиально новые способы получения конкурентоспособных текстильных материалов и изделий из них, пользующихся повышенным спросом на внутреннем и внешнем рынках и отвечающих требованиям мировых стандартов.

Создания научно-образовательных кластеров во взаимодействии с промышленностью является обеспечение повышения качества подготовки высококвалифицированных кадров, разработка инновационной продукции и технологий с последующим внедрением в производство. При этом, особое внимание будет уделено целевой подготовке научных и научно-педагогических кадров для отраслей экономики. Важным составляющим механизмом интеграции науки, образования и производства будет внедрение современных методов проведения прикладных научных исследований для предприятий отрасли. Немаловажной составляющей интеграции будет служить привлечение международных и отечественных научно-исследовательских и учебно-производственных грантов, формирование на базе экономических кластеров филиалов технопарка в регионах республики (рис.2).

Цели и функции научно-образовательного кластера является образовательные и научные программы в виде курсов повышения квалификации и производственных и научных стажировок, направленных на решение потребностей инженерно-технических работников, профессорско-преподавательского состава и магистрантов вузов техническая поддержка крупных и мелких производственных предприятий, совместное использование оборудования и т.д.

Под региональным образовательным кластером понимается сеть учебных заведений (ДОУ, школы, колледжи, ВУЗы, институты повышения квалификации), а также научно-исследовательских институтов и конструкторских бюро, консалтинговых и венчурных фирм. Кроме того, в его состав входят координирующие органы и органы власти, деятельность которых взаимосвязана с развитием региональной инновационной системы. Центральное место в данной сетевой структуре должно принадлежать высшему образовательному учреждению (университету), он является системообразующим элементом этой сети (Usmonov, Rakhimov, Dusmukhamedova, 2017).



Рисунок 2. Концептуальная модель научно-образовательного кластера: пример интеграции науки, образования и производства
Figure 2 Conceptual Model of a Scientific - Educational Cluster: an Example of the Integration of Science, Education and Production

Таким образом, можно сказать, что региональный образовательный кластер как форма территориально-отраслевого партнерства включает в себя 4 комплекса: учебно-инновационный, научно-инновационный, производственный, координирующий и инфраструктурный (см. Рис.3).

Учебно-инновационный комплекс обеспечивает подготовку высокопрофессиональных кадров, является производителем кадрового потенциала для кластера. Также в рамках учебно-инновационного комплекса осуществляется интеграция и согласование учебных стандартов образовательных учреждений более низкого уровня (школы, колледжи) с образовательными учреждениями более высокого уровня (университеты).

Научно-инновационный комплекс регионального образовательного кластера является для учебного и промышленного комплекса основным поставщиком нового знания, результатов фундаментальных, поисковых, прикладных научных исследований и разработок, обеспечивает поддержку и повышение научного уровня всех субъектов образовательного процесса, которые участвуют в научных исследованиях.



Рисунок 3. Региональный образовательный кластер
Figure 3 Regional Educational Cluster

Представители производственного комплекса ориентируют научный и образовательный комплекс на проведение научных исследований и разработок, предоставление образовательных услуг, которые отвечают современным запросам рынка.

В этой связи следует ввести определение образовательного кластера как совокупности образовательных учреждений всех уровней образования, предприятий отрасли и соответствующих органов власти, деятельность которых взаимосвязана с производством с целью успешного инновационного развития.

Поставщики и конечные потребители знаний, имеют возможность более просто налаживать контакты, быстро и постоянно обмениваться информацией о потребностях экономики региона, распространять информацию, навыки, технологии, маркетинг, осознавать требования потребителей, непрерывно обмениваться идеями и инновациями, что повышает скорость создания и внедрения инноваций, в результате чего участники кластера получают дополнительные конкурентные преимущества.

Ключевым фактором эффективности образовательного кластера является глубокая интеграция образовательных учреждений,

исследовательских институтов и бизнеса. Международный опыт свидетельствует о том, что НИОКР в коммерческих компаниях хороши только в рамках краткосрочной перспективы, а университеты имеют преимущество для решения долгосрочных задач, являются постоянным источником нового знания и инноваций. Сотрудничество отраслевых предприятий с университетами является важнейшим фактором кадровой и научно-технической политики этих предприятий. Принципиальной особенностью регионального образовательного кластера является максимальное сближение образовательных и производственных целей, эффективное использование кадрового и научно-технического потенциала региона.

В Узбекистане еще не начали формировать кластеры в системе образования. Хотя в республике в 2017 году был создан научно-инновационный центр в области информационных технологий, что является прообразом образовательно-промышленного кластера. Подписаны соглашения с региональными вузами и экономическими кластерами в сфере АПК и транспортном комплексе. Так же планируется подписать и создать научно-образовательные кластеры в 14 регионах республики разных отраслях экономики - нефтехимии и нефтепереработке, энергетике, легкой промышленности и т.д. Научно-образовательные кластеры РУ должны состоят из головного или нескольких вузов, учреждений среднего и начального профессионального образования, и базовых предприятий отрасли. В регионах эти научно-образовательные кластеры целесообразно формировать вокруг региональных университетов. В рамках реализации стратегии развития этих инициатив нужно разработать или усовершенствовать образовательные программы по ряду специальностей в области подготовки нужных кадров.

Различие между региональным образовательным комплексом и образовательно-экономическим кластером состоит в том, что кластер обеспечивает более эффективную интеграцию участников образовательной и инновационной систем. В результате чего происходит ускорение передачи информации, упрощается доступ к новым технологиям, обеспечивается совместное использование знаний и основных фондов, создаются совместные НИОКР, повышается качество процессов обучения за счет концентрации ресурсов и физических контактов специалистов высокого уровня, и соответственно увеличиваются инвестиции и производительность труда (Usmonov, Vakhodirov, 2018).

Заключение *Conclusion*

Автор считает, что применение подхода кластеризации в структуре НИС позволяет производить своевременную и более точную оценку потенциалов статической и динамической частей и их соотношений на разных иерархических уровнях. Это позволяет разрабатывать стратегию наращивания потенциалов с учётом предметно-ориентированных запросов и реализовывать её за счёт взаимодействия систем образования, науки и производства. Наиболее эффективным представляется функциональное взаимодействие систем образования, науки и производства на основе современных технологий в составе НИС.

Таким образом, в условиях глобализации национальной экономики конкурентное преимущество будет переходить к тем регионам, которые проявят инновационную активность. При этом важную роль в региональном инновационном развитии играет региональный образовательный кластер - инструмент формирования инновационной экономики, ускорения инновационного цикла посредством массового распространения и передачи наукоемких технологий, генерирования новых знаний и их коммерциализации.

Поэтому автором выделены основные этапы формирования научно-образовательного кластера:

1. Оценка возможности формирования кластера.
2. Разработка механизма формирования кластера: выявление потенциальных участников; определение принципов и правил функционирования; цели и стратегия развития.
3. Формирование структуры управления кластером и реализация механизма его функционирования: определение функциональных обязанностей участников, кадрового состава входящих в кластер предприятий и организаций; заключение соглашений между участниками образовательного кластера.
4. Оценка и определение приоритетных направлений развития образовательно-экономического кластера.

В результате внедрения научно-образовательного кластера меняется стратегия развития профессионального образования, создаются автономные образовательные учреждения, расширяется доступ к инновационным технологиям, повышается качество подготовки кадров, что, в свою очередь, приведет к росту производительности труда, уровню занятости населения и повышению качества жизни.

Таким образом, эффективное функционирование научно-образовательного кластера обеспечивает своевременную потребность

предприятий в квалифицированных кадрах путем взаимодействия всех звеньев системы образования и промышленных предприятий, с целью повышения эффективности производственной деятельности.

Summary

The author believes that the application of the cluster approach in the structure of the NIS allows for a more accurate assessment of the potentials of the static and dynamic parts and their relationships at different hierarchical levels. This allows to develop a strategy for building capacities, take into account subject-oriented requests and implement it through the interaction of education, science and industry. The most effective is the functional interaction of education, science and industry systems based on modern technologies within the NIS.

Thus, the globalization of the national economy, the competitive advantage will go to those regions that show innovative activity. At the same time, the regional educational cluster plays an important role in regional innovative development - as tool for the innovative economy, speedup innovation cycle by the science-intensive technologies, the generation of new knowledge and commercialization.

Therefore, the paper the main stages of the formation of a scientific and educational cluster:

1. Assessment of the possibility of forming a cluster.
2. Development of a cluster mechanism: identifying potential participants; determination of principles and rules of operation; goals and development strategy.
3. Formation of the cluster management structure and implementation of the mechanism of its functioning; determination of the functional responsibilities of the participants, the staff of the enterprises and organizations included in the cluster; conclusion of agreements between the participants of the educational cluster.
4. Assessment and determination of priority directions for the development of the educational and economic cluster.

As a result of the introduction of the scientific and educational cluster, the strategy for the education development, create autonomous educational institutions, access to innovative technologies, improve the quality of personnel training, which, will lead to an increase in labor productivity, employment levels and a life quality improvement.

Thus, the effective functioning of the scientific and educational cluster ensures the timely need of enterprises for qualified personnel through the interaction of all links of the education system and industrial enterprises in order to increase the efficiency of industry activities.

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FORMATION OF HIGH SCHOOL STUDENTS' SAFE BEHAVIOUR WHILE TERRORIST ATTACKS

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Abstract. *The attention is drawn to the possibility of terrorist attacks in Ukraine. The essence of safe behaviour during a terrorist attack is revealed in the article. The purpose of the article is to determine the rules of behaviour for high school students in the case of a terrorist attack, the action algorithm of high school students on receiving information about a terrorist threat; rules of safe behaviour in social networks, which are actively used by terrorists, who attack high school students to participate in their groups and terrorist acts; to present a formation program of high school students' safe behaviour while terrorist attacks and show its effectiveness. The results of the experimental implementation of the program for formation of high school students' safe behaviour during terrorist attacks and emergencies are analyzed after a survey carried out. According to the results summarised a conclusion is made to activate social and pedagogical work in the field of forming students' safe behaviour while terrorist attacks and emergencies.*

Keywords: *safety, behaviour, high school/senior students, terrorist attack, program for formation of high school students' safe behaviour.*

Introduction

Terrorism, as a negative social phenomenon, brings a great problem in the lives of people from all countries of the world. The phenomenon of terrorism is a real threat to national and international security. Violent terrorist attacks are the reasons of great anxiety in the world because they are getting new forms and methods with modern techniques and technological means. The later fact in its turn leads to the growth of victims among civilians every year.

In most cases senior students do not know the rules of behavior in the case of a terrorist act, the algorithm of actions when receiving information about a terrorist threat. They do not follow the rules of safe behaviour surfing social networks but follow the instructions of terrorists in some cases. This fact indicates then necessity of preventive work activation. The development and implementation

of the training program not only inform high school students about the rules of behaviour while terrorist attacks, while surfing in social networks, but also provide them with an algorithm of actions in cases of terrorist attacks, help to implement the safe behavior of high school students.

Formation of Research Problem

Now a days presence on the Ukrainian territory of different groups ready to commit terroristic actions is an actual problem. Particularly, the greatest risk is connected with the temporarily occupied territories of Luhansk and Donetsk region. Difficult social and political events in Ukraine affect the life of young people; the possibility of terrorist attacks is becoming a serious threat, which requires great attention and support from the state and social and pedagogical specialists to form safe behaviour of youth. The fact that there are supporters of terrorist organizations on the territory of Ukraine gives reasons for professional intervention, detailed pedagogical and preventive measures to make a contribution into the formation of high school students' safe behaviour and also into the formation of the actions algorithm during terrorist attacks.

The development of stablemoraland strong-willed characteristics of high school students creates conditions for formation of safe behaviour and feelings of security and safety, for adoption of the actions algorithm in the situations which are potentially dangerous for a person or the ones around he or she.

The purpose of the article is to analyze the safe behaviour of high school students during a terrorist attack as well as the results of implementation of a training program as for the formation of high school students' safe behaviour during terrorist attacks.

Analysis of Recent Research and Publication

Safe behaviour formation is a process which mechanisms are ambiguously considered by various domestic and foreign experts (N. Avdeeva, A. Berezovsky, L. Hurash, N. Lati, O. Knyazeva, Y. Kit, N. Liz, I. Pistun, G. Selie, R. Storksha, S. Freud, T. Khromtsova). Causes and conditions analysis of the terrorism origins, general characteristics of some of them, administrative, law-and-international aspects of this issue became the subject of the researches by such scientists as Y. Avdeev, V. Vityuk, O. Dmitriev, S. Efirov, K. Zharinov, V. Zhuravel, V. Zagladin, O. Zdravomyslov, I. Iliinsky, E. Kalnitsky, V. Kantsir, S. Kara-Murza, V. Lipkan, Y. Lyakhov, L. Modzhoryan, G. Ovchynnykov, Y. Pain, O. Panarin, B. Putilin, K. Salimov.

The analysis of the researches by P. Anokhin, A. Weis, E. Ilyin, V. Lefterov, I. Pavlov, O. Timchenko, D. Uznadze, D. Watson allows to consider the formation

of safe behaviour as a complex dynamic process; M. Snitko defines social and pedagogical conditions for the formation of adolescents' safe behaviour while surfing the Internet, R. Vasylieva emphasizes the need to prepare future teachers to conduct formation of teenagers' safe behaviour during extracurricular activity.

Literature Review

The world is surviving a crisis of economic, environmental, financial, political nature, but the greatest danger (because of its massiveness and unpredictability) is the crisis associated with terrorist acts which have resonated all over the world and have been an actual threat since the late 90s of the twentieth century.

The Global Terrorism Index and the rating of the countries where the acts of terrorism have been committed indicate the poor position of Ukraine among European countries. Recently Ukraine has occupied position 20 among the countries with a high risk of terrorist attacks, which is the worst indicator among European countries (Table 1).

Table 1 Ukraine's Position in the Rating of The Global Terrorism Index

Ukraine's position in the rating	56	51	11	12	17	6	5	4,7
Year	2012	2014	2015	2016	2017	2018	2019	2020

In November 2020, the Global Terrorism Index released research data from 163 countries. Iran, Afghanistan, Nigeria, Syria and Pakistan took the first five places of the Global Terrorism Index. Ukraine was number 4,7. Thus, the risk of terrorist attacks actualises the problem of youth' safe behaviour.

S. Gvozdiy thinks that safe behaviour is a kind of activity that does not contain danger, protects a person from danger, does not cause harm to personality and nature (Gvozdiy, 2007). I. Shchegolev defines safe behaviour as a unity of 3 components, the reality of which significantly influences getting a comfortable level of interaction between a person and the environment. They are prediction of danger, avoidance of danger, overcoming danger (Shchegolev, 1998). We think it's important to mention the opinion by D. Kolesov, who believes that behaviour in modern society must meet two criteria: efficiency and ethics. According to him, effectiveness is essential because it is crucial to the survival during terrorist attacks. Ethics in behaviour is manifested in following requirements of morality. Such behaviour does not harm other persons, does not make troubles for meeting needs of others. Considering the questions of behaviour efficiency, the author distinguishes two types of it: initiative and

standard behaviour. He characterizes the following features of the initiative behaviour: diversity, speed, flexibility, action mode switching; taking into account the situation and its dynamics; the person's ability to adapt one's actions to the situation; the ability to act on the basis of forecasting, which means to be ahead of, the ability to act with full power, not to be stopped by difficulties; the ability to carry through; a realised behaviour orientation to the aim (Kolesov, 2004). The purpose of the research J. Bond (2009) was to show how university teachers could help students acquire their skills in techno ethics, ecological ethics, computer ethics skills (Bond (2009)). M. Snitko and T. Veretenko (2011) define "safe behaviour" as a way for self-realization and a complex of actions implemented by children and young people, which are characterized by knowledge about the risks and rules of behaviour, by skills of optimal responding being in the challenging situations, of emotions controlling and being responsible as for one's own acts (Snitko & Veretenko, 2011). Unfortunately, E. Ogrodska-Mazur and P. Saukh show in their work that every tenth young person in Ukraine is not influenced by moral norms (Ogrodska-Mazur, Saukh, 2019).

Methodology

The investigation was being carried out in Kiev and Kharkov schools during 2019-2020 academic year. It was suggested to define the following:

- 1) senior students' knowledge about terrorist attacks and safe behaviour during terrorist attacks (by questionnaire for senior students); the results of the questionnaire (167 students of Kiev and Kharkov schools, Ukraine) allowed us to admit that the students had learnt the algorithm of actions while terrorist attacks. We also can state that the idea about terrorism as a negative thing was formed.
- 2) the behavior of high school students algorithm formation (by the participation in the training program developed). The implementation of the training program developed helped to provide high school with information about a terrorist act as a negative phenomenon, about conflict situations and the ways out of them; to activate students' interest as for safe behaviour and positive response to the algorithm of actions while terrorist attacks.

One of the methods of our study was the analysis of statistical data as for terrorist attacks in the world and in Ukraine. In the study, we used methods of surveys, questionnaires and individual interviews. The questionnaire consisted of three blocks of questions. The first contains questions about information as for terrorist attacks; the second one defines behaviour while terrorist threats; the third block deals with knowledge of the actions algorithm while conflict situations and terrorist attacks. In addition to the questionnaire, we conducted individual

interviews lasting up to 20 minutes. The respondents answered the same questions in a more expanded form. Additional questions were personalized considering the answers got during the interview.

To obtain more reliable data we organized our study confidentially. Each participant agreed to participate in the survey and interview.

