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SPECIĀLĀ PEDAGOĢIJA
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STUDENTS WITH BEHAVIOUR DIFFICULTIES AND LATVIAN TEACHER BELIEFS ABOUT THEM: GLOBALISATION OR GLOCALISATION IN ACTION?

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***Abstract.** This paper analyses Latvian teacher beliefs about students with behaviour difficulties to ascertain whether the same issues are of concern for Latvian teachers as teachers from another system, such as Australia. Do they identify similar behaviours as of concern, do they have similar expectations and views about educating these students or are they so dissimilar that they, by borrowing from elsewhere, end up importing surrogate values and impossible solutions? This rests within a context of globalisation in education which encourages teachers to look to and borrow from foreign systems as an astute way of providing pre-tested solutions for local needs.*

***Keywords:** student behaviour, teacher beliefs.*

Introduction

Latvian teachers need to address student behaviours which they have previously not encountered as the students themselves, struggling with concepts of democracy, often replace the word “democracy” with the word “freedom” and do not understand that rights also entail responsibilities. Globalisation in education encourages the sharing of ideas, strategies, educational philosophies and theories. Potentially, the knowledge from one system could be used by teachers to introduce innovative practices in their own classrooms and to better understand their own systems. However, knowledge gained from one system may not transfer readily to another setting. Crucial to the borrowing process for Latvian teachers is their understanding of their own beliefs and substructures and how they may differ from those of other systems. Belief systems are important as they help teachers to define and understand themselves and their schools, students, the context. They play a role in determining what behaviours teachers will use, the meaning that they give to the term pedagogy, how they organise knowledge and how they analyse the behaviours they experience in their classrooms. Belief systems help teachers to address new situations with which they are unfamiliar, such as the range of student behaviours that teachers in Latvia now face. However to make changes to these existing belief systems,

teachers must first be aware of them and their substructures. Nespor (1997) concluded that beliefs are a strong predictor of behaviour, more so than knowledge, and impact upon how teachers respond to problems.

Aim of the study

This study aims to identify Latvian teacher beliefs about managing students with behaviour difficulties and to establish whether currently held beliefs allow teachers to implement practices from elsewhere in their classrooms.

Method

This study draws on research conducted with participants of two behaviour Management Professional Learning projects (Agreement No 2010/0330/1DP / 1.2.2.4.1/10/IPIA/VIAA/001) in Latvia in 2012 organised by VISC, the National Centre for Education. Each course consisted of 24 hours of lectures and workshops and a total of 110 teachers attended. Data on teacher beliefs was available from analysis of teacher reflection in response to specific questions on their expectations about student behaviour and the strategies they believed most appropriate. At the conclusion of the course, teachers were also required to collect data on student behaviour in their classrooms, identify, select and implement strategies from those presented during the course, analyse the usefulness of the strategies, identify any changes needed for implementation and report on the success of the implementation. All of this provided information on teacher perceptions of the relevance of global strategies for their specific settings as the course was based on a broad cross-section of frequently used Western behaviour management theories.

Qualitative data analysis consisted of a process of comparison and identification of recurring themes. Data was collected through initial evaluations of the course by participants; their written reflections; and, the questions raised during the course. Basic categories were created through content analysis of literature and logical groupings. Grids were created which recorded teacher beliefs concerning each of the following: strategies to maintain a positive classroom community; to encourage appropriate behaviour; to reduce inappropriate behaviour. Teacher responses were recorded on these grids in rows responding to specific categories such as teacher–parent relationships, teacher-student relationships, teacher behaviours, classroom organisation, establishment of rules, individual intervention plans, teaching/learning tasks, involvement of support staff and other agencies.

By reading the strategies and concepts off the grid, it was possible to establish relationships between the responses and to identify reciprocal strategies and concepts. This allowed for the creation of a refined list of favoured strategies and associated beliefs.

Are the issues the same?

Literature from Western countries demonstrates that the behaviours that are of most concern in these countries are relatively trivial. It is their frequency that leads teachers to be most concerned with the low level behaviours. In the UK concern about levels of student violence led to the Elton Enquiry into discipline in schools (Department of Education and Science, 1989). Contrary to concerns raised by the media about violent behaviour, the behaviours that were identified as most of concern were ‘talking out of turn’ or ‘calling out’ as identified in US studies, ‘hindering other pupils’, ‘calculated idleness or work avoidance’ and ‘verbal abuse towards other pupils’. Similar results were identified in Australian research by Stephenson, Linfoot and Martin (2000) which showed that different forms of behaviour such as distractibility and hindering others cause teachers greatest concern. Beaman (2006) investigated troublesome behaviour in secondary schools in NSW where “talking out of turn” was identified by teachers as the behaviour of most concern and also as the main behaviour of the most troublesome students. Interestingly, Infantino and Little (2005) note that students also identified this behaviour as the most troublesome and most frequent. A literature review by Beaman, Wheldall and Kemp (2007) confirmed that the main classroom disruptions are relatively trivial such as “talking out of turn”.

Latvian teachers have identified similar issues with respect to behaviour. In a questionnaire completed as part of the VISC Behaviour Management Professional Learning programs undertaken in 2012, teachers identified the following behaviours as most desirable: students seek help with arguments and conflict, they are friendly and courteous and they follow the rules especially, taking turns, listening to the teacher and raising their hand. They added that they wanted students to take responsibility for their behaviour. As with teachers elsewhere, the focus is on low-level behaviours not on violent and aggressive acts.

It would seem then that the problems are shared, therefore looking to previously identified solutions from elsewhere might be an appropriate strategy and lead to innovative practices in Latvian classrooms with respect to behaviour management. However when considering possible solutions, thought must be given to factors which might impact on teacher ability to implement these new practices, especially that of teacher beliefs. The remainder of this article will

focus upon some factors which impact upon teacher beliefs and how Latvian teacher beliefs are expressed in preferred strategies.

Teacher beliefs

Students with behaviour difficulties need a supportive environment, one that fosters belonging and engagement. Fredericks et al (2004) identified teacher support, classroom structure and positive relationships between the teacher and students as important for engagement. Whether or not a teacher can create these supportive conditions and the way that he/she teaches will depend on his/her beliefs (Guskey, 2002; Palak & Walls, 2009). Kagan (1992, 85) stressed the importance of teacher beliefs suggesting that beliefs may lie at the very heart of teaching. Such beliefs are far reaching and include the teacher's perception about teaching, about themselves as teachers and about students with behaviour difficulties. Beliefs, in turn, affect behaviour (Levin et al., 2005). Teacher beliefs impact on what teachers teach and how they teach, as well as being passed on by teachers to their students.