During the interviews we followed ethical rules. If someone didn't want to answer some questions, we didn't insist. One of the main conditions of the study is one's voluntary participation.

Research Results

The school period, and especially the senior high school one, is the most favourable for developing a person's feeling of personal and collective safety. Obviously, it is easier at this age to form motives which encourage high school students to follow the rules and regulations of safe behaviour at home, on the street, at school, in the country. The main leitmotif of high school students' mental development is the formation of a new, still unstable self-consciousness, a change in the self-conception, an attempt to understand oneself and one's capabilities. A feeling of belonging to a special community appears, and the value of it is the basis for students' personal moral judgments, is of great importance. At the same time a high school student is excited by new thoughts, feelings, anxieties, the young person seeks different forms of communication, friendly relations and is influenced or consciously involved into the process of socialization. The ability to behave independently is formed at this age. It leads to destruction of previous interests and motives and formation of a new motivational sphere, as well as to the search for new forms of behaviour.

As the school age is favourable for the formation of a personal safety feeling, we conducted a test experiment. The developed questionnaire "Surveys for Saving of Life" made it possible to identify senior high school students' realisation of the actions algorithm during terrorist attacks and formation of ideas about the terrorism as a negative phenomenon.

Survey conducted for senior high school students showed that they understand terrorism as: influence on the psychological state of society; violence because of apolitical or religious aim; use of violence; political activity oriented to take control; use of weapons to achieve a specific purpose; an act of aggression; damage to the environment; negative actions which are dangerous for human lives; annihilation of a nation; crime; destruction of property; a threat to humankind. To sum up, we can conclude that senior high school students do not fully realise the concept of terrorism and terrorist attack.

An important thought is the one about what drives people to take the path of a terrorist. It is the desire to achieve one's goal, gain power or material gains,

religious beliefs, thirst for revenge. It is interesting that, senior high school students have an opinion, that computer games can also be a factor in encouraging aggressive actions, a large number of games is violent, and young people are one of the greatest users of online shooters and strategies. High school students also think that one of the factors leading to the lifestyle of a terrorist is psychological problems, such as problems in the family, bullying by peers, death of the ones loved, difficulties in self-realization, life problems, lack of moral and ethical principles, unformed behaviour, not-understanding of terrorism as a negative phenomenon.

One of the main factors in the safe behaviour formation is realising one's own personal safety and his or her social environment, a feeling of safety. Only 30% of high school respondents consider themselves protected from terrorists, 34.7% consider themselves unprotected and feel danger from terrorists and terrorist groups in the territory of Ukraine, 16.3% of respondents feel protected only next to law enforcement officers. High school students determined how protected from acts of terrorism they feel according to a ten-point scale, it is 6 points. So, we can conclude that high school students demonstrate quite a lot of anxiety and find themselves not protected.

As for the question "Why do so many young people support terrorism?", 27% of the senior high school students answered the following way: young people feel the acute injustice of the world order; are easily managed by different groups and religious sects because of their unstable beliefs, insufficient level of information; are radical in their views; spread of extremism phenomenon; influence of advertising and cinema; introduction through social networks; plenty of free time; low informational level as for the negative phenomenon of "terrorism"; uncompleted formation of young people values. Such answers provide a broad field for conducting social and pedagogical work as for formation of high school students' safe behaviour during terrorist attacks

In order to let the state inform about emergencies and terrorist or military actions, it is necessary to involve the media and the "alert system" (sound signal, information about emergency services further actions). But we must admit that 72% of high school seniors students know nothing about the existence of such a system; 12% consider it to be alarm systems and alerts delivered through the mass media; 10% know that this system exists, but consider it imperfect as for the capability to inform everyone about the emergency, 6% of young people interviewed believe that this is informing by television. So, the survey indicates that most senior high school students don't realise at all how to prevent an urgent situation, what to do, and whether the system is perfect.

It is important to collect necessary emergency supplies for emergencies or terrorist attacks, but the greater part of high school students does not know what must be among such things. Unfortunately, this fact immediately reduces their

ability to maintain their own health. Some respondents are ready to take a first aid kit and documents, others hope for emergency shelters and one's rather quick return to a routine life style.

Respondents insist that terrorists actively use social networks to involve individuals into their groups and encourage radical views and decisive actions. They also observed advertisements with bright slogans and can give examples of suicidal groups, such as "Blue Whale", "Wake Me Up at 4:20", "Sea of Whales", "f57", "Silent House", and others. The answers indicate the necessity to carry out social and educational work on safe surfing social networks and the Internet. High school students believe that their safety depends on them and in difficult situations they can only rely on their knowledge and skills.

Among the respondents, 39.8% feel threat from terrorist groups, and 5.6% believe that they can meet terrorists in the territory of Ukraine. A lot of students feel anxiety, especially concerning the regions of Donetsk and Luhansk which are constantly in the zone of combat actions.

It is obvious, that understanding of what to do during emergencies and following a certain algorithm of actions is the formed safe behaviour, creating conditions of protection and security for the person and the others next to. Unfortunately, 95% of respondents do not know what to do and what are the rules of actions during terrorist attacks and while dealing with terrorists. The formation of safe behaviour, theoretical and practical measures directed by educational institutions, public organizations and emergency services should be involved into constructing the actions algorithm for high school students during terrorist acts.

One of the main factors for safe behaviour during terrorist acts is knowledge as for the evacuation procedures and the evacuation plan in buildings, shopping malls, educational institutions, public places, stations, etc. High school students are familiar with the evacuation plan in the subway – 29.2%, not familiar with – 37.5%; students have looked through once, but the exact evacuation scheme can't be remembered – 29.2%, believe that the evacuation plans can't be found – 4.2%.

As for the evacuation plan at shopping malls, it was reviewed by 45.8%, not seen by 31.2%; was looked through once, but not remembered by 16.7%; attention is paid to from time to time by 6.3% .

As for the evacuation plan at school, 75% have looked through; 12.5% are not introduced to; 12.5% we introduced to once but can't remember details.

The data obtained indicate that students are given the information about the evacuation plan at school, but there is a certain percentage of high school students who know nothing about the evacuation exits which are very important as the first action in the case of a terrorist attack or emergency. So, the results of the survey show insufficient informing activity as for introduction with evacuation plans in shopping malls, public transport, educational establishments.

The respondents also state that information about emergencies and evacuation plans given at high school is not worked out (82%); such activity is not carried out at school (6%); the activity is carried out not correctly (2%). The actional algorithm is focused on keeping calm, following recommendations of teachers to be careful, but such kind of behaviour can't be rational during certain emergencies or terrorist acts, such as capturing a building by terrorists.

So, we face the necessity for high school students to develop safe behaviour during terrorist attacks, as well as to be informed about the algorithm of actions. It is also crucial to carry out social and pedagogical work to realize the knowledge obtained and the importance of safe behaviour.

Discussions

Developing and conducting a training program designed to inform and develop safe behaviour of high school students during terrorist attacks is one of the main preventive measures.

The research showed that informative activity should be carried out constantly, the safe behavior of high school students depends on constant search for information and its assimilation. The training program involves not only studying standards and rules of behavior while terrorist attacks, but also: forming understanding the value of safety and safe behaviour; creation of conditions for personal potential of senior high school students; raising the student's terrorist attacks risks informing level; motivating a high school student to develop and follow the actions algorithm of safe behaviour during terrorist attacks.

One of the main aspects of the training program is the behaviour component of high school students' safe behaviour during terrorist attacks formation, related to the formation of relevant theoretical and practical knowledge. The main content of this component is the development of high school students' life essential skills. Namely, to increase resistance to various social influences, to make adequate decisions according to the situation happening while terrorist attacks; to be able to resist pressure from terrorists, to control one's own action and estimate the situation adequately.

The Training Program

The training program includes 6 lessons:

"Acquaintance" – giving participants the opportunity to get to know each other, creating a friendly atmosphere, improving attentive listening skills, relaxing, self-presentation;

"Communication skills as one of the safe behaviour factors" – communication skills development as one of the preventive elements for conflict

situations. For mingan understanding of how to formulate one'sown interests in such away as to beheard by another person and to be able to expres sone'sopinion freely;

"Terrorism is a danger to humanity" – to introduce students to the peculiarities of terrorist acts and the phenom en on of terrorism in the world;

"Let's say terrorism "no" – to learn the algorithm of actions of feredby students and to inform about the correct sequence of actions in the situation of terrorist attacks;

"Conflict" – understanding the concept and nature of "conflict"; communication in a conflict situation; advantages and disadvantages of a conflict;

"I know" – to learn theoretically and practically the knowledge of safe behavior during terrorist attacks, following the algorithm of actions for saving one'sown life and the lives of the others next to.

Our experimental study carried out allowedus to formulate the following recommendations:

1. The main task of a social educatoris to keep constantly informing about safe behaviour, to provide theoretical and practical knowledge.
2. To promote the comprehensive development of high school students as for safe behavior.
3. Implementation of the developed training program allowed:
 - to provide high school students with information about a terrorist actas a negative phenomenon;
 - to rein force the importance of communication;
 - to realize what a conflict situation is and the way to deal with it;
 - to increase senior high school students' interestin safe behaviour;
 - to percept the algorithm of actions during terrorist attacks positively.

The main objective of the training program was to promote the interes to fhigh school students, to create a motivation for high school students to develop safe behaviour.

Conclusions

Difficultsocial and political events in Ukraine affect the life of high school students; the possibility of terrorist attacks is becoming a serious threat, which requires great attention and support from social and pedagogical specialists to form safe behaviour of youth. It is important to carry out social work with high school students to provide the information and practical knowledge in the case of a terrorist threat, to promote peaceful solution of conflict situations. Implementation of the training program developed allowed to provide high school

students with information about a terrorist act as a negative phenomenon; to reinforce the importance of communication; to realize what a conflict situation is and the way to deal with it; to perceive the algorithm of actions while terrorist attacks positively. The study carried out is aimed to learn to tolerate, to tolerate to the others, peacefulness, kindness, willingness to someone next to you.

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CHALLENGES IN PROVIDING QUALITATIVE LEGAL EDUCATION IN THE CONTEXT OF COVID-19: EXPERIENCE OF RĪGA STRADINS UNIVERSITY

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Abstract. *The spreading of COVID-19 since March 2020 has had a profound and irreversible impact on all spheres of life around the world. The long-term impact of the pandemic with unpredictable consequences will also be observed in the field of education. The aim of the article is to analyse the potential impact of COVID-19 on the providing of qualitative legal education. Full-fledged assurance of the qualitative education is linked to common conditions for acquiring of knowledge, skills and competences. There are certain specifics in obtaining legal education, especially higher education. It is related to a combination of circumstances that are relevant to the specific knowledge, skills and competences to be acquired by lawyers and legal assistants. In 2020 a new standard for the legal profession was approved, which not only defines new qualitative requirements for the relevant profession, but also determines the need to make adjustments in the relevant study programs. The process of implementing and performing qualitative legal education in the current circumstances is being transformed in line with the international and national regulatory frameworks in the context of management of COVID-19. As research methods descriptive, analytical and synthetic methods are used by the authors.*

Keywords: *COVID-19, legal education, professional standard, distance learning.*

Introduction

On March 11, 2020 the World Health Organization (WHO) identified the outbreak of coronavirus as a pandemic (Coronavirus confirmed as pandemic by World Health Organization, 2020). The pandemic is, in fact, a serious infectious disease in which its constant spread to several countries of the world can be detected at the same time. The latest pandemic occurred in 2009 with swine flu, which according to experts' views resulted in hundreds of thousands of deaths (Coronavirus, 2020). The COVID-19 pandemic has irreversibly and severely affected all spheres of our life. Its consequences, which have not been identified yet and are only deepening, have had a negative impact on the economy, the social sphere and also on education worldwide. The spread of the virus has changed the

usual rhythm of life, stable habits, interaction and communication processes. Italian physicist and novelist Paolo Giordano acknowledges that „Now a time of anomaly is, and we must learn to live in it and recognize this anomaly... It is in our own interest to learn from them (viruses)” (Dzordano, 2020). In terms of the strength and scale of the impact of the coronavirus pandemic, this can probably be compared to a world war or a global environmental disaster. According to Henry Kissinger (Kissinger, 2020), one of the most prominent US security experts, the reality is that the post-coronavirus world will never be what it was. The political and economic consequences of coronavirus will be felt for future generations. In July 2020 the book “COVID-19: The Great Reset” written by Klaus Schwab, founder and executive chairman of World Economic Forum, and Thierry Malleret, founder of the Monthly Barometer, was published in the USA (Schwab & Malleret, 2020). The authors acknowledged that the book is a guide for anyone who wants to understand how the COVID-19 disrupted social and economic systems, and what changes will be needed to create a more inclusive, resilient and sustainable world going forward. The aim of the book is to shake up people's opinions and show the deficiencies that were manifest in the global system before the COVID broke out. The authors emphasize that a pandemic has a force for radical and lasting change. COVID-19 is interpreted as a “unique window of opportunity” (Schwab & Malleret, 2020). Humanity is shaping the future without going back to the past through this window. The COVID-19 assessment and the prognostic model for preventing its negative effects also have a legal and legally educational aspect. Firstly, the emergence and rapid spread of COVID-19 was caused by human negligence, non-compliance with social and legal norms. This requires a legal assessment. Secondly, the legal framework and ensuring liability for breaches of the relevant rules are important in limiting the pandemic and mitigating its negative effects. Legal knowledge and expertise are required in the development of regulation and identification of violations of the legal framework. Thirdly, a new digital education system, including the acquisition of legal knowledge, plays a key role in the current period of pandemic crisis, as well as the development of a sustainable and stable society for the future.

Impact of COVID-19 on Education

The spread of the pandemic has led to changes in the usual rhythm of life, including the study process. In order to limit the spread of COVID-19, on March 12, 2020, the Cabinet of Ministers issued Order No. 103 (Ministru kabineta rīkojums Nr. 103, 2020.), which declared the emergency situation in the country until June 9, 2020. Point 4.3.1 of the Order provided for the termination of the full-time learning process in all educational institutions, the educational process of any kind in on-site form outside educational institutions and for the provision

of distance/remote learning (with certain exceptions). Thus, switching from audiences to the virtual world was a challenge for both teachers and students. Significant changes and tension were experienced by all participants of the study process. Distance learning cannot be a solution to the crisis caused by COVID-19 or a comprehensive compensatory resource for its negative effects. However, it can be recognized that distance learning, including in the field of legal education, is an additional new tool in the training of lawyers and in the process of their further professional development. The crisis situation in the implementation of distance learning in preparing lawyers and legal assistants introduces serious adjustments. Firstly, the distance learning process is not based on the planned and prudent development and implementation of distance learning tools, but on an unplanned serious epidemiological situation. Secondly, educational institutions were generally neither technologically nor methodologically prepared for the rapid introduction of distance learning. Undoubtedly, there were some pleasant exceptions. Thirdly, the introduction of distance learning was regulated and implemented by mandatory standards, despite the various possibilities of educational institutions to comply with the regulations established.

The spreading of COVID-19, to some extent, may be related to the conditions described by Nassim Taleb in his bestseller “Black Swan” (Taleb, 2007). For a long time, the world was believed that swans were only white, until ornithologists also discovered black swans. Social life is formed by so-called “sign of unpredictability”. Unpredictability, like the spread of black swans, is relative. For a long time, the world was teeming with ideas about a possible pandemic. It was necessary to develop a possible model of the functioning of society in the context of a possible pandemic, including unavoidable changes in the world and regional educational area. The unpredictable possibility required the development of new educational algorithms. Distance learning and online learning processes had to develop earlier. Not all regions and not all have access to the traditional academic education system with mostly organized onsite audience classes. The question of ensuring access to higher education, including legal education for all stakeholders, remains important.

This is the most directly linked to the development of the global digital education system. On January 17, 2018 the European Commission published a communication to the European Parliament on the Digital Education Action Plan (Digitalas izglitibas plans, 2018). This includes three priorities set out in the Action Plan: (a) Better use of digital technologies for teaching and learning; (b) Development of appropriate digital capabilities and skills for digital transformation; (c) Improving education by improving data analysis and foresight. The Action Plan provides analysis and evidence in support of these priorities and related actions.

On October 6, 2020, the Saeima adopted Law on the Management of the Spread of COVID-19 Infection where Chapter V also applies to the field of education (Covid-19 infekcijas izplatības parvaldības likums, 2020). Due to the emergency situation declared in the country to limit the spread of the infection the study process takes place remotely at Rīga Stradins University (RSU). In this situation, a number of other tools related to remote provision of the study process are available in addition to the RSU e-study system tools which allow performing various activities (Attalinātu studiju organizācija, 2020):

- Adding of study materials.
- A forum for sending and discussing information.
- Submission of students' independent studies with or without plagiarism check, when the submission and correction of studies and works is ensured, the originality of the content is determined and the submitted studies and works are sent back to students.
- Interactive video lecture with recording and discussion forum.
- Virtual seminar with discussion in audio or video format among all participants.
- Development of electronic tests.
- Electronic surveys.
- Electronic voting and others.

It must be concluded that in the context of the crisis caused by COVID-19 Latvian higher education institutions have shown the ability to quickly refocus and provide studies remotely through e-solutions. It should be accepted that remote lectures have shown that this can also be one of the forms of study that higher education institutions must be able to accept and use in the offering of studies. It is quite rightly stated that competition has begun among higher education establishments worldwide.