Richardson (1996) defined beliefs as “psychologically held understandings, premises, or propositions about the world that are felt to be true” (p. 103) and suggested that attitudes and beliefs are important concepts in understanding the thought processes and classroom practices of teachers.

Obviously beliefs may vary. Richardson (1996) suggests that they arise from a variety of sources including personal life experience, experience with schooling and instruction and experience with formal knowledge. Other studies have identified the quality of pre-service learning and reflection on the pre-service experience as affecting teacher beliefs (Brousseau, Book, & Byers, 1998). To this list must be added the unintentional maintenance of existing beliefs by education department policies or approaches.

Teacher beliefs, potentially, could explain any divergence between the strategies that teachers from a Western system such as NSW, for example, are prepared to implement to those in Latvia. The life experiences of teachers in NSW varies markedly from those in Latvia. Putting aside the variance of individual experiences of each and every teacher, at a universal level Australian teachers have worked within a stable political democracy with gradual social changes. Latvian teachers have experienced a plural democracy, authoritarian government, including a period of colonisation, and then a return to democracy marked by neo-liberal tendencies, all within the space of one lifetime. Perhaps the only common feature to both is the neo-liberal context, as this has dominated Australian education since the 1980s.

The relative political stability in NSW has allowed for a co-ordinated approach to achieving changes in teacher thinking and beliefs. Changes which have required teachers to undergo a paradigm shift, such as in the management of students with behaviour difficulties, have been associated with professional learning opportunities and over the decades professional learning has become linked to the needs of the system, the region, the school and the teacher. In order to achieve a paradigm shift, policies and strategic documents provide the new direction, school plans have to reflect this and professional learning support it. While not all teachers may have engaged with the changes or achieved a paradigm shift with respect to students with behaviour difficulties, there has been an ongoing and co-ordinated emphasis on policies and professional learning over many decades of a neo-liberal approach which has addressed teacher beliefs.

Professional learning is available to teachers in Latvia and is necessary for maintenance of their teaching accreditation. The difference lies in the number of different political, at times conflicting, directions that teachers have been exposed to in Latvia and the lack of a co-ordinated and directed approach which facilitates a paradigm shift.

Teacher beliefs about pedagogy

To this must be added differences in what must be taught. The NSW education system stresses educating citizens who can contribute to the functioning of a democracy. The importance of contributing to the political decision-making process in Australia is demonstrated by the requirement for all citizens to vote in elections at a local, state and commonwealth level. Voting is compulsory and students are educated to understand and participate in the political process, to question and to analyse.

Set against this the aims of education under a soviet system, where the important feature was to maintain and promote the approaches of the Soviet government, to preserve the status quo. Teachers were expected to promote a Soviet lifestyle and the development of a questioning and politically aware populace was not the key. The life experiences of teachers within these two systems were almost diametrically opposed.

Older teachers in Latvia would also recall teaching within a pluralistic democracy and younger teachers would have the experience of teaching within a fledgling democracy but still caught up in structures from the old soviet system. While students in NSW were educated in democratic principles, students in Latvia, after the return to independence, struggled to understand democracy. Teachers in Latvia had to come to terms with understanding not only the systems changes from their own perspectives but also how to support students in

making meaning from the terms “personal freedom” and “democracy” all within a context of student behaviours that were new to their experiences and where, for instance, the beliefs upheld during the soviet years did little to explain or manage these challenges.

Hansen (2012,) states “We should examine how the teacher constructs categories, teaching and classroom,”. Herein arises a pointed difference between the concepts to which teachers in NSW and those in Latvia are exposed. The concept of pedagogy is promoted differently in both contexts. In Latvia pedagogy is all-inclusive, it is about educating and raising the total child (Collinson et al., 2009). Pedagogy in Western literature is often discussed as the art or craft of teaching. If Latvian teachers are constructing their classrooms based on concepts of teaching using a pedagogy that focuses on “audzināšana”, loosely translated as upbringing in English, this classroom could differ from the Western classroom where the teacher is focussed on how and what is being taught, the techniques used and increasingly, performance in standardised tests. This different understanding of pedagogy would impact on teacher beliefs and what a teacher chooses to implement when exposed to innovative practices from elsewhere.

Teacher beliefs and the dominant discourse

If, as Ainscow and Sandill (2010) state, “...the starting point must be with staff members...This may also involve tackling taken for granted assumptions, most often relating to expectations about certain groups of students, their capabilities and behaviours”, what factors beyond the political context and understanding of pedagogy impact on the development of these assumptions and expectations? Some beliefs are inadvertently reinforced by the policies of the system itself, with the use of labels for students with additional needs as an example.

Foucault (1974) describes how *discursive practices* ‘form(s) the objects of which they speak.’ To define students with disabilities, including those with emotional or behavioural disorders (EBD), special education drew on discourses from medicine and psychology. The medical model focussed on a causal relationship. As Harry and Klinger (2007, 16) state, there had to be ‘proof of intrinsic deficit’ in order to gain access to support services.

This deficit model has consequences for both teachers and students. As Sullivan, Johnson, Owens and Conway note: “A concern raised about mainstream policies and practices related to student behaviour is that they invariably locate ‘the problem’ within individual students, rather than in the context of classrooms” (2014) therefore the responsibility for change rests with

the student. The ultimate effect can also be that teachers start believing that they are not qualified to teach these children Slee (2009).

Labelling contributed to the belief amongst NSW teachers that students with additional needs did not belong in a regular classroom either because their own education suffered or that of their peers did. In NSW, special education classrooms became 'dumping grounds for those students viewed as untouchable or undesirable' (Reddy 1999, 11). Students suffered because often they experienced lowered expectations with respect to their academic and social achievements (Van Swet et al.). Metcalf (VS1995) noted that students often ended up living up to their labels and that they were often not expected to display normal, responsible behaviour.

Labelling impacts on teacher beliefs in another way as well. In NSW students with behaviour difficulties were either treated as if they have a disability and labelled EBD, or they were not considered to meet any of the disability criteria and therefore teachers viewed them as just naughty or difficult students. Without the redeeming feature of a label, they earn a quasi-label such as rude, disruptive, disobedient, ill-disciplined etc. If teachers believe that students are choosing to misbehave, then this impacts on how they interact with these students and what actions they are prepared to take and works against any paradigm shift by teachers.

A change in the dominant discourse came with the World Health Organization's (WHO) revision in 2001 of the International Classification of Functioning, Disability and Health (ICF). Rather than the cause, the impact had to be considered. This required a shift in beliefs amongst teachers. Adjustments to the teaching/learning program had to consider the situation rather than just the student's deficit.

A decree, however, does not mean a change in teacher beliefs or actions. For this to happen the teacher needs to undergo new experiences and reflect, to understand what beliefs they currently hold and what beliefs underlie the changes. In NSW statewide policies, strategic documents and professional learning strategies have been used to build new belief subcultures, to move teachers to an understanding that meeting the needs of students with behaviour difficulties requires reflection on, and examination of, the total environment and responsibility does not rest with the student alone.

While NSW has now moved away from a medical model to a social model for addressing the needs of students with additional support needs, in Latvia it is the role of the State Pedagogical Medical Commission or local government pedagogical medical commissions under the jurisdiction of the Cabinet of Ministers (General Education Law, 1999) to ensure that students with special needs can access a quality education based on equality and equal rights. These commissions determine who meets the special needs criteria and can access

additional or different services and it is interesting to note that a medical commission continues to make judgements about educational placement. Of concern is the perpetuation of belief systems which underpin the acceptance of the use of medical or psychological labels for educational purposes. (Erten & Savage, 2012)

Latvian teacher beliefs about intervention strategies for students with behaviour difficulties

As Fulham and Hargreaves (1991, 5) point out, teachers need to be provided with opportunities to “confront the assumptions and beliefs underlying their practices, avoid faddism”. The VISC project provided an opportunity to do this.

When, as part of the VISC project, Latvian teachers were asked to reflect on their own needs within the classroom, interestingly their responses did not focus on additional support such as extra resources in the classroom or smaller class sizes. Instead their needs were defined by what they could do and how they impacted on student behaviour, such as being organised, or, what they needed their students to do, such as follow the rules and take some responsibility for their own behaviours.

Teachers stressed awareness of their own behaviours as important. They indicated that interactions with students should be based on a good understanding of the student, his/her learning and behaviour needs and any specific health needs. They believed that interactions with students should be firm, but friendly and that teachers could be positive role models. They also saw themselves assisting students to resolve problems and suggested that teaching students to be optimistic would help.

They believed that they could develop good rapport with students through demonstrating their interest in the student’s activities and showing that they cared about the student. They also suggested that teachers should ensure that students with behaviour difficulties had positive experiences at school each day and they should avoid referring to past negative behaviours. Positive interactions could also be created by devising classroom rules jointly with the students, informing parents of these rules and encouraging parents to follow the same rules if appropriate.

Interactions surrounding learning tasks were also seen as important for creating a positive classroom environment. They believed that teachers should manage learning tasks so that they were varied, designed to meet individual student need and provided the student with choices. Teachers suggested that developing a systematic way of providing feedback would also help to support teacher/student interactions, as would keeping a record of appropriate

behaviours rather than just inappropriate ones. As well they stressed the importance of the task itself, not just finishing it.

While all of these strategies would help to create a positive environment, there would be times when some form of direct intervention was needed. At such times they suggested that teachers should observe the student in class which would provide data for the development of any intervention plans. By doing this teachers would gather information and make educated decisions about the nature of the behaviour and any necessary intervention. There was a focus on private interactions, from preventative strategies like using private cues to prompt students, to engaging students in private discussions to address behaviour problems.

Having good relationships with students and their parents was seen as crucial. These good relationships could be maintained by using humour and remaining calm in class. Teachers suggested a focus on current behaviour issues rather than re-visiting past problems. They also indicated that praise should be used to encourage students to improve their behaviour.

However teachers must maintain control in the classroom and not give it over to the student. They believed teachers could best do this by using consequences consistently, as well as proximity as a deterrent. Again there was a focus on the positive. Teachers need to be aware of the students when they are using appropriate behaviour and acknowledge this, not just focus on inappropriate behaviours. Rules should be stressed and the need to follow them discussed. Reinforcement should be used, such as rewarding on-task students regularly or using a specific points system. Teachers should make clear their expectations about student behaviour.

Negotiated rules, informing parents of the rules and stressing student achievement and positives were seen as contributing significantly to the reduction of inappropriate behaviour in class. As well teachers had to work towards creating a safe and positive environment which they could do by: giving students responsibilities in the class; listening to criticisms from students; teaching appropriate behaviour; applying consequences consistently; ensuring students understood the importance of antecedents and consequences when behaviour problems were discussed; redirecting the student when inappropriate behaviours were used. Teachers had to structure the class in such a way that students developed a sense of belonging.

If the “social power” model (Alderman & Green, 2011) is applied to the responses of the Latvian teachers it indicates that of the four types of social power, Latvian teachers suggested use of “expertness”, that is helping to solve problems, taking time to engage with and actively listen to the student as a favoured strategy. As they also wanted the student to develop a sense of belonging, they supported “manipulation” which allows the student to think that

he/she has come up with the answer by, for example, giving the student choice and using a different tone of voice. The third type of power “coercion” was only reflected in the suggestion that a points system be used for reinforcement. This is coercive only in the sense that the teacher is in control and that this is clear to the student. They did not support strategies that involved any form of threat, which may be in line with current approaches or could also be a response to the coercion that was experienced within Soviet education. It could be linked to their beliefs about how students learn and also their belief about their role as a teacher. The fourth social power “likability” was not raised at all. “Likability” refers to students viewing a teacher as personable or fun and this increasing the prospect of co-operation with the teacher. Perhaps for teachers who had experienced the Soviet system, either as teachers or students, this was not an approach that had previously been important and formed no part of their beliefs about themselves as teachers.

Conclusion

The teacher preferred strategies indicate a close connection between Latvian teacher beliefs and the Latvian concept of pedagogy. The strategies reflect the Latvian concept of pedagogy as educating the total child rather than the art or craft of teaching. They also demonstrate teacher belief in relationship building as opposed to coercion as a means for achieving behavioural change. This could be the result of continuing an approach from Soviet times when they were told what to teach but were free to choose how and they chose to use relationships as the cornerstone of education seeing it as consistent with their beliefs about how students learn and develop. It could also be the influence of new strategies introduced through globalisation or it could be an extension of the concept of educating the total child and viewed as a strategy that would promote this by providing a role model for interaction for young people. Whatever the reason, Latvian teachers believe that building relationships is central to the management of student behaviours.