COVID-19 and Challenges in Providing Legal Education

In 2020, a new Legal Profession Standard entered into force, which has been approved by the Tripartite Cooperation Sub-Council for Vocational Education and Employment (Jurista profesijas standarts, 2020). The new Standard has clearly defined the duties and tasks of a lawyer. Among the activities mentioned, which are important with a practical orientation, we will also note the following: he/she provides legal advice and legal assistance (provides legal consultations and performs representation or defence of a legal entity), performs legal activities in civil proceedings, administrative proceedings, administrative violations proceedings, Constitutional Court proceedings and criminal proceedings.

Providing legal assistance it is necessary for a lawyer: to find out and understand the client's needs; to get acquainted with the factual circumstances of the case and analyze them; to provide legal advice; to develop procedural documents within the framework of the provision of legal assistance; to represent the client and implement the client's defence. In the framework of the study program "Law", including distance learning, students need to establish and develop skills about how to understand the client's needs, how to provide qualitative legal assistance and how to represent the client in various institutions and defend him/her? In the learning process, particularly in practice, it is important to provide guidance even on how to listen to and understand the client's needs, how to assess them, and how to work more constructive and efficient with the client. The new Legal Profession Standard also includes the rights of a notary, which were not included in the previous professional standard. The RSU Faculty of Law has paid attention to the mentioned study course before (Kudeikina, Palkova, 2020).

The use of distance learning forms in the study process can have a significant impact on studies in the professional master's study program "Law", in the framework of which the first unified qualification examination for lawyers will be provided for in 2021. As Janis Grasis has rightly acknowledged, this is not only a new challenge in the implementation of legal education in Latvia, including uncertainties in the preparation and conduct of the examination (Grasis, 2020), but also preparation for the examination in the form of distance learning without knowing the range of issues can be objectively difficult both for students and teachers.

Researchers at the Santa Clara University School of Law have conducted an extensive study on legal education in COVID-19 situation in the context of health, safety and equality priorities (Sandoval, Cain, Diamond, Hammond, Love, Smith, Nabipour, 2020). It is to be acknowledged that researchers have carried out a complex interdisciplinary study on health care, legal education and public safety. It is important that in the conditions of a pandemic within the study courses implemented in law schools awareness needs to be promoted and a security culture should be developed. The security segment has a broad and extensive content, which includes epidemiological, public, informational, technological and other types of security.

The identification of the security situation in terms of legal education starts with the fact that lawyers, including future lawyers, judges, prosecutors, etc., have to accurately assess the degree of increased risk of the traditional academic education model. The previously implemented educational model (online classes) needs to be extended to the current risk potential posed by COVID-19. The evaluation indicator of the comparative analysis results in the appropriate regulatory framework, which provides for restrictive measures of the learning

process. Appropriate measures may be set at national, regional level, as well as in individual educational institutions and their faculties. It is recognized that the legal education system can be extended to the critical infrastructure sector. Legal education and its implementing institutions and authorities constitute a sufficiently stable and fundamental system of values, which is covered by laws, other legal acts and case-law.

An appropriate educational segment develops complex knowledge, skills and abilities, how this value system functions and how it can be used in the societal development or in overcoming the crisis. In this context it is fundamentally important to assess whether the limitations of the learning process of the legal education system, i.e. organizing classes remotely provides full-fledged opportunities for students to acquire the necessary knowledge, skills and competencies in the field of law. Implementing the study form of distance learning social and communication skills of the students are evaluated and developed. This is particularly the case for dealing with legal goats by communicating with clients in the legal assistance process. At the same time students' technical competences and digital skills need to be developed (Catalano, 2018), providing additional support if students have insufficient digital skills.

On April 3, 2019, the European Commission adopted a Communication to the European Parliament, the European Council "Further strengthening the Rule of Law in the Union. State of play and possible next steps" (Tiesiskuma stiprināšana Eiropas Savienībā, 2019). The EU Scoreboard is set out as part of the EU's tools to strengthen the rule of law, contributing to judicial reform and the promotion of standards in the field of justice (Further strengthening the Rule of Law, 2019). Strict compliance with standards in the field of justice is fully linked to the development of legal education and respect for the rule of law, which includes awareness of the independence of the judiciary. The report of 2019 determines the economic and social priorities of the EU and its Member States for the coming year. It is pointed in the study to an important link between the rule of law and efficient judicial systems, on the one hand, and a business-friendly environment and economic growth, on the other hand (Annual Growth Survey, 2018). A successful interaction among the legal system, the social and business environment is possible on the basis of an equal understanding of the standards of the rule of law. The new standards of the rule of law are also included in the renewed professional standard and in the legal education system.

The study on challenges of e-learning of English language during the COVID-19 pandemic at the Taibah University, Saudi Arabia, showed that majority of the students are dissatisfied with continuing their education online (Mahyoob, 2020).

Dissatisfaction was linked to the fact that students acknowledged that they were not able to achieve the expected progress in the language learning process.

Subjective assessment is undoubtedly the basis of language learning effectiveness. It can be assumed that students have set higher results in learning English. Undoubtedly, foreign language learning is a specific field, which is related to individual linguistic abilities, as well as language learning methodology, digital tools used, teachers' skills to use new information and communication technologies.

In May 2020, the State Audit Office published a report on the provision of distance learning in emergency situation (*Attalinata macību procesa nodrosinasana arkartejas situācijas laikā*, 2020). In the audit process the State Audit Office focused not on the distance learning process, the quality of the education process, but on the accuracy of the preparation of the report of the Ministry of Education and Science for 2020, providing educational institutions with the necessary goods and services. The Ministry relied on the Cabinet Order from March 14, 2020 on non-application of the norms of the Public Procurement Law for the prevention of the COVID-19 crisis, the procurement process being based on prompt action and conclusion of immediate contracts (*Ministru kabineta rīkojums Nr. 105*, 2020). In assessing the procurement process for ensuring a distance learning process during the emergency situation, the auditors could follow the decision-making process. The Ministry has ensured the purchase of the necessary goods and services to overcome the COVID-19 crisis and prevent its consequences, however, the audit does not provide sufficient assurance whether the actions of the Ministry with state budget funds and resources to ensure distance learning have been economical and effective in all cases (*Attalinata macību procesa nodrosinasana arkartejas situācijas laikā*, 2020).

Experience of the Faculty of Law in Organising a Distance Learning Process

Digital information technologies are particularly important in the context of COVID-19. The connection to the Internet environment in terms of the implementation of qualitative legal education provides new opportunities for different legal databases (such as Interpol; Europol; European Judicial Training Network; Eiropas tiesiskuma portāls; Eiropas tiesību akadēmija; likumi.lv, at.gov.lv, ic.iem.gov.lv, etc.). It is important to ensure the availability of appropriate databases for students and to introduce them with the information contained therein. Information on the relevant databases is included in the lists of sources in the descriptions of study courses within bachelor's, master's and professional master's study programs of the Faculty of Law of the RSU (www.rsu.lv/juridiska-fakultate).

In the conditions of distance learning, students are expected to develop research projects by means of interactive learning forms. In view of the

development of a single legal space in the world and in Europe in the context of globalisation students develop research projects on fifty entities of judicial cooperation or cooperation problems in the framework of the study course “Problems of International Judicial Cooperation” (IJC) (Starptautiskas tiesiskas sadarbības problēmas).

Research projects are designed to contribute to and to promote the development of analytical skills. It is necessary to include the following elements in the research development:

- Identifying and exposing the nature and topicality of problem of the subject.
- Discovering and analyzing operational concepts.
- Describing the problem to be analysed using quantitative and qualitative indicators.
- Raising hypotheses (or formulating research issues), substantiating them, exposing personal options of problem solving.
- Revealing the effectiveness of cooperation by analysing the strengths and weaknesses of the IJC.
- Displaying alternative approaches to solving the problem.
- Drawing conclusions.

Projects developed on the Zoom platform are publicly defended. Students actively participate in discussions and evaluate the papers and presentations developed by colleagues. Presentations and projects developed are available on the e-learning platform. Digital technologies, which are used remotely in the study courses implemented by the RSU Faculty of Law, are linked to an interactive analysis of problem situations. An appropriate approach in the EU is recognized as positive and supported (Atjaunota ES augstākās izglītības programma SWD, 2017).

On the one hand, the form of distance learning in law science in the context of COVID-19 provided opportunities to acquire appropriate study courses for students living in remote regions of Riga and who did not always have the opportunity to participate in on-site classes. It should also be noted that young people with special needs were also studying at the Faculty of Law, whose participation was provided by assistants. The number of these young people has been increasing in recent years. The distance learning extended the opportunities for these young people to participate actively in the study process.

However, the use of digital technologies in the learning process, including in the context of the implementation of legal education, also reveals some problems. Though Latvia has one of the highest Internet usage rates (CSP aptauja: Internets Latvijā pieejams gandrīz 90% mājsaimniecību, 2020), quality of the Internet connection is not sufficient everywhere. Digital technology equipment

available to students (computers, video cameras, software, etc.) is not always sufficiently modern. In some cases the digital skills of students should be also developed.

Visions of Development Perspectives of High-Quality Legal Education

One can assume that society will still feel the pandemic and its social, economic, political and legal consequences for a long time. It is recognized that society will transform itself by developing new perceptions, assessments, orientations and social norms. COVID-19 in general has taught to live and learn in a different format. The benefits of tough lessons should be used and developed in the future.

By promoting the provision of high-quality legal education in the current COVID-19 crisis as a post-crisis environment in terms of the development of forms of digital training, it would be desirable to address the following challenges in the perspective:

- Assessment of the positive elements (achievements) and shortcomings of the study programmes and study courses to be implemented during the pandemic in hybrid and remote format, including by conducting electronic surveys in the digital environment (Latvijas Digitālas transformācijas pamatnostādnes 2021-2027.gadam)
- Identifying the potential for the future use of digital technologies, taking into account the rapid development of appropriate tools and equipment and their compatibility with high-quality legal education resources.
- Education and training of academic staff, promoting acquisition of stable and high-quality digital skills and competences.
- Providing classes for students in the development of digital skills and competencies in the introductory courses of law study programmes, taking into account the technological and informative resources and opportunities of university and faculty.
- Interregional and international cooperation could be a perspective in the acquisition of law study programmes and study courses (internationalization of study programs), for example, taking into account that Rīga Stradins University is the leading Latvian educational institution in the field of health care, the university could offer specific study courses – Medical Law, Pharmaceutical Law, Patients' Rights (in Latvian and English) (www.rsu.lv).
- Building on intensive development of education and training, including in legal sciences, in accordance with the requirements of the digital age, it would be desirable to develop and implement appropriate study

courses in law study programmes, for example, Legal Programming, Robotics Law, Digital Proceedings, Human Rights in the Digital Environment, Electronic (Digital) Financial Rights.

- The global digital environment, including the single legal environment, requires interdisciplinary cooperation (law and information technology sciences, humanities, etc.). In this context modules for interdisciplinary study courses could be developed. The perspective could be the cooperation of law faculties with computer science faculties.
- Informative and educational resources of foreign educational institutions and law enforcement institutions (lectures, presentations, research materials, etc.) should be more extensively used by educational institutions and establishments implementing law study programmes.
- One of the important segments in ensuring high-quality legal education both in the conditions of a pandemic and in a stable period of societal development is the successive professional development of legal specialists. An important aspect is linked to the further training in the circumstances of an emergency situation, including mastering the new legal framework. It is important for professional development to take into account specific legal professions and possible relevant specializations to be implemented within them.
- Research using digital technologies is important in providing high-quality legal education in pandemic, as well as in the post-crisis period. This includes a sufficiently wide range of possible activities: organisation of ensuring study process in law in the context of COVID-19; challenges of the legal framework for pandemic management and its implementation; the creation of interdisciplinary and transnational research teams, including global legal issues, such as issues relating to the legal regulation of artificial intelligence; acquisition and use of specific digital skills and competences in research work; preparation of scientific publications using open publications and databases, making publicly available electronic legal journals. The RSU Faculty of Law has been publishing the electronic legal journal “Socrates” since 2015, which is indexed in the databases of the European Reference Index for the Humanities and Social Sciences (ErihPlus) and the Index Copernicus ICI Journals Master List (Elektroniskais zurnals Socrates).
- Students are of great importance in the implementation of high-quality legal education in the current COVID-19 crisis and in the post-crisis conditions. Students’ ratings and assessments, opinions, participation in various projects (for example, organization and implementation of

fictional legal trials, participation in remote legal advice within legal clinics, etc.) not only strengthen the motivation to acquire qualitative knowledge in the field of law, but also promote more effective implementation of the study process.

Conclusions

Since the beginning of 2020 the COVID-19 pandemic has significantly affected all areas of our lives. Its effects are deepening and have had a negative impact on the economy, the social sphere and also education worldwide.

In March 2020 the Cabinet adopted a decision to terminate the full-time study and learning process in all educational institutions, to carry out all types of full-time educational processes outside educational institutions and establishments and to ensure the distance learning. The traditional study and learning process was transformed into distance learning.

In the context of the announcement of an emergency situation and the transformation of the study process amendments to the Education Law were adopted, the concept of distance learning was defined (Grozijumi Izglitibas likuma, 2020). It is defined as the part of the educational process in which learners learn independently and individually without being physically in the same class or room with a teacher, by using information and communication technologies. The form of distance learning presents new challenges with the promotion of students' motivation, the study process and the achievement of the study results set. At the same time a hybrid learning environment has developed, where distance online learning forms are supplemented with students' independent work, including solving legal cases (Macibu vide, 2020).

During the implementation of the distance learning the students' social and communication skills and technical competences and digital skills are evaluated and developed, additional support is provided if the students have insufficient skills in the digital environment. In terms of providing legal education the new Legal Profession Standard is important, which determines certain changes in the study process and the study courses to be implemented. The development of the digital education system requires the implementation of law study courses that are relevant to this field (Jurista profesijas standarts, 2020).

The Faculty of Law of the Rīga Stradins University provides high-quality and full-scale distance acquisition of study programs and study courses. The faculty is developing digital tools to ensure a qualitative educational process in the conditions of the COVID-19 pandemic.

COVID-19 makes it necessary to assess the current legal education system, identifying opportunities for its further development. One of the key lines is the

digitisation of legal education, acquisition and use of specific digital skills and competencies in academic and research work.

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RENEWED TRENDS IN HIGHER EDUCATION FOLLOWING COVID-19

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Abstract. *The world in general and the organizations in particular has been changed significantly because of Covid-19 pandemic. The higher education institutions haven't been an exception. The new challenge has triggered a worldwide shift towards online learning and teaching. There is a question of whether the current situation will lead to the overall transformation of higher education institutions to online, digital or blended one. This paper presents the systematic review of official reports where the new trends concept is used in higher education context. The primary goal of this paper is to establish understanding of already listed trends and directions and to contribute to the discussion of a digital transformation of higher education institutions following Covid-19 pandemic for effective teaching and learning. The paper is based on the theoretical research, including literature and official reports review in the context of transformation of higher education following Covid-19. As primary results, the list of new trends in higher education has been made for effective learning and teaching. This study will help higher education institutions to rethink their strategies according to the necessities to respond to the challenges of such rapid digital transformation.*

Keywords: *Higher education, Covid-19, digital transformation, teaching, learning, online learning, digital learning, blended learning.*

Introduction

The Covid-19 pandemic has triggered a worldwide shift towards online learning and teaching. There is a question of whether the current situation will lead to the overall transformation of higher education institutions to online, digital or blended one. Time will show what the consequences of an emergency transition to an online format will be, but is there a necessity to update and renew the current trends in the context of higher education to increase the effectiveness of teaching/learning.

The major reforms in higher education have been started from Bologna process in 1999 for ensuring comparability in the standards and quality of higher education qualifications and the European Higher Education Area creation in 2010 to facilitate student and staff mobility, to make higher education more inclusive and accessible as well as more attractive and competitive worldwide

(Council of Europe, 2014). Additionally, all participating countries agreed firstly, to introduce a three-cycle higher education system consisting of bachelor's, master's and doctoral studies; secondly, to ensure the mutual recognition of qualifications and learning periods abroad completed at other universities and finally, to implement a system of quality assurance to strengthen the quality and relevance of learning and teaching (European Commission, 2014).

Still the key question refers to how to achieve and ensure the quality of learning and teaching to make it relevance to learners and society, taking into consideration the aspects of country and institutions and to make it linked to digitalization, internationalization, research and innovation capacity (Sursock, 2015).

The European University Association Trends reports for the last five years have been taken as the base for the new trends analyses and comparison, in order to specify the changes that have taken place in European higher education in relation to learning and teaching, and to list the new trends that have to be taken into consideration following Covid-19 impact. The current research is focused on the digital transformation of teaching and learning as the necessity how to overcome the faced crises and to provide the effectiveness of study process, by indicating what exactly should be transformed and renewed.

Digital transformation of higher education has been already discussed in the context of digital material creation (Benson-Armer, Sarakatsannis, Wee, 2014) and of life-long learning aspect (Moore, Martinotti, 2016), but after March 2020, Covid-19 pandemic has triggered the transformation of educational process to online one. So, firstly, the definition of online learning, e-learning, digital learning and blended learning have to be specified. In online learning the most of content is delivered online, at least of 80 percent of the program, while in blended learning the online and face-to-face content is blended or combined, taking into consideration the following proportion, where 30 to 79 percent of the program is delivered online (Allen, Garrett, Seaman, 2007). Similar to online learning is also e-learning and digital learning. As digital or e-learning is any learning that is facilitated by the digital tools and technologies (Priyadarshini, 2018).