The strategies indicate that Latvian teachers share a common need with teachers elsewhere in addressing low-level but disruptive behaviours in their classrooms. As they are addressing similar needs, are there global strategies which could provide a possible solution? With the divergence in teacher beliefs about pedagogy and the strong belief in relationship building, Latvian teachers could implement strategies from elsewhere that were based on a social model for meeting the needs of students with behaviour difficulties which focussed not just on the student but sought solutions to difficulties within the total physical, social and learning environment and which corresponded to their concept of how students learned and developed. Under these circumstances they are not

importing or accepting surrogate values rather they are demonstrating globalisation in action by adopting and adapting strategies that help to address unfamiliar student behaviours but that also reflect their beliefs. Strategies which do not reflect current beliefs are unlikely to be implemented as they would conflict with teacher understanding of their students, school and context, thus creating additional teacher stress. For such strategies to be successfully implemented, teachers must first be taught how to identify their beliefs and understand how they affect classroom practice.

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SENSE OF SELF-EFFICACY AND STYLES OF COPING STRESS OF YOUNG SPECIAL NEEDS TEACHERS

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***Abstract.** The author presented the results of research on the sense of self- efficacy and styles of coping with stress young special needs teachers, who take cooperation with people with disabilities, and who are obliged to cope with adversity and to help in the fight against distress their dependents. Research conducted in quantitative strategies, using the normalized and standardized tests: GSES - Generalized Self - Efficacy Scale by Schwarcer and Jerusalem in Polish adaptation by Schwarcer, Jerusalem and Juczyński, and CISS - Coping Inventory for Stressful Situation by Endler and Parker, in Polish adaptation by Strelau, Jaworowski, Wrześniewski and Szczepaniak from 2009.*

***Keywords:** coping stress, sense of efficacy, special needs teacher, special pedagogy.*

Introduction

Research on sense of self-efficacy and styles of getting along with stress young special needs educators take current and very important topic. It is related to the specific functioning of a professional group particularly vulnerable to overcoming difficult situations, resilient and efficient activity even under pressure and in tough circumstances. As actors who share responsibility for the course of education and rehabilitation persons with disabilities, they establish and modify goals, aiming to deliver them to support the development and optimization of biopsychosocial functioning. A very important issue is therefore to examine whether outside the methodical workshop young teachers have adequate resources of personality and strategies that support their mechanisms of overcoming difficulties allowing making, maintaining and efficient finalization of activities (Paluchowski, 1982; Gibson & Dembo, 1984; Coladarci, 1992; Gosselin & Maddux, 2003; Baysal, 2010).

Analyzing the results of research on the level of perceived stress at work, the teaching profession surpasses managers or business owners, and also ranks second in terms of the risk of heart disease and circulatory system (Kretschmann et al., 2004). Particularly determining factors include:

- responsibility – both as a subject of therapeutic – educational and didactic actions in a given time and space, as well as for its achievements and the potential development in the future;
- working time – basic teaching load (number of hours depends on the type of employment and position) classes should be made up by primarily planning and designing work in the selection of methods, techniques, teaching aids, professional development, participation in meetings of councils and assemblies, overtime and replacement or verification achievements of pupils;
- deadlines and responsibilities, and the pace of work – responsibility for the implementation of the curriculum at a certain number of hours of the subject and a different pace of acquiring skills by pupils. Performing additional functions, eg. caring interest groups, coordinating teams, delegates and others;
- environment – infrastructure, noise, collaboration, life publishing and others;
- assessment – a constant, systematic and/or periodic achievement and teacher performance;
- the prestige of the teaching profession – the aspiration to maintain the validity of the social rank of the job under adverse circumstances, including placed requirements by the employer but especially parents, lack of sincere cooperation and the shifting of responsibility for the child;
- stability of employment – the risk of job loss and limited prospects of the employment;
- remuneration - in Poland depends mainly on the career, it remains one of the lower paid professions.

Taking into account the above considerations, the results of research on the level of stress in the teaching profession (Rongińska & Gaida, 2001; Terelak, 2007; Schwarzer & Taubert, 1999) and data about professional burnout (Sęk, 2000 a, b; Korczyński, 2014; Hakanen et al., 2006), it is clear that with such a huge load the presence of stressors should be constantly monitored. The same applies to the level of stress and its impact on the standard of the performance of teachers, but above all emphasize the strengthening of the personality structures responsible for coping - overcoming difficult situations, such as self-efficacy, resilience, optimism, sense of coherence to shape appropriate strategies to reduce the level of stress or alleviate its effects and to develop pro-health action (Juczyński & Ogińska - Bulik, 2010).

Theoretical background

The essence of personality lies in the different ways of perceiving the situation of the people and the different patterns of behavior that are shaped in accordance with these different insights. Big impact on the understanding the nature of existence had self-efficacy definition created by Bandura in the 70s of the last century. Action man began to understand as the perception of the valuations situation positively designating the purpose for which achievement shall be taken and continues to act even in difficult circumstances. The sagacious feeling of possibility to overcome the difficulties on the way to success - the belief in their own abilities causative called a sense of self-efficacy (Bandura, 1977, 1986, 1997, 1999). In 1981, Kazimierz Obuchowski divided sense of the effectiveness from efficiency. He emphasized the different status between both theoretical terms that are very close to each other:

- Efficiency is to maintain the effectiveness in terms of increasing difficulty,
- The effectiveness is the efficiency of the objectives in certain circumstances (Obuchowski, 1982). However, the original understanding of Bandura's self-efficacy (dealing inseparably efficiency measures and their effects) and an attempt to specify the nature of the activities undertaken in difficult situations, understood as styles coping with stressors gave base to the research of their own. It is based on the transactional theory of stress understanding created by Lazarus and Folkman (1984), which makes the perception of the difficult circumstances dependent on disposing of certain personal resources (mostly cognitive). This allows the specific assessment of the situation and the opportunities it brings with it. The specific situation gaining value on the scale of difficulty then the entity shall apply the preferred style aiming to overcome the difficulties. Thus, coping with stress is one of the defense mechanisms and is defined as a characteristic of the individual, relatively permanent ways remedial action undertaken in order to overcome the difficult situation (Endler & Parker, 1990). Additionally, it is that included modifying agent is dependent on the conditions of the operation's situation of the unit in the surroundings (Wrześniewski, 1996). Relating this to the specific work as a special education teacher should be taken into account in the assessment of self-efficacy, or taking remedial action nature of work in the conditions of a particular load (discussed in the introduction of the article), but above all, the essence of working with a person with incomplete efficiency, where the activities are task-oriented, specialist, purposeful, planned, aiming to overcome the difficulties (resulting for

example from the same disability), and efforts are characterized by a high risk of failure or error. Implementation of educational activities reminds permanent struggle with adversity with increased responsibility, where it seems necessary to have a high sense of self-efficacy, which allows in all activities revalidation can be taken and continue in certain consequences of disability conditions, as well as the ability to cope with stress to maintain mental health and support their own body interactions in a difficult and long-term - lifelong therapy.