It is evident that digital transformation in higher education has required the organization of teaching and learning in online environment. But what exactly have to be transformed in order to achieve high efficiency of teaching and learning?

According to University World News the key predictions for new trends in higher education following Covid-19 included: a wider role of online learning, teleconferencing opportunities and study at home (Dennis, 2020), time to reimagine and reposition universities (Kupe, 2020), further better preparation of higher educational institutions for high risk crises (Hommel, 2020), higher education will be changed forever, including how universities operate, teach and

do research (Mitchell, 2020), the necessity to make learning more flexible (Martin, Furiv, 2020) etc. Moreover, a technological revolution in higher education has been predicted, the expand of using distance learning methods, the necessity to find solutions for increased inequality and international students' mobility; challenge of distance vs face-to-face education (Altbach, Wit, 2020). In addition to the above, the general vector of these changes have be traced: the pandemic has put universities in difficult conditions, forcing them to adapt to current events in the shortest possible time, spend significant funds for accelerated digitalization, and make decisions often without taking into account possible consequences. The pandemic had a negative impact on international cooperation in the field of education and science: international trips were canceled, exchange programs and academic mobility of students and research and teaching staff were suspended, and many research cooperation programs were put on pause. The rapid transition to distance learning has created a number of interrelated problems as well (Karpinskaya, 2020).

The focus of the research is to identify the latest trends through the comparative analyses of findings of already published reports according to the specified indicators for learning/teaching aspect. While the primary goal of this paper to contribute to the discussion of a digital transformation of higher education institutions following Covid-19 pandemic.

Research Methodology

The methodology of the undertaken research is theoretical one and based on an overview of the existing literature in the topic. Within the scope of the research the integrative literature review has been conducted, by reviewing, criticizing and synthesizing representative literature on the topic in an integrated way by generating the new perspectives and trends. This method is appropriate when contradictory evidence appears, when there is a change in a trend or direction and how it is reported, and when research emerges in the indicated field (Torraco, 2005).

Covid-19 has been a contradictory evidence that highlights the change of trends in the context of higher education, so existing reports and studies tackling the issue of trends in higher education were analyzed through the specified indicators. The theoretical orientation based on conceptual model of trends offered by European University Association covering only learning/teaching aspects. The current research covers the official reports and studies published from March till August 2020 in the context of higher education following Covid-19 pandemic.

Literature Review

Starting from 1999 the European University Association (EUA) has published trends reports in the context of higher education, basing on the conducted questionnaires in the European Member states. The current study covers the trends analyses of the last five years, starting from the EUA 2015 Trends report. Focusing on teaching and learning aspect the following trends have been listed: firstly, shift of student-centered learning, secondly, opportunity for transferable skills development for students by increasing and widening their participation, thirdly, the pre-eminence of internationalization and ICT, fourthly, changing conceptions of teaching, by introducing new ways and revising the curricula and finally, changes in the learning environment by proving necessary improvements (Sursock, 2015).

While EUA 2018 Trends report indicates learning and teaching as a core mission at Europe's universities. The findings of the report reveal that while dynamics for change and transformation come from learning and teaching practice, their success and sustainability require support and coordination from the institution and the system (Wilson, 2018). Moreover, learning and teaching has become an institutional priority, generating dedicated strategies and structures, creation of learning and teaching centers. The institutional strategies tend to focus on, firstly, international exchange and cooperation for learning and teaching enhancement, secondly, on academic staff development and finally, on other ensures to improve teaching. It is important to mention that institutional strategies are not developed in isolation, but in external exchange and collaboration. Additionally, the teaching and learning have to be analyzed by the institutions regularly (Gaebel, Zhang, Bunescu, Stoeber, 2018).

Furthermore, life-long learning has been recognized as an essential element of the European Higher Education Area since 2001, as for building a knowledge-based society life-long strategies are necessary (Haug, Tauch, 2002). Life-long learning strategies are important to face the challenges of competitiveness and the use of new technologies and providing equal opportunities. Arrival of digitally-enhanced learning can be the solution for enhancing the capacity of higher education institutions to provide life-long learning (Gaebel, Zhang, Bunescu, Stoeber, 2018).

Among the 2018 trends the following indicators have been mentioned: the improvement of teaching approaches and related processes; towards student-centered learning with the state of play and challenges; useful approaches to enhance students learning; institutional collaboration on teaching and digitalization. The focus is on the digitalization offering Massive Open Online Courses solutions. While the perspective has been uncertain either a learning revolution or a new business possibility (Gabel, 2013). The higher educational

institutions have the opportunity to co-operate and provide the courses in such perspective. Additionally, in 2014 the e-learning report has specified how information and communication technologies impacted higher education teaching and learning, proving the fact that in different forms e-learning has been already offered and used (Gaebel, Kupriyanova, Morais, Colucci, 2014). While later studies prove that not enough experience and daily practices of e-learning achieved (Gaebel, Zhang, Bunescu, Stoeber, 2018).

Summing up the analyzed reports the key trends before Covid-19 pandemic in the context of higher education for the learning/teaching aspect have included the following indicators: student-centered shift, transferable skills development, academic staff development, teaching improvement (approaches and related processes), life-long learning, e-learning, institutional collaboration and digitalization.

Research Results

Numerous studies have been conducted worldwide following Covid-19 pandemic in the context of higher education covering organizational issues, planning, study process and principles, methods and approaches, key trends and frameworks, etc. The current research covers the reports following Covid-19 of the following organizations: the European Association for International Education, the Organization of Economic Cooperation and Development, Young European Research Universities, the International Association of Universities and Global learning company Pearson. The key findings in learning/teaching aspect are indicated in Table 1.

Table 1 Report Analyses

Name of the Report	Organization/ Time	Key findings	Methodology used
Coping with Covid-19: International higher education in Europe (Rumbley, 2020)	The European Association for International Education (EAIE), March 2020.	<ul style="list-style-type: none"> – the necessity of planning response plans; – information dissemination; – methods of communication, – messaging targets, – new content creation; – solutions of the impact on mobility; – long-terms concerns. 	Analyses based on online survey for individuals working in HE institutions, worldwide (800 respondents).
The Impact of Covid-19 on Education Insights from	The Organization of Economic Cooperation and	<ul style="list-style-type: none"> – quick replacement of face-to-face lectures with online learning; – - teaching/learning and assessment process have to be updated; 	The policy responses presented in this report cover key measures announced

<p>Education at a Glance 2020 (Schleicher, 2020)</p>	<p>Development (OECD), May 2020</p>	<ul style="list-style-type: none"> – impact on international students’ mobility; – online platforms usage; – educators’/lecturers’ preparedness to support digital learning; – networking and social opportunities; – new educational content; – to reinvent learning environments so that digitalization expands and complements student-teacher and other relationship. 	<p>before the end of June 2020, including the selection of main indicators for the response and potential impact from the COVID-19.</p>
<p>How Covid-19 has affected young universities (Recio, Colella, 2020)</p>	<p>Young European Research Universities (YERUN) June 2020</p>	<ul style="list-style-type: none"> – blended and hybrid teaching/learning; – variety of new teaching methods; – focus will remain on face-to-face education; – alternative online assessment should be developed; – new methods of teaching, evaluation and assessment by virtual means; – the educational content with additional features; – greater emphasis on collaborative projects; – more options for students to choose; – lifelong learning; – strengthen the skills of teaching and administrative staff. – to improve the quality of teaching, accessibility, digital skills, social connections, major flexibility and own learning experience. 	<p>The report includes the discussions/roundtables with YERUN members to better understanding the impact of the crises on higher education.</p>
<p>Regional/ National Perspectives on the Impact of Covid-19 on Higher Education (IAU, 2020)</p>	<p>The International Association of Universities (IAU), July 2020</p>	<ul style="list-style-type: none"> – shift to emergency remote learning; – impact on internationalization; – impact on mobility; – impact on research; – the value of collaboration. – development of innovative approaches; – flexible online learning options, including blended and hybrid models; 	<p>Based on the 1st IAU Global Survey, the 1st Global overview to understand the disruption caused by Covid-19 and investigate the first measures taken by HE institutions around the world. It shows the short-term</p>

		<ul style="list-style-type: none"> – to develop long-term strategies as respond for current challenges in ‘technical infrastructure, competences, pedagogies and specific study field requirements’. 	effect (576 respondents).
The Global Learner Survey (Pearson, 2020)	Global learning company, Pearons, August 2020	<ul style="list-style-type: none"> – no return to a pre-Covid-19 education world; – trust and confidence in education system is on the rise; – learners’ equality; – learners better experience for online learning; – to build skills that will sustain people through the pandemic and beyond; – institutions feel safer at home; – - total modernization of HE institutions. 	Survey to measure the world in terms of “life before COVID-19 and life after” in the perspective of education. Survey respondents were selected based on their age and quality of response from leading online research panels (7038 respondents).

It is necessary to emphasize that two of mentioned reports have covered the European Higher Education area, while three left have been the international ones. The reports submission period has been from March to August 2020, when Covid-19 pandemic has been in process. The conducted analyses specify that the impact of Covid-19 pandemic has long-terms concerns and require the transformation of the following: methods of communication and collaboration, blended/hybrid learning and teaching, methods and approaches for learning, teaching, evaluation and assessment, digital skills, learning environment. It is evident that the following trends specified before Covid-19 pandemic are still important: internationalization, life-long learning, student-centered shift, e-learning and digitalization. Thus, the list of already existed trends in higher education should be enlarged and expanded with those highlighted by the current unaccepted situation, focusing especially on modernization and transformation.

Discussion

Similar results were also found in the detailed analyses in the context of higher education following Covid-19 in Forbes report. For its part, the necessity has been indicated for higher education system to go through a revolution and make a forced leap into the future, when Covid-19 pandemic has been a start point in this procedure. According to Forbes report the following trends have been specified. Firstly, interdisciplinarity, study of the field from different perspectives for detailed understanding and critical thinking development, for opening new horizons for science. Secondly, active learning methods, including discussions,

research, practices, case-solving, problem-based classes, game tasks etc., where the student is central figure for solutions search, analyses and conclusions listing. Active learning is possible only in small groups and requires the flexibility and high level of professionalism from teaching staff. Thirdly, freedom and responsibility, individual trajectory of study process for significant motivation increase and real control over their own development with a sense of responsibility and involvement. Fourthly, digitalization and blended learning, as the development of online tools will continue. Lastly, the global perspective and mobility, as Covid-19 pandemic has clearly shown the interconnection of everything in the world, where international collaboration is the key one (Forbes, 2020). The trends specified in Forbes report are common to those previously indicated.

Moreover, Barnett Berry by indicating the post-Covid era of higher education lists similar trends: the importance of integrated student support system; work-time aspect; the understanding of the proper role of online with 24/7 learning environment, for more accessible, equitable and personalized innovative learning; effective collaboration inside and outside the educational institutions; with universal Internet access for every student; personalized learning; assessment system transformed to measure the student progress; teachers/educators lead their own professional learning through affinity networks and in collaboration with institutions; combined work of educators and other helping professionals for challenges and innovations (Berry, 2020).

Attention to the digital transformation of higher education has increased significantly in recent years, the Covid-19 pandemic has triggered the process by placing the parties involved into uncertain and unaccepted conditions. To increase the effectiveness of learning and teaching the important trends have to be followed. Some of the listed trends have been already specified and implemented, such as digitalization, student-centered shift, e-learning and life-long learning. While some trends have been added, modernization and transformation of study environment, methods and approaches for learning, teaching, evaluation and assessment, digital skills and learning environment, assessment system update and innovation.

Further research is required as Covid-19 pandemic is still in process. Since the current research has been conducted in the certain period of time the main limitation is that there are no results available of trends implementation and effectiveness check. Therefore, the offered list of trends should be renewed once again after the detailed analyses when the Covid-19 pandemic is over and regular conditions will follow.

Conclusion

The offered research provided us with a wide source of information to identify the key trends and frameworks in the context of higher education following Covid-19 pandemic, especially focusing on the aspect of learning and teaching.

Looking at the indicators being analyze, it is noticeable that the key points put into the formation of new trends in higher education are as following:

- methods of communication and collaboration;
- blended/hybrid learning and teaching;
- new methods and approaches for learning, teaching, evaluation and assessment;
- development of digital skills as for students as for teachers and educators;
- modernization and implementation of innovations in learning environment.

However, the trends, specified before Covid-19 pandemic are still important: internationalization, life-long learning, student-centered shift, e-learning and digitalization.

Thus, the list of already existed trends in higher education should be enlarged and expanded with those highlighted by the current unaccepted situation, focusing especially on modernization and transformation.

Further research is required as Covid-19 pandemic is still in process. Since the current research has been conducted in the certain period of time the main limitation is that there are no results available of trends implementation and effectiveness check. Therefore, the offered list of trends should be renewed once again after the detailed analyses when the Covid-19 pandemic is over and regular conditions will follow.

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STRATEGY TO FORM STUDENTS POSITIVE MOTIVATION TO EDUCATIONAL AND PROJECT PROFESSIONAL ACTIVITIES

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Abstract. *The article presents the authors' strategy for the formation of positive motivation of students to educational and project professional activities, based on students' project activities structuring and management at different hierarchical levels. For each level (academic discipline, main professional educational program, faculty, university, region, country) the authors propose various forms of project implementation, the content of which meets modern school challenges, professional community requirements and contributes to the transformation of the diffuse nature of students' needs towards professional motives.*

In the course of the research, both theoretical methods (pedagogical literature analysis, modeling) and empirical methods (pedagogical experiment, questionnaire) were used.

The basis for the experimental part of the study was made by 1st year students of Pskov State University, taking the course "Pedagogical Education", studying the discipline "Introduction to Pedagogical Activity" that is built on the basis of a project-oriented program.

An important educational effect of the presented strategy implementation was the growth of motives for professional self-realization, improvement of the emotional background of students' motivation for professional activity, awareness of the subjective need for active interaction, as well as the acquisition of certain educational skills related to project activities and useful for teachers' successful work.

Keywords: *educational and professional activities, project-oriented program, students' motivation.*

Introduction

The leading function of the university today is a professional one. However, the question of the terms and technologies of introducing students to the profession remains unresolved. In the pedagogical community and in the state structures of Russia, people insist more and more on the early inclusion of students in professional activities, as well as on the employment of senior students of

pedagogical universities in educational institutions (Prikaz Minprosveshcheniya RF, 2020), what actualizes the need to involve a student in professional activities already in the junior courses of pedagogical educational programs. The new federal state educational standard of higher education (FSES HE) in the direction of “Teacher education” requires strengthening the practical orientation of teacher training. Thus, there has been an increase in the minimum values of the practice volume by three times: from 21 (FSES HE2015) up to 60 credit units (FSES HE 2018). At the same time, a simple quantitative increase in practice hours without an essential change in the approach to the organization of students’ educational activities will not lead to an increase in the professional competence of the latter. The solution to the problem is possible in the implementation of project-oriented programs in the training of future teachers.

The article presents the authors’ strategy for the organization of project-oriented education of future primary school teachers, and analyzes its effectiveness in terms of developing students’ motivation for educational and project-based professional activities.

The Theoretical Background

The methodological basis of the research is the ideas of constructivist pedagogy, based on the discoveries of L.S. Vygotsky (Vygotsky, 2005), J. Bruner (Bruner, 1990) and their followers, who revealed the unproductivity of direct transfer of knowledge from the teacher to the student and determined the need to create conditions for generating the student's own experience in activity.

So, E. Glazersfeld writes about the need to operate with knowledge, about the priority of mastering not so much the concepts themselves, but the ways of dealing with them (Glazersfeld, 1995). In her work, devoted to the review of modern literature on the problems of constructivism in teaching, N. Babich notes the recognition of this approach of the process and functionality of knowledge, teaching as an active process of building knowledge, the result of students’ participation “in an active community” and teaching as a process of “supporting learning” (Babich, 2013, p.27).

The project-oriented approach is an actual direction in education that develops these ideas.

Project-oriented teacher training programs are widely represented within the framework of practice-oriented approaches (Emelianova, 2020). In particular, the experience of implementing models of “real-world problem-based learning (PBL)”, which uses, among other things, the work of students on group projects (Meiers, 2007), as well as “project-based learning”, when students are involved in the study of real-world problems, is useful (Hmelo-Silver & Barrows, 2006).

For our research, the works that describe the types of project activities and project-oriented programs are of particular interest (Mrdulyash, 2017); as well as the works devoted to the analysis of institutional mechanisms for the implementation of project-based learning in higher education organizations (Fedoseev, A., Andryushkov, A., Belinskaya, M., Lazarev, A., & Prosekin, M., 2018), integration of project-based learning into various types of educational activities in teacher education (Ivanova & Vinogradova, 2020), the questions of readiness of students of pedagogical profiles for project-oriented training (Medvedeva, Martynyuk, Pan'kova, & Solovyova, 2020). The authors also have experience in organizing students' project activities in a number of disciplines (Vitkovskaya, Solovyeva & Ovchinnikova, 2020; Solovyeva & Vitkovskaya, 2020).

At the same time, these studies did not pay enough attention to the structuring of students' project activities at different hierarchical levels, as well as to the issues of managing this activity by means of the academic subject.