Own research on sense of self-efficacy and styles of coping with stress

Research on sense of self-efficacy and styles of coping with stress were carried out in the month of June 2016 year. The study involved a group of 47 people, teachers with a bachelor's degree, while graduates of secondary special education, persons who have certificated of university studies, simultaneously practiced the profession of special education teacher. The target group of the research were women aged 22-24 years (Table 1), with teacher training at a professional level - bachelor's degree. Due to the age requirements there are 47 persons (N = 47) analyzed in questionnaires). Examined persons have been living 5 years in a big city, but came from rural areas (9 persons), small cities (12 people) of large cities and urban areas (26 people).

Table 1 Summary of data on the age of the examined population

Age	Number (N=47)	Percentage (%)
22	9	19,1
23	31	66
24	5	10,6
25	2	4,3

The selection of the group was purposeful, voluntary participation in the survey. An attempt in numbers is sufficient to conduct statistical analysis and derive conclusions (Pilch & Bauman, 2001, p. 130). Studies have been embedded in the paradigm post-positivistic, quantitative strategy (Creswell, 2013, p. 32), using the correlation scheme, taking into account variables: self-efficacy, and coping with stress. They were used standardized and normalized research tools: a questionnaire GSES - Generalized Self - Efficacy Scale by Schwarcer and Jerusalem in Polish adaptation of Schwarcer, Jerusalem and Juczyński 2001, and Questionnaire Coping with stressful situations CISS - Coping Inventory for Stressful Situation by Endler and Parker in the Polish adaptation Strelau, Jaworowski, Wrześniewski and Szczepaniak from 2009. The first research tools measures the strength of the overall unit beliefs about the effectiveness of coping

with difficult situations and obstacles, classifying the results of individual sten scale from low to high by average. The second tool provides information on coping styles of examined with difficult situations. Distinguished style focused on the task, the style focused on emotions, style focused on avoiding taking two forms: the involvement of substitute activities and the search for social contacts. The study was conducted in accordance with applicable standards for tools, using appropriate norms. The study formulated the following research questions:

Question 1: What is the level respondents' self-efficacy?

Question 2: Which strategy for coping with stress dominates among respondents?

Question 3: Is there a correlation between the sense of self-efficacy and styles of coping with stress of respondents?

Put forward following hypotheses:

Hypothesis 1: The respondents were characterized by a high level of self-efficacy,

Hypothesis 2: The respondents in the most difficult situations apply the style of coping with stress focused on the task,

Hypothesis 3: There is a relationship between the sense of self-efficacy and styles of coping with stress.

The results of own research

Comparing and analyzing the results of research on the level of self-efficacy it is noted that in the examined population is moving research results towards the high level, approx. 51 % of respondents received the results on a scale sten within the range of high performance from 7 to 10 sten. Taking also into account the average for the stringent results clearly states the advantage high results in the examined population (Table 2, Figure 1).

Table 2 Summary of results of research on the sense of self-efficacy

N=4 7	M	The Result Recalculated Scale in Sten	K	SKE	SD	Percent Results	
						Low (sten 1-4)	High (sten 7- 10)
	29,87	7 (high)	0,55	0,19	3,77	6,38	51,06

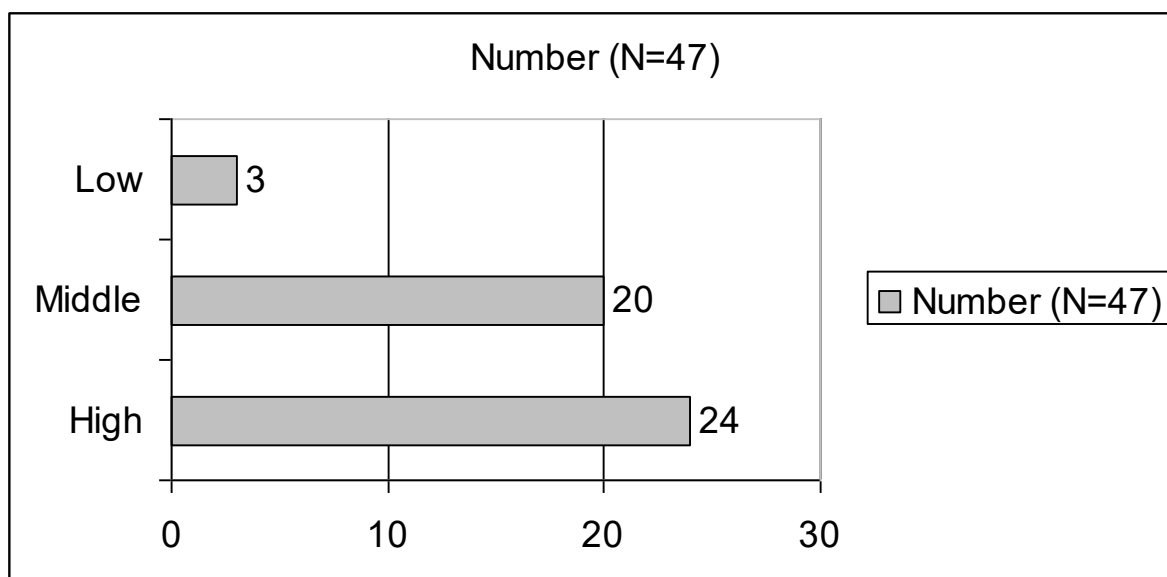


Fig.1 Summary of test results for a sense of self-efficacy on sten scale

Analyzing the results of research on the styles of coping with stress states that for the style-oriented task, and style focused on the search for social contacts (which is a sub-style style avoidance) recorded the same distribution of research results, while noting that for the all above mentioned styles that takes into account the research tool is observed most of the results of achieving high level (Table 3).