The analysis of the literature sources allowed us to proceed from the fact that project-oriented training of students who are just starting their studies at the university involves the inclusion of students in project activities that leads to the creation of their own products. Thus, both the product created in the design process and the solution of training tasks become equivalent goals. The purpose of creating and using projects is to involve the student in a professional activity that bears all the features of an educational one, and, in essence, is an educational and professional one. The professional aspect of this activity is manifested in the fact that the student solves (theoretically or practically) professional tasks, and the form of the project requires him to implement the full life cycle (Fedoseev et al., 2018) – from the concept to the receipt and implementation of the product. The educational meaning of such training is to master the student's key academic competencies: set goals, plan, predict, find and update information, monitor and evaluate the work of your own and others, cooperate. Here the student masters the general way of solving a professional problem – the way of designing.

Methodology and Organization of the Research

To achieve the goal of the study, the authors used methods of modeling, designing educational programs, questionnaires, and qualitative and quantitative analysis of the empirical data obtained.

The modeling method allowed us to build a strategy for the implementation of a project-oriented program aimed at forming a positive motivation of students for educational and project professional activities, the system-forming (basic) element of which is the academic subject.

Let us explain our position. Subjects compulsory for students allow us to manage the process of acquiring by them training and professional competencies, which provides training time to master the common way to solve professional tasks of designing, introducing technologies that are guaranteed to achieve results, but also has a control unit that includes assessment tools that allow to diagnose and, if necessary, adjust the competence formed.

In the structure of the proposed model, the management of project activities of students is carried out (ongoing), also at the level of the basic professional educational program (BPEP), the faculty (Institute), the University level, the level of the municipality, the region, and the Russian Federation.

The integration of projects initiated in an academic subject into project activities at higher levels ensures the interconnection of individual and social learning, involving several interconnected learning systems operating in a “spiral reciprocity” (Salomon & Perkins, 1998).

At each level of the model, the forms of project implementation are defined. So, at the level of an academic subject this is the construction of academic subjects in the format of project-oriented programs that form the student’s project thinking when working on the problems related to the profession, the level of OPOP involves the introduction of the type of tasks of professional activity – project, the development of appropriate competencies, the inclusion into the curriculum of special disciplines that teach project activities, practices, the implementation of course and final projects. At the faculty (institute) level, students are involved in the organization and support of scientific and professional events, in various forms of student self-government. The university level involves students in projects of special structures of the university, city and region level - in social, cultural, educational projects, contests, finally, at the level of the Russian Federation it means participating in professional contests.

The experimental work involved three stages. The preparatory stage included the development of a project-oriented program of the subject on the basis outlined above models, as well as ascertaining surveying students to identify the orientation of the motives of educational and project activities, allowing to allocate the control and experimental groups. At the main stage, a project-oriented program was implemented in an experimental group of students. At the final stage, the results were summed up, a control questionnaire was conducted in the control and experimental groups of students, and a comparative analysis of the obtained empirical data was performed.

The Results of the Empirical Research

The study was conducted at Pskov State University (PSU) in the 2019-20 academic year with the 1st-year students studying in the direction of “Teacher

Education”, but at different departments: the first group – “Primary education and correctional pedagogy” – 51 students and the second group – “Technology and Economics” - 43 participants. The subject, which is the system-forming level of the hierarchical model, is the course “Introduction to Pedagogical Activity”, which is taught in the 1st term of the 1st course in all pedagogical profiles. This course is orientational in nature, it is given a large place in the formation and development of professional orientation of students.

A significant role in the formation of the professional orientation of the future teacher is played by its affective component, which includes, among other things, the motivation of the student. In this regard, we were interested in the orientation of the motives of students’ educational and project activities, the presence of the motives and how strong they are for professional self-realization of students. To identify the nature of motivation, both groups of students were offered a questionnaire, the results of which made it possible to determine the control and experimental groups of students. In the control group, the discipline was taught traditionally, in the experimental group – on the basis of a project-oriented program.

When developing a project-oriented program, we chose such a type of it, when there is only one design of the technologies within the educational program, along with other types of educational formats (seminars, trainings, lectures, and others) (Mrdulyash, 2017). This type was chosen based on the specifics of the subject: the very beginning of training at the university, as well as the fact that students had little experience working in projects. Thus, the results of a written survey of students of the experimental group showed that 45% of the 51 participants never participated in project activities, while the rest (55%) noted that they only sometimes took part in projects.

Planning and management of students’ work at this and subsequent stages was carried out within the framework of the rating system of assessment using the technological map of the subject, in which a project module was introduced for the experimental group. At the preparatory stage, the first-year students were introduced to the technological map. A lesson was developed and conducted aimed at their theoretical preparation for participation in projects.

At the main stage of the program the students dealt with the problems of the discipline through the development of full life cycle projects related to the issues of professional activity. The first project – an individual one – was of a research nature. Each student chose one of the issues of modern education proposed by the teacher: “Teacher – who is he: a spiritual mentor or a representative of the educational services?”, “Will artificial intelligence replace the teacher?” and etc. The work on this project was carried out in connection with the projects of the university level, as well as of the highest level. It was proposed to take part in the competition of student projects established by the Council of Rectors of

universities of the Northwestern Federal District called “Russia – aspiring to the future” (Konkurs studencheskih proektov “Rossiya, ustremlennaya v budushchee”, 2019) by completing an essay or filming a video on one of the mentioned above issues. 12 students of the experimental group took part in the regional stage of this competition, organized by Pskov State University, presenting 3 individual and four group projects. Three projects took winning places. The project that won the first place – an essay on the topic “A modern teacher – who is he?” – took part in the district stage of the competition in St. Petersburg.

The next project was of an applied nature and was carried out by groups of students. Among them were the following events: the organization of a conference on the educators and innovators’ creativity, the organization and conducting a competition for freshmen: “On the way to teaching excellence”, as well as a project for organizing extracurricular activities of younger students on the topic “How to save the ecology of the Pskov region”, which was developed and implemented directly at school. It should be noted that the first two projects had a meaningful connection with the third, faculty (institute) level of the model. These events were organized for all three pedagogical departments of the Institute of Education and Social Sciences of Pskov State University. Project-based learning for the pilot group was that each of these activities was designed and delivered as a project by the groups of freshmen. In addition to the developers, all students of the academic group were involved in the implementation of projects as team members or supporters (with each micro-group preparing its own project), or as developers of interactive information on the work of one or another famous teacher.

The connection of the projects within the described discipline with the content of the second level of the model – at the level of the main professional educational program – was in solving a number of issues of professional activity of the project type, prescribed in the main professional educational program: the organization of project and research (including scientific research) students’ activities related to learning problems, education and development of junior schoolchildren, as well as designing their own educational route and professional career, which was expressed in the preparation by the students their individual projects, so called “Programs of professional self-development”.

From the point of view of achieving the objectives of our research we should highlight an important feature of student projects which is openness and integration into different social groups. Here we support the idea of student involvement in the professional community (Fedoseev et al., 2018), complementing it with involvement in student communities, as well as in possible social projects. In this regard, as it has already been mentioned above, one of the additional tasks of the project module in the technological map of the discipline

was the participation of students in the implementation of projects at their choice: at the university level, as well as the city level, region and country levels. Modern reality offers the student many opportunities to participate in projects. So, at Pskov State University there is a whole set of activities at the department of educational projects and initiatives, as well as the department for youth policy, including the youth project office. Among them we can point out the open discussion platform “TOK'ing”, where hot issues of the Pskov region are discussed, and the interuniversity festival of artistic creativity called “University of Stars”. At the city and regional level, social projects are extremely important, first of all, those related to the current volunteer activities: food delivery to the elderly, work in call centers. Participation in these programs has an invaluable educational impact on young people, preparing future teachers for educational work with children.

Since such projects relate to extracurricular activities, they could not be hardcoded. At the same time, students were encouraged to seek out and participate in such activities, which developed their learning skills and formed professional competencies. So, all 1st year students of the experimental group took part in the qualifying round of the All-Russian Olympiad for students “I am a professional” (Vserossijskaya olimpiada studentov “YA – professional”, 2020), one student in 2020 passed to the regional stage of the Olympiad and took part in it. To prepare for the competition when developing a lesson project, she had to establish contacts with the school where she studied: with pupils and teachers, and at the same time, she initiated interaction with university teachers who facilitated her participation. Thus, a full-fledged project-oriented learning was implemented.

The final stage of the research involved students' presentation of completed projects and their analysis, as well as reflection and identification of the attitude of students of the experimental and control groups to project-oriented learning through questionnaires. Let us recall that the questionnaire was conducted in both groups, also, before the experimental training.

We used a modified version of the methodology for diagnosing the orientation of educational motivation by T.D. Dubovitskaya (Dubovitskaya, 2002). The judgments presented in the stimulus material of the methodology were reformulated in such a way that they dealt with project activities. Students were offered 20 statements about which they needed to express their consent or disagreement. Half of the statements reflected positive motives, which included internal cognitive motives, as well as external positive ones: motives of personal and professional development, cooperation, emotional attractiveness. Traditionally, negative motives were attributed to external avoidance motives, implying the performance of work due to obedience to the requirements of the teacher, the need to follow the curriculum, have a positive assessment, and avoid trouble. One of the indicators characterizing the motive of social success (“I don't

want to be worse than others”), in the framework of this study, we referred to as neutral. The calculation of indicators in points was carried out in accordance with the key: the match with the key was assessed by 1 point, the non-match – 0 points (Dubovitskaya, 2002).

The results obtained were divided into groups reflecting the following levels which we had adjusted:

0-5 – low level: negative avoidance motives prevail;

6-10 – below average level: both negative avoidance motives and neutral motives of social success are presented; there are some positive motives, which in the statements of the respondents are less than 50%;

11-14 – average level: mostly positive motivation, including – personal and professional development, cognitive motives; negative motives are less represented (less than 50%);

15-20 – high level: significant predominance of cognitive motives, motives of personal and professional development; there are individual statements of respondents characterizing neutral and negative motives, accounting for less than 25%.

The results of the survey are shown in Figure 1.

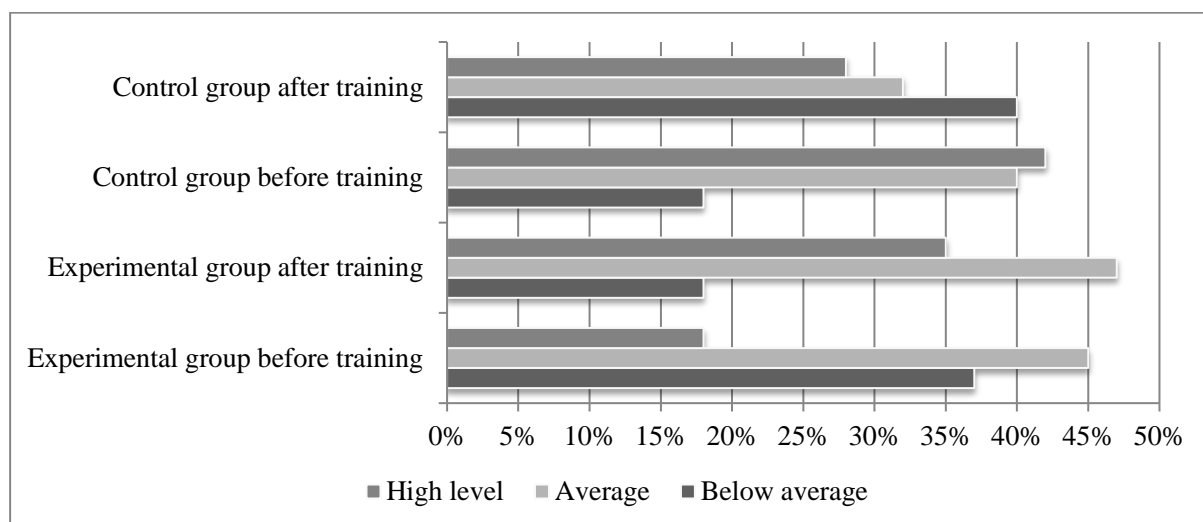


Figure 1 Development Levels of Positive Motivation of Educational and Project Activity of Experimental and Control Groups Students

Both groups were interviewed before and after completing the course of “Introduction to Pedagogical Activity”. The decrease in the results of the control group (the high level of positive motivation decreased from 42 to 28%, and the level “below average” increased by 22% – from 18 to 40%) can be explained by the nature of the questions, the content of which related to project activities that were absent in teaching students of this groups.

In the development of the motivation of students in the experimental group, there is a significant positive dynamics: the high level increased from 18 to 35%, the average level slightly increased – from 45 to 47%, and the level “below average” dropped significantly – from 37 to 18%.

Structural analysis of the motivation of students in the experimental group is presented in Figure 2.

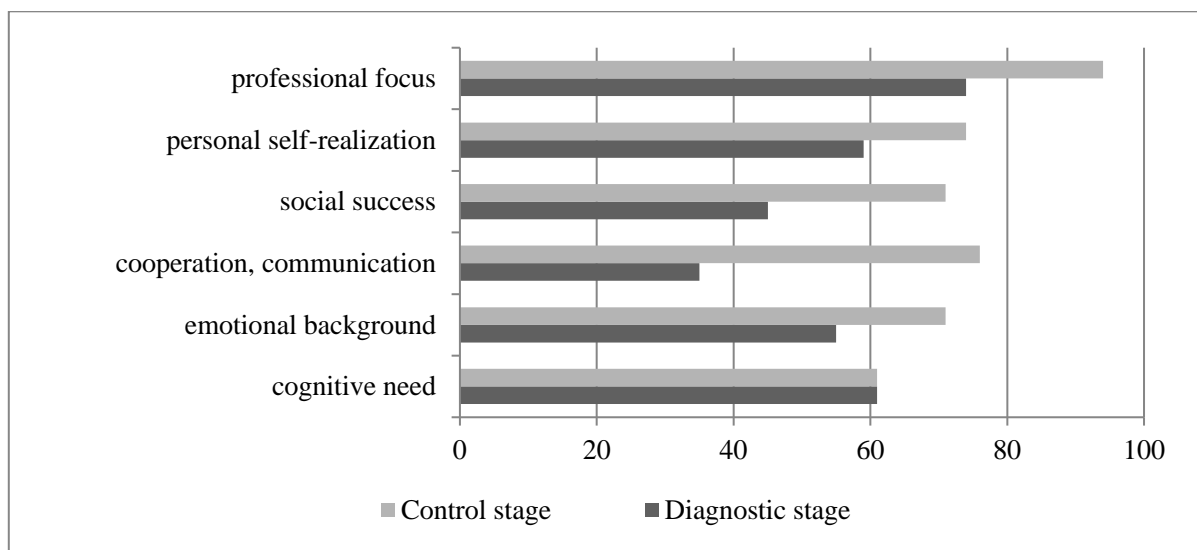


Figure 2 Orientation of Motivation of Educational and Project Activities of the Experimental Group Students

As can be seen in the figure, only internal cognitive motives did not have dynamics, which is explained, in part, by the high level of their development at the ascertaining stage of the experiment (for 61% of the respondents). As for the remaining groups of students’ positive motives in relation to educational and project activities, there is a significant increase: from 15% in the group of motives for personal self-realization to 41% in the motivation for cooperation. Particularly important for our study are high rates of motives for professional self-realization, which increased by 20 percent: from 74 to 94%, which directly confirms the effectiveness of the proposed strategy of project-oriented student learning in their professional development. We believe that since all projects carried out by students, in their topics and content, reflected the professional activity of a teacher, all other indicators of motivation also indirectly characterize the attitude of students to their future profession.

Conclusions

Thus, the study showed that the developed strategy for teaching students on the basis of a project-oriented program, based on the structuring and management of students' project activities at different hierarchical levels at the basic level of the academic discipline, allows to successfully form positive motivation of students for educational and project activities. It should be noted that in the structure of this motivation, a significant place is occupied by motives of professional self-realization, which allows us to conclude that the strategy has a positive influence on the professional development of future teachers. We also emphasize the indirect positive influence on the attitude to the future profession and motives of a different orientation (cooperation, emotional attractiveness, personal self-realization).

This model may be relevant for the implementation in other disciplines of the general professional module on pedagogical educational programs in order to form professional, primarily, project competencies in future teachers. The described strategy can be successful in a situation where there are no specially allocated credit units for project activities in the curriculum, or, if there are any, as a means of practical implementation of the design skills formed in special disciplines in relation to the educational and professional activities of a student – a future teacher.