Table 3 Summary of the results of research on the styles of coping with stress

N=47	M	The Result Recalculated Scale in Sten	K	SKE	SD	Percent Results	
						Low (sten 1-4)	High (sten 7-10)
SFT	59,45	6 (medium)	-0,003	-0,037	5,60	10,64	36,17
SFE	47,32	6 (medium)	-0,58	0,16	11,11	19,15	31,91
SFA	49,94	5 (medium)	-0,27	0,29	8,63	25,53	23,40
ESA	20,62	5 (medium)	0,097	0,52	6,20	23,40	21,28
SSC	19,72	6 (medium)	0,31	-0,46	2,59	10,64	36,17

SFT - style focused on the task, SFE - style focused of emotions, SFA - style focused of avoidance, ESA - engaging in substitute activities, SSC - search for social contacts

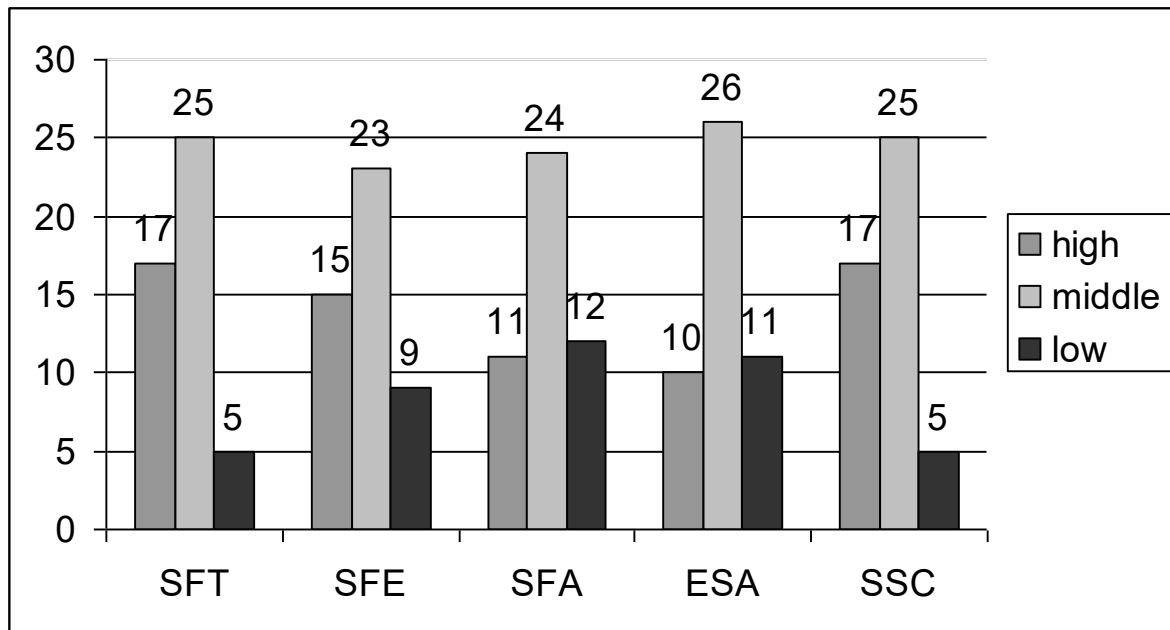


Fig.2 Summary of test results for different styles of coping with stress sten scale

Taking into account the raw results and the calculated results on a sten scale for all styles it is noted that in the studied population most results for all distinguished styles is within the results of the average (Figure 2, Table 3). It can therefore be presumed that in this population are different styles of coping with difficult situations, without any special advantage addressed by research tool. Comparing the test results obtained while testing the GSES and CISS states that most people received high scores for self-efficacy, and the average for the style of coping with stress concentrated on the task (Table 4).

Table 4 Summary of the results for the level of self-efficacy and the level obtained for a particular style of coping with stress

N=47	H-H	H-M	H-L	M-H	M-M	M-L	L-H	L-M	L-L
GSES – SFT(CISS)	0	23	1	1	17	3	0	1	1
GSES – SFE(CISS)	3	15	6	10	8	3	1	0	1
GSES – SFA(CISS)	6	14	3	3	10	7	2	0	1
GSES – ESA(CISS)	5	10	9	4	9	7	1	2	0
GSES – SSC(CISS)	9	15	0	6	10	4	2	0	1

H- high, M- middle, L- low

When making a statistical analysis of results included in the tab. 2,3,4 there is established level of correlation p - value = 0.05 and df = 45. The significance

of the correlation found for SFT and SFE, the self-efficacy and style of coping with stress concentrated on the task correlated positively (increase self-efficacy implies an increase in the value obtained for style focused on the task), while a negative correlation was observed for self-efficacy and the style of coping with stress concentrated on the emotions (the increase in the level of self-efficacy is accompanied by a decrease performance for style focused on emotions). The values of the correlation coefficient for the level of self-efficacy and style focused on avoiding and its two sub-styles have not achieved statistical significance.

Using additional classification by J. Guilford, the observed correlation coefficients for self-efficacy and coping styles with stress following results were obtained:

- self-efficacy and style focused on the task - the correlation coefficient = 0.342129652, average correlation, positive;
- self-efficacy and the style focused of emotions - the correlation coefficient = -0.527415933, high correlation, negative;
- self-efficacy and styles focused of avoidance - correlation coefficient = 0.024902, correlation hardly perceptible, positive;
- self-efficacy and engaging in substitute activities - correlation coefficient = -0.12199, weak correlation, negative;
- self-efficacy and the search for social contacts - the correlation coefficient = 0.234445, weak correlation, positive.

Interpretation of research results

The GSES scale, in contrast to many scales that measure the sense of effectiveness in specific situations, measures the force of general beliefs about the possibilities of overcoming difficult situations and obstacles. The surveyed individuals obtained high scores for general self-efficacy, which means that they are capable of making and continue operations even in the face of mounting barriers, they are characterized by a deep belief that the actions taken are feasible and the target achieved.

Studies on styles of coping with stress CISS questionnaire show that young teachers have different styles in dealing with difficult situations, although relatively more likely to use the style focused on the task and the search for social contacts (most results achieving high level). This means that in case of occurrence of a difficult situation, they take action to change the situation or seeking support in social interactions. They take into account the results obtained for the level of self-efficacy it is presumed that the style of coping with stress is dependent on the occurrence or situation, chosen in a way that ensures the best possible deal with adversity, and the fastest possible lossless overcome the difficulties.

The study also provide important information regarding the correlation of variables. It is noted that there is a relationship between the level of self-efficacy and a particular style of coping with stress. The increase in self-efficacy is accompanied by an increase in frequency of use of the style of coping with stress concentrated on the task. At the same time increase the sense of self-efficacy is accompanied by decrease in frequency of use of the style focused on emotions, which means that higher levels of self-efficacy combined frequent-making in a stressful situation action to resolve the situation and/ or the pursuit of change and move away from style focused on experiencing emotions, fixing on themselves, wishful thinking and fantasizing.

An attempt to answer the research questions and hypothesis verification

The analysis and interpretation of research on the sense of self-efficacy and styles of coping with stress young educators have answered the research questions and the hypotheses verification has been done.

The answers to research questions:

What is the level of self-efficacy respondents?

The study population prevails a high level of self-efficacy.

Which strategy for coping with stress dominates among respondents?

The respondents use different strategies in order to optimize the effects of activities, although most of the high results note for style focused on the task and style focused on the search for social contacts.

Is there a correlation between the sense of self-efficacy and styles of coping with stress of respondents?

Statistically significant correlation exists between the sense of self-efficacy and style focused on the task and the style focused on emotions.

Verification of hypotheses:

Hypothesis 1: The respondents were characterized by a high level of self-efficacy, has been confirmed.

Hypothesis 2: The respondents in the most difficult situations apply the style of coping with stress concentrated on the task, it is partially confirmed. The respondents use different styles of coping with stress, most high results, providing about making a particular type of activity recorded for the style focused on the task and the search for contacts.

Hypothesis 3: There is a relationship between the sense of self-efficacy and styles of coping with stress, has been partially confirmed. Self-efficacy and style of coping with stress concentrated on the task correlated positively, while negative correlation was noted for a sense of self-efficacy and style of coping with stress concentrated on emotions.

Summary

These studies provide information that young people starting their careers as special educators evaluate their high efficiency. They can make efforts despite adversity, to continue and finalize the action. Their level of assessment is dictated partly on their own experiences, partly on social learning of coping strategies. Because of that, they can believe in themselves to choose the circumstances appropriate styles of coping with stress. Positive correlation between the sense of efficacy and style of coping stress oriented to the task of providing information that strengthens in young teacher self-efficacy at the same time increases the chances of use in the fight against the difficulties the task strategy, oriented to overcome the problems (at the teacher's work seems to be the key in the design of therapeutic and educational effects). While reducing the frequency of use style-oriented emotions, experiencing difficulties, moving away from the real world and zooming into the world of alternative reality - fantasy. It should be noted, however, that the focus on the task, using a disciplined style can in some circumstances lead to resource depletion, causing a feeling of personal destruction. To prevent this, it should be carried the impact of efforts to improve the assessment of their effectiveness, while introducing fundamental changes to the system in the teacher's work aimed at maximum reduction in the level of stress generated by stressors such as conditions of employment, workload, infrastructure and focus on working with children with special needs to overcome difficulties resulting from the nature of the activities carried out revalidation.

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EDUCATIONAL INTERACTION OF THE STUDENTS WITH BEHAVIORAL DISORDERS IN THE CONTEXT OF TRANSFORMATION OF EDUCATIONAL PARADIGMS: THE CASE OF AN EDUCATIONAL CENTRE

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Abstract. *The article analyses the manifestation of educational interaction among fourteen – eighteen – year – old students with behavioral disorders that are being educated in the socialization centre. The method of a structured interview has been applied in order to determine the peculiarities of such interaction in the contexts of the traditional and the progressive education, prioritizing the culture of cooperative learning culture as a prerequisite for fostering social relations and learning a proper social behaviour. The discourse of the students, teachers and providers of special educational assistance has been analyzed in the context of the lesson organization, cooperation activities and surmounting impediments. The study results revealed that feelings of dignity and belonging to the community are of particular importance for the students of the social centre. However, the education here is based more on the teaching than on the learning strategy, as well as on a vertical interaction between teachers and students. Progressive education episodes, flexible organization of education and joyous atmosphere during the lessons establish a horizontal relationship and reduce tension in the educational environment.*

Keywords: *behavioral disorders, educational interaction progressive education, traditional education.*

Introduction

The educational system is one of the key factors in the development of a society. The society that is developing its own future on the basis of democratic values, seeks equal participation of all its members in the life processes. The opportunities to achieve the educational objectives of a democratic society can be opened by educational systems that are based on the ideas of progressivism. Such education systems emphasize democratic ideals, respect for the student, goal - oriented activities and active cooperation with the community (Hayes, 2006, Goossens & Van Gorp, 2016). In order to transform the unified education

system into a free and based on the ideals of democracy one, we have to overcome prioritization of the system based on abstract knowledge and to switch to the development of personal autonomy and social cooperation. (Duobliene, 2010, Bitinas, 2013). Access to different educational systems is fundamentally modifying the educational goals, their methods of implementation and evaluation of the results (McManus, 2001). It is important that a change in overall education system is necessary when seeking to implement changes in education. The anticipated result cannot be achieved having internalized only one of the components of an education system that is being updated (Fullan & Miles, 1992).

After the restoration of independence in Lithuania, from the year 1991, significant changes in the educational system for the students with special educational needs have been made. In 1991, when Law on Education of the Republic of Lithuania validated the opportunity for all the students with disabilities or special educational needs to study at general education institutions, the majority of them moved from special education institutions to general education schools. Only students with severe and profound special educational needs remained at special purpose educational schools. Six special purpose educational schools, “Socialization centres”, are designated for the students with severe behavioral problems. Their mission is to implement an average child - care tool for adolescents aged 14 to 18 years in cases provided by the Criminal Code of the Republic of Lithuania. Behavioral disorders are among top of the most disruptive disorders for social and educational ties. Students who have this disorder, face challenges not only when being trained interpersonal skills, but experience academic difficulties when learning (Watt et al., 2014). Public attitudes often marginalize people with this disorder, and possible success forecasts are unreliable (McGuire, 2015). Behavioral disorder restricts the pupils’ success at a general education institution by several aspects: limitation of social ties with peers and teachers, self - regulation problems and academic difficulties (Simpson, 2004). However, significant results can be achieved with the help of purposeful application of the target - oriented education. Systematic exercises, raising self-regulation skills, appropriate peer interaction skills, emotional regulation skills, and conflict resolution strategies, determine significant progress of such students (Zeng et al., 2016). Research shows that external support enhances educational interaction and increases the opportunities for inclusion of such students. Collaborative problem-solving is highly recommended, as it increases students’ social validity (Simpson, 2004). Creation of a favourable, goal-oriented educational environment and continual assessment of its effectiveness also have significant importance on the expected development of the student’s behaviour (O’Shaughnessy et al., 2003).