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CHANGING FOREIGN LANGUAGE TEACHING STANDARDS AS A CONDITION FOR UNIVERSITY GRADUATES' EMPLOYABILITY

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Abstract. *The main aim of the study is to substantiate a new foreign language teaching standard in the universities of Russia closing the gap between the standards and the modern job market demands. In order to achieve this aim it is necessary to define the vector of the changes and correlate them with the bachelor and master students' requirements. The main changes which the modern labor market is undergoing are the emergence of new related professions, blurring borders between professions, difficulties defining narrow vocational standards. The study hypothesizes that foreign language teaching standards should be transformed towards greater interdisciplinarity and development of soft skills rather than a merely linguistic component in the course. The main methods of research, namely analyzing literature on the soft skills in demand with employers, polls of bachelors and masters on the need and possibility to develop soft skills in the ELT classroom, allowed identifying the soft skills which are in greater demand in terms of employability in the modern job market and received a positive feedback from the respondents – communicative competence, learnability, critical and creative thinking, collaboration skills. A similar poll was conducted among the graduates of the CAAS MSU working in various spheres. The study resulted in developing the new foreign language teaching standard which encompasses teaching two European languages, instructing with the help of interdisciplinary materials and forming soft skills on all the stages of foreign language acquisition.*

Keywords: *communicative competency, foreign language curriculum, interdisciplinary approach, labor market, learning to learn, soft skills.*

Introduction

The topicality of the study is determined by the necessity to develop a new standard of foreign language teaching in Russian universities taking into consideration significant changes occurring in the employment market. These changes are connected with globalization which has led to an increasing role of multinational corporations whose employees can be transferred between different spheres or even between different countries. Over the past 20 years Russia has

seen the growth in the number of small- and medium-size businesses which often work beyond Russia or have overseas partners. A manager must be able to independently conduct negotiations, maintain business correspondence, and check documents in a foreign language. Another feature of the modern job market is blurring vocational borders. The polls among the graduates demonstrate that they have to work in various fields – international organizations, diplomatic representative offices, trade missions, banks, business or scientific institutions. It means it is quite difficult to assume in which area a graduate of university humanitarian faculties will work upon graduation or whether they will be employed there for the rest of their working life. Thus, it seems obvious that soft skills should become an integral part of education in general and foreign language instruction in particular. The study aimed to discover via students' questionnaires whether the students at various stages of their education are aware of soft skills and their importance and how the most important soft skills can be formed and/or developed in a foreign language classroom apart from tasks and activities offered by course books. The authors' hypothesis is that it can be achieved through an interdisciplinary approach and multilingualism, i.e. teaching two European languages.

Theoretical Framework

The concept of skills which can help people succeed in life and profession followed the idea of life-long learning. There are abundant definitions of soft skills – 21st century skills, transferable skills, life skills, key competences being just a few. Very generally life skills have been defined as "...skills or abilities individuals need in order to achieve success in life, within the context of their socio-cultural milieu, through adaptation to, shaping of, and selection of environments" (Binkley, Erstad, Herman, Raizen, Ripley, & Rumble, 2010, p. 51).

This study analyzed the materials of the World Economic Forum in order to single out the vital soft skills which are predicted to be in demand with employers in many, if not all, spheres of work.

The event of the World Economic Forum in Dubai, March 2015, focused on education and identified 16 key skills for the 21st century placed into three categories – basic literacy, competencies and personal characteristics (World Economic Forum, 2015).

Most research works on soft skills agree that all skills can be learned and developed (Kechagias, 2011). Thus, in the context of foreign language teaching, it is the competencies in the scheme of the 21st century skills that are of a particular interest, i.e., critical thinking, creativity, communication and collaboration, though some personality traits such as inquisitiveness,

determination, ability to adapt, social and cultural awareness, can also be developed through opting for certain approaches, curricula and methods of instruction.

According to the report by the World Economic Forum “The Future of Jobs 2020” (World Economic Forum, 2020), critical and creative thinking are gaining an increasing importance for the early 2020-es, followed by a greater demand for emotional intellect. Towards 2022 such skills as memory and verbal abilities (including active reading and listening, writing and speaking) will be playing an ever growing role. No doubt this is where foreign language instruction can actively come into play.

Another important source on soft skills is The Cambridge Framework of Life Competencies (CFLC) which concerns human functioning in various spheres of life and is not directly related to specific content areas in which people learning or using an L2 or L3 specialize (Cambridge Framework of Life Competencies (CFLC), 2018). “Competency” is defined by the Council of Europe as a mix of knowledge, skills and attitudes where:

knowledge – facts and figures, concepts, ideas and theories which are already established and support the understanding of a certain area or subject;

skills – ability and capacity to carry out processes and use the existing knowledge to achieve results;

attitudes – disposition and mind-sets to act/ react to ideas, persons or situations (Council Recommendations..., 2018).

The CFLC includes the following competencies: creative thinking, critical thinking, learning to learn, communication, emotional development, collaboration and social development. Each competency is further subdivided into component competencies. The first five competencies are of utmost relevance for this study.

Creative thinking is a complex concept which is characterized by divergent thinking, imagination, cognitive flexibility, intrinsic motivation and joy from dealing with things previously unfamiliar. Three components of creative thinking are: participating in creative activities; creating new content from own ideas or other resources; using newly created content to solve problems (CFLC, 2018).

Critical thinking refers to higher levels of thinking and consists of identifying links between ideas, analysing points of view and evaluating arguments, supporting evidence, synthesizing ideas and information, reasoning and conclusions (CFLC, 2018).

Learning to learn also comprises three components: practical skills for participating in learning, the so-called learning technologies; taking control and managing your own learning; self-reflection and self-assessment (CFLC, 2018).

Communication, or communication competency, is regarded as an essential skill for business professionals (Cenere, Gill, Lawson, & Lewis, 2015, p. xiii) undoubtedly extending far beyond reading and writing. “Good communication

skills make us employable, regardless of the specialization we are choosing within the business world” (Cenere et al, 2015, p. xiii). Communication is affected by complex human behavior, both verbal and non-verbal, when an individual demonstrates his or her own way of comprehending and interpreting meaning. “Mastering effective communication is a skill which can be developed and honed and is distinct from mastering the core linguistic features of a language” (CFLC, 2018, p. 5). Within the CFLC, communication comprises the following competencies: using appropriate language/register for context; managing conversations; participating with appropriate confidence and clarity (CFLC, 2018).

Collaboration involves the ability to work in a team towards a common goal, distribution of tasks and conflict management.

The concept of emotional intelligence dates back to 1990, when it was defined as “a set of skills hypothesized to contribute to the accurate appraisal and expression of emotion in oneself and in others, the effective regulation of emotion in self and others, and the use of feelings to motivate, plan, and achieve in one's life” (Salovey & Mayer, 1990, p. 185). Numerous research works have shown that emotional intelligence can account for academic and social achievements as well as the worker's success in the job market to a greater extent than cognitive abilities (Pope, Roper, & Qualter, 2011). Being able to result in productive relationships at a workplace, stronger collaboration and teaming, interpersonal skills can determine companies' success as well (Goleman, 1998; Mayer, Salovey, & Caruzo, 2008). The three main components of emotional development are: defining and comprehending emotions; managing one's emotions, empathy and relationship building skills (CFLC, 2018).

Emotional development can definitely become one of the targets of foreign language instruction, as it cannot be denied that studying languages and various cultures helps develop empathy and tolerance towards other people's sentiments.

One of the obvious ways to integrate soft skills into foreign language courses is to include tasks and activities aimed at problem-solving, pair and group work, debates, presentations, role play and others (Tevdovska, 2015). The authors' hypothesis is that it can be done through teaching university students two European languages and adopting an interdisciplinary approach.

Multilingualism has been shown to develop such vital skills as learnability (Marian & Shook, 2012); creativity (Furlong, 2009; Maley & Peachey, 2010); emotional intellect, competencies and foreign language enjoyment (Dewaele & Macintyre, 2014), critical thinking and other cognitive abilities (Keysar, Hayakawa & An, 2012; Bartolotti & Marian, 2012; Wallin, 2019) and, obviously, communicative competency.

As for the interdisciplinary approach to teaching is has been shown to develop critical thinking (establishing ties, analyzing and synthesizing ideas),

creative thinking (divergent thinking, complex approach to problem-solving, imagination), self-awareness and confidence.

Methodological Framework

In accordance with the aim of the study the following objectives were set:

- to explore the opinions of the 3^d- and 4th-year undergraduates on the prospect of studying a second European language from scratch after completing a 5-term English language course;
- to find out whether the 4th-year undergraduates and master students realize the importance of soft skills and which ones they regards as the most important;
- to query the graduates who are either working full time or combining work and post-graduate study about the soft skills and compare their responses with the above mentioned groups of students;
- to study whether all groups of the respondents consider the foreign language classroom a conducive environment for honing their soft skills;
- to explore how the students feel about interdisciplinary materials, which difficulties and challenges they might face.

Several polls were conducted over 2 years in order to verify whether the bachelor and master students might be interested in having a new standard developed, which would be aimed at acquiring two European languages, forming vital soft skills and studying interdisciplinary English course books.

All the questionnaires were designed by the authors in Russian, the mother tongue of the respondents, and consisted of questions of a close-ended, multi-choice type. The participants were asked to select up to 3 options out of several. There were 6 questions in the poll concerning the attitudes to a prospect of studying a second European language as part of the curriculum. The poll was conducted in autumn 2019 and was answered by 91 respondents. The questionnaire dealing with the students' opinions on the importance of soft skills and their development at foreign language lessons was carried out in autumn 2020 and produced 45 responses. Another poll concerned the students' attitudes towards interdisciplinary course books and materials and comprised 7 questions. The poll was conducted in April 2019 and brought 50 responses. These three questionnaires were typed out and distributed in class among the potential respondents who completed the questionnaires at leisure and submitted them in the teachers' absence. The poll targeting the graduates was compiled in *Google Forms* in January 2021 and sent out to them via a link, because these respondents could not be reached on the premises of the college. Their responses (23) were also anonymous. All the answers were subsequently compared and analyzed.

Results and Discussion

The aim of the first survey was to reveal whether the future specialists in Oriental and African Studies were willing to take up two European languages as part of the curriculum alongside their oriental/African one. Studying these languages often requires substantial input of time and effort but might not be in immediate demand in the labour market. Most college students learned English at school, quite often up to C1 or even C2 level by the time they apply to university. The respondents in the survey were 91 undergraduate students in the 5th or 7th semester. One hundred percent expressed the opinion that the knowledge of two European languages was necessary or very desirable. Sixty one percent consider that English alone is not sufficient for communicating in all possible professional and non-professional domains, while the majority realizes that command of two European languages may enhance their academic prospects (69.2 %) and career prospects (72.5 %).

The target group of the second survey (September 2020) consisted of bachelor students in their final year (4th year) and master students, i.e. those who are likely to be aware of the practical value of their education and to closely think about their future careers. The poll revealed that the majority of participants (91 %) acknowledge that theoretical knowledge given during the course of study should be combined with developing soft-skills. Only 1 person emphasized that core theoretical knowledge is sufficient, and two more respondents pointed out the utmost significance of soft skills alone. When asked to select the most important soft skills (out of critical and creative thinking, emotional development, learning to learn, collaboration), critical thinking was ranked top (68.8 %) followed by learnability (60) and collaboration (57.7 %). Creative thinking and emotional intellect had practically the same number of votes (46.6 % and 37 % respectively).

Another finding was that the overwhelming majority of the participants (97.7 %) responded that soft skills can and must be formed and honed in a foreign language classroom, while less than a half found it desirable. Finally, when asked to grade aspects for assessment (concrete material of the term, acquired competencies or soft skills), the majority (55.5 %) consider that competencies directly affecting the mastery of a foreign language should be assessed during formative and summative assessments, only 3 (6 %) respondents find it possible to assess soft skills. Possibly, the students feel somewhat fearful of their soft skills being assessed as there are no stringent criteria of assessing such qualities as creativity or teamwork. It is rather a psychological personality assessment where objective judgments are not possible.

A separate poll with the identical questions was conducted among the graduates of the College of Asian and African Studies and produced 27 responses.

The majority of participants either work full time (7) or combine work with post-graduate studies (14 persons).

Most respondents (92.6 %) agree that both core theoretical knowledge and soft skills are important for their career. Two respondents think the same about soft skills alone, none consider theoretical knowledge sufficient.

The overwhelming majority named learning to learn the most important skill (92%), followed by critical thinking (78.3 %), while collaboration and emotional intellect scored the same (43.5 %) following creative thinking (52.2 %). The respondents could also identify the qualities they themselves find important in an open-ended question. The traits they mentioned were public speaking skills and communicability, i.e. aspects of the communication competence.

Most respondents (78.3 %) stated that soft skills can and must be developed in a foreign language course, about a quarter (27.1 %) consider it possible. Almost a half (48.1 %) agreed that activities they did at their European language lessons contributed to the development of their soft skills, another 37 % found it possible. Nevertheless, three participants answered negatively.

Only 3 respondents share an opinion that it is most appropriate to assess the material studied during the term, 8 respondents think that it should be competencies, while another 5 consider that it is most acceptable to assess soft skills. On the whole, most participants point out that assessment should take into account all the three components – the material, the communication competencies and the soft skills.

The comparison of the results of the polls among bachelors/masters and graduates/post-graduates reveals shared opinions. Thus, most respondents from all the age groups find it necessary to combine core discipline knowledge with soft skills. As far as the most important skill was concerned, those graduates who are already in employment named learning to learn the first, putting critical thinking second. Bachelor and master students did the reverse.

As for the assessment, both formative and summative, more adult respondents were less apprehensive about their soft skills being assessed (18 % support the idea vs 6 %).

One more poll was conducted among the junior and senior students in order to reveal their attitudes to interdisciplinary materials and course books (Klyukina, Ziza, 2019).

As it can be expected, the students face some challenges of interdisciplinary approach, e.g., most respondents find the material connected with physics and chemistry to be the most difficult, while economics seems to be the hardest for future historians and philologists.

Nevertheless, the results seem to prove that the students feel positive about such an experience for various reasons – 66 % agree that studying material from various disciplines broadens their horizons, 50 % are of the opinion that it is

necessary to be capable of understanding the content coming from different fields of knowledge, while 27 % pragmatically remark that one never knows which knowledge and lexis can come in handy in the future.

The results of all the polls can be summed up as follows (not in the chronological order):

- the respondents realize the importance of soft skills, particularly critical thinking and learnability;
- the respondents find it possible and necessary to form and hone soft skills at a foreign language lesson;
- most respondents are willing to take up a second European language;
- most respondents support the interdisciplinary approach to foreign language studies.

The following tasks were solved as a result of the study:

- a foundation for a foreign language course orientated towards its practical usage in various spheres was identified – namely, forming and developing vital soft skills;
- the polls of the students demonstrated their willingness to study two European languages, provided their mastery of English is sufficient, which will not only expand the geography for the graduates' employability, but also foster vital soft skills such as learning to learn (developing memory and attention), critical thinking (through comparing L2 and L3) and communication competence, which involves not only mastering the language of an interlocutor, but also the elements of culture and ways of thinking;
- the polls showed some advantages of interdisciplinary course books, which offer a wide range of vocabulary from various content areas, practice common grammatical structures coupled with stylistic peculiarities of different professional registers of speech;
- the polls verify that the university students are interested in having their foreign language teaching standard modified.

Conclusion

The study had its practical result in a new foreign language instruction standard being developed for the College of Asian and African Studies of Lomonosov Moscow State University, which includes:

- teaching two European languages – English up to B2-C1 level and a second European language at the students' choice;
- using interdisciplinary course books and materials to teach English;
- forming and developing soft skills during foreign language classes alongside the linguistic component of the course.

Further research should be aimed at substantiating a new format of assessing the learning outcomes of the course and at defining priorities.

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CRITERIA AND INDICATORS OF THE DEVELOPMENT OF MUSICIAN'S TIMBRE HEARING

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Abstract. *Musical practice constantly lays down requirements to a musician's hearing. An important tendency of a contemporary musical thinking is the intensification of the timbral beginning, which now starts to come to the foreground as one of the most significant expressive and form-developing means.*

Timbre hearing is one type of harmonic hearing (Teplov, 1947) and one of the most essential components at teaching a contemporary musician's hearing, though in the teaching practice it has not been adequately reflected as yet. The development of the ability of hearing to perceive the expressive sense of a timbre sounding is a vital condition for achieving professionalism in a musician's musical-performing activity. The precondition for a successful development of musical hearing, including that of timbre, is the process of diagnosticating its actual developmental level, which will help a teacher to organize a student's musically-practical activity.

The paper offers criteria and indicators for identifying the developmental level of musician's timbre hearing.

Research Aim: to study the theoretical basis of timbre hearing and to develop criteria and indicators of its development.

Research methods: monitoring, modelling.

Keywords: *timbral hearing, criteria, indicators.*

Introduction

Musical practice constantly lays down new requirements to a musician's hearing. An important tendency of a contemporary musical thinking is the intensification of the timbral beginning, which now starts to come to the foreground as one of the most significant expressive and form-developing means.

Traditionally, the timbre hearing is interpreted as the ability to identify the timbral coloring of sounding voices or instruments, of single sounds and different sound combinations. According to B. Teplov, timbre hearing is one type of harmonic hearing (Teplov, 1947).

At present, researchers pay great attention to the characteristic features of pitch and timbre of sounds (Waters, 1994; Handel, 1995; Lyon & Shamma, 1996; Handel & Erickson, 2004; Levitin & Rogers, 2005), as well as to the issues of how timbre is perceived (Dinther & Patterson, 2006; Karaseva, 2009).

Dinther & Patterson (2006) have stressed that humans are good at recognizing timbre categories, to determine what instrument is playing a note, but also are very good within categories, as in comparing one violin to another. The development of the ability of hearing to perceive the expressive sense of a timbral sounding is a vital condition for achieving professionalism in musician's musical-performing activity.

This research is focused on such issues as:

- What exactly is a developed timbre hearing of a musician?
- Which criteria and indicators determine the developmental level of timbre hearing in a musical-performing activity?

The aim of the research is to study the theoretical basis of timbre hearing and to develop criteria and indicators of its development.

Methodology

Research methods used in this research are as follows:

- the analysis of methodological and theoretical literature, and the pedagogical experience on the issue under the research;
- modelling of criteria and indicators for the development of a musician's timbre hearing.

Theoretical Background

Due to the changes of the role of timbre and other sound qualities in music of the 20th -21st centuries (Teplov, 1947; Kirnarskaya, 2009; McLachlan, Marco & Wilson, 2013; McLachlan, 2016), researchers have started to focus their attention on issues related to the phenomenon of a sound color – timbre. Neil M. McLachlan (McLachlan, 2016), quoting *American National Standards Institute*, characterizes timbre as follows: *this is the attribute of an auditory sensation that allows it do be distinguished from other sounds at the same pitch and loudness* (American National Standards Institute, 1973).

Other authors define timbre as the time-varying pattern of spectral components by which a sound may be recognized (Handel, 1995; Handel & Erickson, 2004). Neil M. McLachlan emphasizes the fact that this definition aligns with common descriptions of the timbre of a sound according to its similarity with a remembered sound identity (McLachlan, 2016).

Sounds produced at the same pitch and loudness but performed on different instruments, by different voices or on one instrument but by different techniques of playing are distinguished one from the other by their timbres (McLachlan, Marco & Wilson, 2013).

Timbre is a unique individual sound color which belongs to a specific instrument. On the one hand, it is the timbre that makes sounding of a group of musical instruments (such as “wind-instruments” and “string-instruments”) sound the same, on the other hand, it is also the quality which within the frame of each “kindred” group of instruments allows distinguishing every specific instrument. (Starcheus, 2003; Kirnarskaya, 2009)

Timbre is a necessary component of musical-artistic information: music does not exist without a sound and, consequently, without timbre. Timbre as such is the most important means of performing expressiveness. Along with this, timbre together with other means of performing – nuancing, articulation, dynamics and tempo – forms the basis. In the contemporary music, timbre has assumed a special importance, since it often comes into forefront as one of the most essential means of expressiveness. As noted by D. Kirnarskaya (2009), in the phylogenesis and ontogenesis, timbre hearing is the earliest one, it is a part of the intoning hearing as an ability to perceive a sound as a unity of all its properties (pitch, timbre, loudness, articulation) (Kirnarskaya, 2009). Timbre hearing is one of the most significant components of the development of musician’s hearing. However, we have to mention the fact that in practice of teaching musical-theoretical disciplines (sol-fa course), the timbral component of musical hearing has not received full attention to, and its development remains passive as regards to melodic one. D. Kirnarskaya writes about the lack of attention to the development of timbre hearing, and notes that musical and pedagogical methods in the modern teaching system are analytical (Kirnarskaya, 2009).

In our country, in practice of teaching sol-fa at a secondary professional level (music school), the line of complicating pitch, mode and harmony difficulties is sufficiently well elaborated and methodologically well-constructed. Besides, we have to note that the amount of the study material has been reduced in respect to timbre. The potential of the diversity of a specific timbral incorporation into the music of the 20th -21st century is used insufficiently. The basic forms of work on the development of hearing (dictation and analysis by ear) are implemented under mono-timbral conditions – the piano. A peculiar type of perception – state, auditory contemplation of the qualitative changes and peculiarities of a timbral sounding – is currently shaping in the contemporary music. The main method is the method of auditory analysis of music.

Requirements to the contemporary music dictate the necessity to adopt the attitude to timbre as a compulsory object of learning. Therefore, a topical issue in a sol-fa course is the development of a multi-functional musical hearing, giving priority to such type of hearing as timbre hearing.

The development of timbre hearing provides musicians-professionals a lot of advantages:

- the ability to identify and single out among a group of instruments the timbre of a specific instrument by ear;
- the opportunity to hear one's own performance and understand how the technique of playing affects the timbre of a sound;
- the opportunity to find individualized subtle solutions in the field of sounding, timbre, to create an exquisite sound color;
- development of the ability to create more interesting arrangements at working on note texts when distributing them by voices and instruments.

The prerequisite for a successful development of musical hearing, including timbre, is the process of diagnosing the actual developmental level.

Defining Criteria and Indicators of the Development of Musician's Timbre Hearing

Sensitivity to musical timbre is a constituent part of the intoning hearing, responsible for perceiving all sides of sounding and emotional-semantic aspects of music. The development of timbre hearing must be tightly linked with improving the intoning hearing, with paying due attention to the character of sounding produced by the instrumental timbre combined with other means of expressiveness.

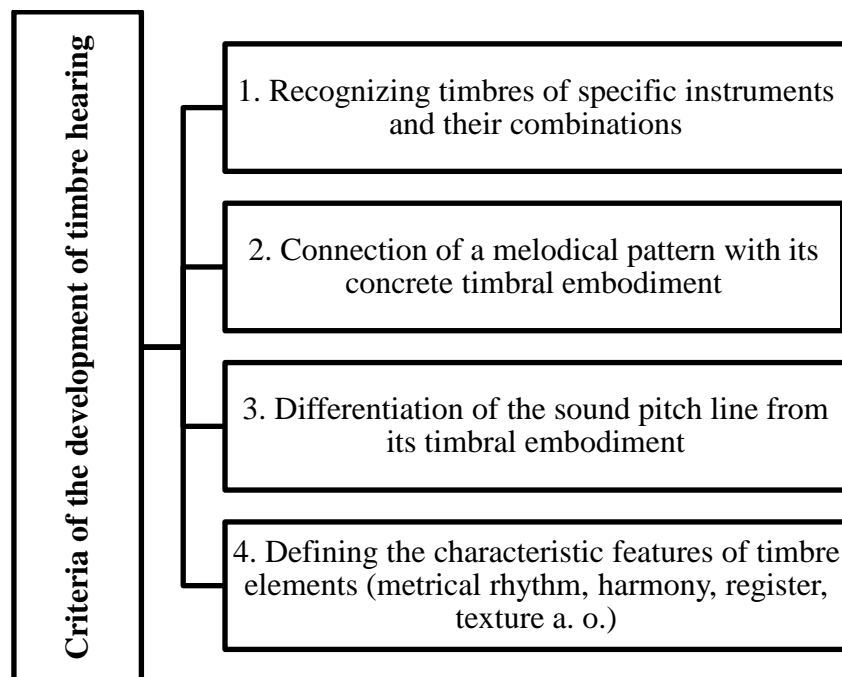


Figure 1 Criteria of the Development of Timbre Hearing

Relying on the theoretical basis of timbre hearing, during this research criteria and indicators of the development of timbre hearing were established. The four criteria that can be attributed to this category are as follows (see Fig. 1).

Three levels of the development of timbre hearing were defined for each criterion: low, average and high, as well as indicators corresponding to each of the levels.

Recognizing Timbres of Specific Instruments

Recognizing timbres implies the skill of distinguishing sounds and instruments, separate sounds, assessing timbres, their characteristic features and peculiar qualities such, for instance, as the skill to distinguish violin from trumpet. This occurs during the process of an auditory analysis of the timbre of a composition fragment provided for this analysis, (e. g, in the theme from the 2nd part of the Sixth symphony by Dmitry Shostakovich the solo instruments – flute and bass clarinet – are distinguished). It should be noted that perceiving timbres of different instruments sometimes causes “contemporary complications”, for instance, if an instrument sounds in a way unusual for it (e. g. a lyrical melody is performed on the trombone).

To recognize timbres of specific instruments and their combinations, three levels and their indicators have been developed (see Table 1).

Table 1 Level Indicators of the Criterion “Recognizing Timbres of Specific Instruments and Their Combinations”

Criterion	Indicators	Level
Recognizing timbres of specific instruments and their combinations	a) Difficulties in recognizing timbres of instruments; b) Errors in combination of instruments	Low
	a) Correctly recognized timbres of instruments; b) Errors in combination of instruments and partially in their horizontal alternation	Average
	Precisely recognized timbres and a correct combination and alternation of them	High

Connection of a Melodic Pattern with Its Concrete Timbral Embodiment

Sounds of the same pitch and loudness but performed on different instruments, in different voices or on the same instrument but by different techniques of playing are distinguished one from the other by their timbres. Perceiving timbres usually evokes various associations that can be compared to the sensations from objects and phenomena. The timbre of a sound might be

bright, soft, warm, cold, deep, sharp, satiated, metallic etc. Purely auditory definitions are also used: e. g. sonorous, dull, nasal. Connecting a melodic pattern with its concrete timbral embodiment helps a performer or a composer to select means of performing according to the instrument the specific theme refers to.

The technique of instrument playing may influence melodiousness: we know specific melodic formulas of brass instruments producing military and hunting signals. These timbral-intoning formulas include typical features of sounding, the timbre of instruments. There are a lot of such stereotyped patterns – those of flute and violin resonances, horn signals based on French-horns, a great number of trumpets etc.

To determine the connection of a melodic pattern with its concrete timbral embodiment the level indicators were developed (see Table 2).

Table 2 Level Indicators of the Criterion “Connection of a Melodic Pattern with Its Concrete Timbral Embodiment”

Criterion	Indicators	Level
Connection of a melodic pattern with its concrete timbral embodiment	The connection between the melodic pattern and its concrete timbral embodiment is not manifested	Low
	The connection between a melodic pattern and its concrete embodiment is partially manifested	Average
	A precise connection between a melody and its timbral embodiment	Low

Differentiation of a Sound Pitch Line From Its Timbral Embodiment

Timbre is a quality of the sound as such, while musical pitch is a quality that characterizes a sound in its relation to other sounds. Only after the pitch is disconnected, i. e. separated from timbre, it is possible to intone the sound by voice or play it on a musical instrument. Timbre may be felt as a peculiar, different from the pitch, quality which can be opposed to the pitch (a change of timbre without changing pitch and vice versa). B. Teplov maintains that only after the musical pitch has been separated from the initial timbre-pitch complex, timbre itself becomes a special musical quality (Teplov, 1947). Consequently, the differentiation of a sound pitch line from that of timbre may contribute to improving timbre hearing. Table 3 shows the indicators of this criterion.

Table 3 Level Indicators of the Criterion “Differentiation of a Sound Pitch Line From Its Timbral Embodiment”

Criterion	Indicators	Level
Differentiation of a sound pitch line from its timbral embodiment	Differentiation of a sound pitch line from timbre is not manifested	Low
	Differentiation of a sound pitch line from its timbral embodiment is partially (in some places of the musical fragment under analysis) indicated	Average
	Differentiation of a sound pitch line from its timbral embodiment is correct	High

Defining the Specific Features of Timbre Elements

There are different ways of producing sounds on musical instruments which, in turn, affect the color of sounding (e. g. *con sordino, col legno*). Instruments sounding in the utmost registers of the range, the change of timbre in every sound also add color to the musical material. Vital components are also rhythmic patterns (dotted rhythm, triplet swinging, a. o.) and harmony (dominance of diatonic consonant or dissonant chromatic harmonies). The fourth criterion “Defining the specific features of timbre elements” is aimed at identifying the character of sounding and acoustic features (articulative, register, dynamic, textural), which implies the development of various sides of timbre hearing. Differentiating of instruments occurs on the basis of separating a specific timbre from a musical context by ear (see Table 4).

Table 4 Level Indicators of the Criterion “Defining the Specific Features of Timbre Elements (metrical rhythm, harmony, register, texture a. o.)”

Criterion	Level	Indicators
Defining the specific features of timbre elements	a) Defining of the sounding timbre (timbres) of the instrument (instruments) is not established; b) Some elements: register, texture, rhythmic pattern, a. o. are partially indicated	Low
	a) Timbres of some instruments are partially defined; b) Some timbral acoustic features are partially indicated	Average
	a) Defining of the sounding timbre (timbres) of the instrument (instruments) is precise; b) Different acoustic features are indicated precisely enough	High

The given criteria and their level indicators have been developed to diagnose the actual level of the development of timbre hearing, which will help the teacher to organize correctly learners' musical-practical activities in future.

The development of timbre hearing must be tightly linked with improving a complex musical hearing, with paying attention to the character of sounding created by the instrumental timbre in unity with other means of musical expressiveness.

Conclusion

1. During the process of diagnosing the developmental level of timbre hearing, which requires a close interaction between a teacher and a student, the use of the designed level indicators in correspondence with four criteria contributes to identifying achievements and issues of the development of musician's timbre hearing and provides the opportunity to determine the direction of its further development.

2. The basic conditions for the development of musician's timbre hearing are:

- active listening to sounds of the world around us;
- developing the skill of differentiating timbre from a sound pitch;
- recognizing timbres of specific instruments and combinations, as well as their expressiveness;
- attention to the character of sounding and ability to define its quality by acoustic timbral characteristics.

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A METHODOLOGY TO STUDY PEDAGOGICAL EDUCATION OF UKRAINE: THE REGIONAL DIMENSION

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Abstract. *Aim of the research is to validate the methodological approaches, developed by the authors, for the further use in the studies on historical pedagogy that within the regional aspect examine the processes of emergence of pedagogical education in Ukraine. For highlighting the issues of methodology of the historical and pedagogical research within the regional dimension, contemporary scientific approaches were used, including the integrated, systematic, activity, and synergic ones. The principles of objectivity, evidence, comprehensiveness, substantive analysis, of historical and logical coherence, of continuity, and systematic one were chosen as the main methodological grounds for the research. The study is novel in that it allows to assert: the mentioned methods of research with regard to its key concepts provide an opportunity to compare and trace the evolution and dynamics of development of the pedagogical education of the region within the defined chronological frame, shaping it as a complex, controversial process, influenced by many factors. The results prove that a research on pedagogical history should be grounded in holistic, historical and chronological, systematic, paradigm, structural, functional, axiological, and cultural studies approaches, be science-based, historically accurate, congruous with nature and culture. Within the scope of these approaches and principles, appropriate research methods should be used, i.e. empirical, general-science and specialized ones.*

Keywords: *historical and regional dimension, history of the pedagogical education of Ukraine, methodology, principles and methods of research, research concepts, theoretical and methodological basis.*

Introduction

Modern historical and pedagogical science of Ukraine in recent decades has made significant progress in developing the latest scientific and methodological approaches that contribute to the analysis of the formation and development of education in individual regions. It should be emphasized that the regional component of historical and pedagogical research is becoming increasingly popular because it allows a comprehensive approach to solving current problems of pedagogical education as not only a socio-political phenomenon, but also a complex cultural phenomenon in the unity of specific patterns of its development. It should be noted that in the Ukrainian historical and pedagogical science today is active scientific community, whose representatives develop basic methodological approaches to the development of pedagogical regionalism, emphasizing the importance of regional research in practical and theoretical dimensions, outlining historical and pedagogical regionalism as relevant and necessary direction in research.

Correspondingly, the issues of methodology of the studies on historical pedagogy in regional dimension become increasingly topical and important. Careful examination and theoretical validation of such methodology will contribute to solving a number of problems, including the practical application of knowledge of historical pedagogy, as well as better potential for prognosis etc. Aim of the research is to validate the methodological approaches, developed by the authors, for the further use in the studies on historical pedagogy that within the regional dimension examine the processes of emergence of pedagogical education in Ukraine.

Research Methodology

Methodology of the research is based on using special instruments that contributed to reaching the main objectives and achieving the aim of research by covering the broad spectrum of scientific and specialized pedagogical sources, publications on history and pedagogical history, periodicals, archival documents, etc. While highlighting the issues of methodology of the historical and pedagogical research within the regional dimension, contemporary scientific approaches were used, including the integrated, systematic, activity, and synergic ones that enabled to systematically and thoroughly study and afterwards to use a single integrated model of an object at all stages of the research. The principles of objectivity, evidence, comprehensiveness, substantive analysis, of historical and logical coherence, of continuity, and systematic one were chosen as the main methodological grounds of the research. The categories of dialectics (essence and phenomenon; cause and effect; necessity and eventuality; chance and reality;

content and form; the part and the whole; the individual and the common, etc.) played an important role in the study of methodology of Ukrainian pedagogical education progress. These categories contributed to a deeper understanding of the complex issues of pedagogical progress, to creative solving of such problems. The results of the conducted pedagogical study were to meet following methodological requirements: objectivity, probability, reliability, and validity. Methodology of the research is based on the specific scientific forms that are manifested in orientation towards the system of knowledge, produced by the scientific schools, with certain explanatory principles and ways of organization.

In recent years, prolific group of researchers has emerged in Ukrainian historical and pedagogical studies; their works may rightfully be considered a valuable contribution to the theory and methodology of pedagogy. The academic audience on the subject is well-familiar with publications, authored by O. Adamenko (2013), L. Berezivska (2011), N. Gupan (2013), N. Dichek (2014), I. Ziaziun (2011b), V. Kurylo & Ye. Khrykov (2013), O. Sukhomlynska (2003), which deal with the rationale for new methodological approaches. However, the core of pedagogical history within the regional dimension rarely becomes a subject for targeted research that, undoubtedly, has its impact on quality of historical and pedagogical studies in general.

Research Results

In order to solve the problem that is rooted in historical and pedagogical domain, findings in psychology, history, sociology, political studies, philosophy, art history, cultural studies, as well as historical regional studies and studies of the personalities of the prominent educators were used; however, that complicated the research process and assumed delving into specific terminology and phenomena. Exploring phenomena of regional pedagogical history within the defined chronological frame, it seems worth to use the leading methodological approach — *holistic* one. Such approach, as emphasized by I. Ziaziun, should be a leading one in the studies on pedagogical history, as “integrity of the educational systems may be adequately described only using categories of interconnection, unity and integration” (Ziaziun, 2011b, pp. 19-20). We believe that is it reasonable to consider integrity of education as an inner criterion of its effectiveness. In practice, integrity of an educational system is most commonly evaluated according to its effectiveness. In the pedagogical research and innovative practices there are certain elements, links, stages and levels of education that serve as the common sense-generating, sense-producing “lines”, namely, they are:

- Presence of a central sense-generating humanistic idea of education and compliance to it of the goals and values, stages and levels of education

(with adequate regard to the specific circumstances of a certain level of education and real-life educational process).

- Interconnections, continuity, mutual complementarity and variability of content and results of the education.
- Compliance of the procedural aspects of educational process (its methods, educational techniques, environment) with the objectives, values and senses of education, as well as its content.

The use of the ideas of holistic approach while studying organizational forms, methods and tendencies of development of pedagogical education of Ukraine in a certain chronological period will contribute to distinguishing logics and consequent stages, to choosing the set of according research instruments, implementation of which would allow to state that it was the holistic approach that was used. The steps of holistic approach are:

- Studying the ideas of holistic, historical-chronological, systematic, structural-functional, paradigmatic, cultural studies, axiological approaches is aimed at producing some “conceptual lens” to be used during the further steps of the research; formulating an idea about the essence, functions, composition and structure of the phenomenon.
- Conducting a retrospective analysis through such “lens”, with the mandatory adequate evaluation of its success and failures, achievements and losses of the mentioned approaches, assessment of the current state of the problem.
- Developing new perceptions about the essence, functions, compositions and structure, levels of some feature as a single phenomenon within some higher entity — personality as a whole (particularly through finding and analyzing its holistic traits — the ones that cause a personality to be oriented towards something and influencing the rest of its traits).
- Analysis of research publications and educational practice of solving the problem; revealing means and circumstances that favor achieving defined goals. Within the context of implementing holistic methodological approach the special attention should be turned to: means and circumstances enabling development of the main components of the researched problem; factors that are stimulating development of holistic traits of the researched pedagogical system; boundaries and conditions of realization of certain means’ potential.
- Scoping and implementation of the model of holistic process of development of pedagogical education in Ukraine should: be a uniform “static structure of the process” (Ziaziun, 2011a, p. 20), this implies designing and realization of the whole sequence of research; reveal its

holistic nature within the “dynamic structure of the process” (Ziazium, 2011b, p. 29) that reflects the successive change of stages and phases of the process, which are aimed at development of the unsolved problems, at the favorable conditions and results; fulfill aspirations of the organizing entity (teacher or group of teachers) at all stages and in all circumstances of the holistic process.

To solve the vast number of problems regarding the essence of developmental trends of pedagogical education of certain regions of Ukraine, appropriate theoretical and methodological foundations ought be used in order to study and analyze a significant number of sources. As for methodological concept, it should be formed with regards to the principles of dialectical cognitive theory and to the ideas of *synergy of methodological approaches*. Among these approaches it would be productive, in order to study developmental trends of the pedagogical education of a certain region, to implement the following ones:

- *Historical-chronological approach* for substantiating periodization of development of pedagogical education, for exposing the essence of its main trends and characteristic features, applied to specific historical circumstances and given chronologically. It would allow to trace emergence, forming and development of the processes and arrange them chronologically, from emergence or conception of the idea through the main phases and up to decline or extinction. Embracing historical-chronological approach allows to determine prerequisites of development of pedagogical education as a system and to recreate its genesis. For instance, covering the changes within the system of pedagogical education in Podillia region of Ukraine during the late 18th through the early 20th century, it is important to emphasize that “these changes took place either amid certain reforms or in order to solve some practical problems (founding of parish secondary schools for women, secondary-class church parish schools and schools for teachers, seminaries, Vinnytsia Teachers’ Training Institute; founding of a pedagogical study group; introducing pedagogy and didactics into the curriculum; solving practical problems of teachers’ training)” (Zuziak, 2018, p. 4). Such transformation contributed to the renovation of the core of pedagogical education in Podillia region in the mentioned time frame. Historical-chronological approach facilitates achieving one of the main methodological requirements — understanding the subject of the research within its fundamental and historical background; this allows to view and analyze the development of educational processes, as well as the transformations of the academic and pedagogical principles of teaching and mentoring within certain historical environment and circumstances.

- *Systematic approach* allows to holistically and thoroughly examine the progress of pedagogical education as an uninterrupted process of permanent change of its elements, with the evolution of these elements (aim of teaching, subject-subject relations, essence of learning, organizational process of pedagogical education and its results), depending of the level of concordance between them. Systematic approach implies that object of pedagogical history should be studied as whole, consisting of integrated elements and interconnections between them. Systematic approach facilitates showing integrity of the research object, while taking into account the influence of objective and subjective factors, including the foreign policy of the colonial states, their state organization and political order. While using the systematic approach, one should pursue looking for answers on the following questions: Which external factors cause changes in functioning of the system of pedagogical education? Which principle changes took place within the system of pedagogical education of the researched period? Which other disciplines did influence its development? What results the researchers, scholars and educational practitioners have achieved? etc.
- *Structural-functional approach* facilitates theoretical analysis of the text for research purposes, identifying the whole aggregate of functional relation within the inner structure of pedagogical education, as well as determining levels and nature of its influence on the socio-cultural and civilization progress of certain territory or region.
- *Paradigmatic approach* ensures that development of pedagogical education is viewed as a systematic process, which defines the formation of the educational and pedagogical paradigms, dominant during the historical period.
- *Cultural studies approach* is aimed at writing a research on historical pedagogy within the framework of general philosophical understanding of culture. It urges to view pedagogical education of Ukraine as closely linked to the rich European and Ukrainian cultural heritage, their interplay and mutual enrichment. The choice of cultural studies approach to cover the research problem is motivated by the objective connection of educational and teaching activity with culture.
- *Axiological approach* is aimed on studying value dimensions and pedagogical ideals that permeate the process of development of pedagogical education; it urges to define value–sense priorities. As T. Zuziak (Zuziak, 2018) notes, preserving certain traditional values, rituals and customs in everyday life becomes a basis for revival of the nationally-oriented cultural life of the region or territory.

At the same time, research should be generally science-based, historically accurate, objective, congruous with nature and culture, systematic, it should present unity of the historical and the logical, be of multifactorial nature, specific, show interplay of theory and practice, social and historical determinants of the pedagogical reality of the past. All of the above would allow to analyze the main ideas and educational practices in order to enhance teacher's training in the observed region.

The principle of *objectivity* should become one of the main priorities in the research. It is objectivity that cautions against subjective interpretations while doing literature review and analysis; it allows to avoid biased, groundless, ideologically charged approaches. While implementing the principle of objectivity, it is worth involving the highest possible number of sources in order to present not the fragmented and separate facts but the sets of facts that would allow to justify the stand of the author. Scientific objectivity urges to take into account a variety of various factors: socio-political, socio-economical, socio-cultural, etc., which influenced emergence and development of the pedagogical education of the region in certain chronological period.

The principle of *scientificity* implies unveiling cause-and-effect interconnections, phenomena, processes, and events that took place in the historical period under examination. Application of the principle of scientificity adds to the comprehensive coverage of the learning material of the time (reflected in the curriculum and course material); to defining the perspectives of the use of historical legacy for reforming the modern pedagogical field; to giving an objective account of the scientific facts, phenomena, and theories of the researched period.

The principle of *historical accuracy* urges to study and analyze in integrated manner the historical regularities and features of development of certain pedagogical phenomenon; it allows to examine the main stages of pedagogical education development during the set historical period. Besides the principle of historical accuracy, *civilization and formation principles* are instrumental for comprehending a cultural and historical process. When these principles are applied, development of pedagogical education is viewed in the light of the particulars of the time (state organization, political order, economic development, available teaching staff, etc.)

Using the *principle of congruity with nature* is grounded on the constitutive idea of future teacher's training, on teaching and mentoring future teachers within the scope of progress of Ukrainian society and assimilation of general legacy of preceding generations. The *principle of congruity with culture* assumes indissoluble ties between development of the pedagogical education and nation culture, knowing the history of the nation and its forming.

A study of the subject itself is an important factor of methodological concept of research on pedagogical history. It implies turning to a set of research methods, namely:

- *Empiric* methods (source studies and historiographic analysis, descriptive analysis) to search, process and interpret the source material and determine the prerequisites of pedagogical education development in the region. *Content analysis* method is helpful in revealing the content of pedagogical education. *Quantitative method* is most commonly used to analyze the authentic documents (scientometric analysis of the publications' and theses titles, of archival documents and periodicals; estimation of the research works on the subject; defining the state of knowledge of a certain pedagogical problem, dynamics of changes in orientation on peculiar issues of pedagogical education in the regional dimension). Empiric methods are applied when there is a need for a search and analytic work in libraries, archives and museums. Content analysis method should be used when dealing with various documents, whether published or not. It is crucially helpful for the work in archives. For example, Soviet archiving did not have among its priorities preserving as a single body of material the documents on development of the pedagogical educational institutions of the Podillia region of Ukraine; therefore, searching for information in archival sources requires deep understanding and knowledge of pre-revolutionary records management that may contain the needed data. This method, as a system of search and evaluation of the facts of historical pedagogy, was implemented through comprehensive search with subsequent classification, grouping, separating the major from the minor, evidence-based from probable. Content analysis method is exceptionally convenient when there is a need to analyze a body of historical sources on some sphere of everyday life of a society. Content analysis method is very helpful for getting the hidden information from specialized documents, such as library catalogs or reference lists. Content analysis method also helps to give an objective, systematic and quantitative description of the content of these sources. This method is well-suited for discovering necessary information about the pedagogical processes, phenomena, facts of the past, which are unavailable for direct observation.
- *General methods of science* (analysis, synthesis, generalization, analogy, comparison, classification, dialectic method, and method of scientific theoretical interpretation) are aimed to organize the research work, to set a goal at objective, scientific and throughout study of many factors of development of pedagogical education, including process,

content, organization, and pedagogical ideas. The use of general methods of science to study various sources and literature “allows to recreate certain facts of the researched period with regard to the body of national and foreign research works, to the views that the prominent educators of the time had on the essence and specifics of teachers’ training” (Zuziak, 2018, p. 6).

Methods of scientific *analysis and synthesis* become indispensable while studying the governmental policy in education, as well as its positive or negative consequences. The use of *generalization method* for the research on historical pedagogy allows to reveal the emergence and developmental trends of the pedagogical education of a certain region, to avoid simple copying the facts and presenting the plain chronological list of facts, events, and phenomena of pedagogical history. The use of generalization method prompts formulating the conclusions of a research thesis. *Analogy method* facilitates defining the common problems of the pedagogical education development. For instance, during the late 18th through the early 20th century in the Western Podillia and Eastern Podillia regions of Ukraine the common problems were: astonishing learning environment, poor learning conditions, lack of learning aids and methodology, low wages of the teachers, corruption, etc. *Comparison method* enables discovering specific developmental features of pedagogical education that were not typical for other territories of Ukraine, common and distinctive traits in the government policy of different regions and states. At the same time, methods of analogy and comparison are used for finding common or different elements in the curricula of the different types educational institutions during the researched period. *Cognitive method* is an efficient tool for working on archival sources, religious and non-religious periodicals, academic publications. *Descriptive method* is helpful in discovering individual features of the teacher’s training at the various educational institutions in the studied region. *Classification method* ought to be applied to study the educational institutions for teachers’ training, as it “helps to validate the classification of such institutions, typical for certain region (including religious educational institutions: seminaries, religious schools for men and women, parish schools for women, secondary-class church parish schools and schools for teachers; and non-religious: gymnasias and progymnasias, seminaries for teachers, teacher’s training institute, etc.)” (Zuziak, 2018, p. 6).

To provide a proper explanation of pedagogical processes, phenomena, ideas and concepts of the past the method of *interpretation* is often used. While interpreting certain facts, phenomena, processes, it is possible to reveal different aspects of information about them, to assess the potential of this information for achieving the objectives of the research on pedagogical history, to make assumptions about the reasons for their emergence, to uncover the regularities, connections and trends of development of the problem. *Forecasting* and

actualization methods are used to comment and determine the academic achievements of the educators of the past, as well as their failures; also to draw perspectives for theoretical and methodological research and in the field, prospects for the use of the results of this research for improvement of pedagogical education in Ukraine. In the studies on the progress of pedagogical education in the regional dimension, the *dialectic method* is applied, as it allows tracing the interconnections and mutual influence within the process of development of events and phenomena.

It is methodologically reasonable to use the following specific methods for the historical pedagogical matrix of the research:

- *Historical-pedagogical method* — to define and substantiate the concept of the research.
- *Comparative pedagogy* is helpful in juxtaposing the phenomena, events of historical pedagogy with the facts of socio-cultural life of the period, for revealing common and divergent in the content of the pedagogical education of the region at the different stages of its development. It is worth noting that method of comparative pedagogy enables the research of pedagogical education in different historical periods; allows to capture the features of the different evolutionary stages of pedagogical education of the region and of various social groups; identify their common, recurring and specific characteristics. For instance, comparative pedagogy may be applied for determining the main policy trends of the state authorities (Ministry of Public Education, Ministry of Religions and Education, the Holy Synod, Curator of the Kyiv Educational District, etc.).
- *Problem-genetic method* suits well for retrospective coverage and recreating of the pedagogical education in the researched period, as well as for substantiating implementation of historical achievements of the pedagogical education of the past into contemporary educational practice of the pedagogical higher educational institutions. This method makes a significant contribution to the process of studying the dynamics of social changes, of national and cultural life of the region; to the retrospective coverage and recreation of the system of pedagogical education of the period; to determining contradictions, lining up the cause-and effect connections and regularities of development. As this method is specific and detailed, it helps in formulating theoretical positions on the features of professional training of the future teachers at the educational institutions of the region, both religious and non-religious ones.
- *Concrete historical method* is well-suited for analysis and comparison of the projects of reforms and state legislation that incorporated new

models and paradigms of pedagogical education, as well as for developing periodization and discovering the main tendencies of the progress of pedagogical education in the region. Concrete historical method enables systematization of development of pedagogical education in chronological stages that may differ in certain ways. Application of this method enables not only analysis and comparison of the reforms' projects and state legislation, but also allows to trace changes in nearly all fields of social life of the future teachers in the region, to determine negative correlation with the impact of socio-political factors.

- *Logical and systematic approach* is suitable for highlighting the conceptual basis of pedagogical education development within the framework of overall historical progress, as its integrated social and pedagogical phenomenon.
- *Method of study and generalization of pedagogical legacy* reveals levels of educational work, of teachers' pedagogical skills and innovativeness, traces patterns of educational process in a certain period.
- *Systemic-structural method* helps in designing the structure of the research, its organizational features, as well as process and content. As it was mentioned above, pedagogical education is viewed as a system; therefore, its study is conducted by analyzing its key components and typical links between these elements. Systemic-structural method is instrumental in presenting all phenomena of historical reality and their interconnections as a single mechanism with certain features and at the same time traces their structural changes, content and evolution. It contributes to the consistency of the research and not only adds to the scope of the research material but also provides structural unity of the study. The use of the systemic-structural method allows not only to define a structure of historical-pedagogical research but also to establish connections between its elements. Systemic-structural method contributes to highlighting the sets of problematic issues and simultaneous consideration of certain events of the period; it implies division of broader subjects into the smaller ones, each one to be subsequently viewed in chronological and logical order. This is the method that helps to recreate the general tone of the era, the environment, in which students of the certain region had been learning. When applied, the method reveals the logic behind the emergence of different issues of pedagogical education of the region, contributes to consistently studying the basic phenomena, becomes a key factor for proper structuring of the research work.

- *Historical-typological method* aids in typological classification of the educational institutions and recreating the key features of educational process of the time. This method allows conducting typological classification of historiographic material, analyzing sources and classifying them according to their types.
- *Pedagogical biography* is a method of studying the evolution of the views of prominent educators on the issues of professional training of future teachers. This method allows to characterize biographical facts, life and work, and personal traits of the noted educators, cultural religious figures, whose activity was linked to the development of pedagogical education. At the same time, pedagogical biography is also helpful in studying the staffing of educational institutions of the certain period. Official pre-revolutionary records of the teaching staff give account of nationality, professional training, career, religious views of the teachers.
- *Extrapolation method* is applied for prognostic justification of creative use of progressive achievements of pedagogical education in the current realities, when reformation of pedagogical education is underway.
- *Terminology analysis of the specialized literature* outlines the key concepts and categories of the subject (Zuziak, 2018, p. 7).

Conclusions and Implications

Scientific analysis of the leading methodological approaches applied to a pedagogical history research (taking into account a regional dimension) allows to assert: the mentioned methods of research with regard to the key principles provide an opportunity to compare and trace the evolution and dynamics of development of the pedagogical education of the region within the defined chronological frame, shaping it as a complex, controversial process, influenced by many factors.

Theoretical and methodological basis of the research should be grounded in holistic, historical and chronological, systematic, paradigm, structural, functional, axiological, and cultural studies approaches, be generally science-based, historically accurate, congruous with nature and culture. Within the scope of these approaches and principles, appropriate research methods should be used, i.e. empirical, general-science and specialized ones.

Presented methodological approaches, principles and methods of research form a solid foundation for historical and pedagogical studies, for the set of concepts and categories to be used in them. These methodological approaches enable the pedagogical history issue of pedagogical education of a certain region to be thoroughly studied and analyzed by examining phenomena from the

perspective of their development and interconnections, by understanding the interplay of a mindset and everyday life.

In general, integrated application of research approaches, principles and methods is instrumental for the most effective use of archival material, published documents and academic literature, periodicals. This gives way to a systematic and unbiased analysis of emergence and developmental trends for pedagogical education in its regional dimension.

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