Research question. How do the components of educational paradigms reflect themselves in the educational interaction of the students with behavioral disorders?

Research methodology. Assuming the metamorphosis of the paradigms of an educational system based on traditionalism ideas into the educational system based on the ideas of progressivism, an educational interaction in a socially sensitive educational environment, a socialization centre, is analysed. Order, hierarchy and cultural transference prevail in an education system based on traditionalism ideas, whereas the ideas of progressivism actualize personal development and social co-operation (Duobliene, 2010). These educational systems are revealed by different educational approaches. Traditional education is based on an educational *training* strategy which emphasizes a vertical cognitive teacher’s relationship with a student. Meanwhile, ideas of progressivism actualize a *learning* strategy, which focuses on collaborative teacher-pupil relationship (McManus, 2001). In this way, educational interaction mechanisms switch from the direct knowledge transmission system to the collaborative educational system where the impact power is distributed among the participants of the educational reality (Juceviciene et al., 2010). Successful learning is achieved through cooperation, primarily in the social level through interpersonal interaction means and sharing a common learning experience (Vizgirdaite & Juceviciene, 2014).

McManus (2001), referring to Smith & Waller (1997), provides characteristics of teaching and learning approaches (Table 1).

Table 1 Characteristics of teaching and learning approaches

Characteristics of Teaching - Centered Groups	Characteristics of Learning - Centered Groups
Individual accountability only	Both group and individual accountability. Members keep themselves and others accountable for high quality work
Little or no attention to group formation	Deliberately formed groups
Assignments are discussed with little commitment to each other’s learning	Members promote each other’s success, doing real work together
Teamwork skills are ignored. Leader is appointed to direct members’ participation	Teamwork skills are emphasized. Members are taught and expected to use collaborative skills
No group processing of the quality of the groups work	Group process the quality of work and how effectively members are working together

McManus (2001), referring to Smith & Waller (1997)

These characteristics reveal the differences of the teaching and the learning strategies in the aspect of cooperation. Taking into account the fact that

interpersonal interaction is the most affected part of the educational system of students with behavioral disorders, our survey statistics are analyzed in accordance with McManus' (2001) construct of teaching and learning characteristics.

Research participants. The research was carried out in one of the Lithuanian socialization centers. Six male trainees of this centre, aged 16 – 17, agreed to participate in the study. The average time of the adolescents who took part in the study of the education at the socialization center is 4 months. Also, four of the teachers of the boys and two special educators participated in the research.

Research organization. The data were collected using the method of a structured interview. Individual discussions were held with each interviewee, based on a prearranged interview plan. In order to increase the credibility of the research results, a group of respondents was formed from a variety of the participants of the educational reality - students, teachers and student assistance specialists. The method of structuring content analysis is applied for the analysis of qualitative data.

Research ethics. Determination of the participants to participate in the research was voluntary. Confidentiality of educational institutions and research participants has been preserved, without indicating either the name of the institution, or the names of the participants. Coding of the focus group: (S) - student; (T) - teacher; (SAS) - student assistance specialist.

Research limitations. The research was carried out in one specific educational institution, so the results cannot be generalized in respect of all the learners with behavioral disorders. It reveals possible trends and encourages further studies of individuals with behavioral disorders.

The research data analysis

Feeling of the participants of the educational reality. Interpersonal interaction expression results are primarily reflected by the participants' well-being in the community. The research results show that the students of the socialization centre, the research participants, feel well enough in this community. The most important aspects that students distinguished when talking about their well-being are: 1) dignity intact "... *I'm not insulted or humiliated by friends*" (S), "*I am not isolated from other students*" (S); 2) meeting the need of belonging to the community "*I am not marginalized by friends*" (S), "*I get on well with friends*" (S), "*I get along well with teachers*" (S). However, the students recognize the fragility of this interaction and the need to remain within the limits "...*when you gossip too much, other peers may hit you on your head*" (S). Interpersonal relationships between students in this environment are created

on the basis of common interests and internal motivation to communicate. They are hardly affected by external requirements. In most cases, the frontiers in this relationship are drawn by the students themselves, so the need for human dignity and belonging to someone is satisfied.

The teachers' relationships with the students are influenced by external requirements to change the behaviour of the students and to achieve certain academic results. It is interesting that the teachers put the greatest emphasis on the processes that take place in the classroom during the research. The teachers' feeling during the lessons is twofold and has to be related to the elements of the educational paradigm a teacher uses in his work. Teachers who create learning environments feel well in the interaction with the students "*I feel at ease during my classes and I enable my students feel this way*" (T), "*Our lessons are always accompanied by laughter and fun*" (T). It is obvious that the correlation created by horizontal relationships allows both students and teachers feel unembarrassed. The feeling of tension in the educators' discourse occurs when a vertical educational relationship with students is planned. In this case, the situation can be resolved by flexibility and ability to adapt to the needs of learners "*You often have to improvise as you come prepared to the lesson and you see that what you had planned is going to fail; something needs to be changed; you always try to get the students interested, because it is not possible to force them to learn*" (T). The situation becomes complicated when elements of the teaching strategy prevail in the educational interaction "*everything usually depends on the lesson theme*" (T), "*sometimes the topic is not interesting*" (T). Academic purposefulness (characteristic of traditional education), hinders transferring of the content of the subject into the context of actual reality and analyzing it in connection with the experience that is close to the student's heart, thus creating a horizontal educational interaction. The research results show that the teacher's well – being in the interaction with these students is significantly influenced by the factor of overall mood of the students in the classroom "*everything usually depends on the mood of the students in the classroom*" (T). Human mood is influenced by numerous factors. It may reflect the events of the past and may not be associated with a particular present situation, but it has an impact on the present situation, on the other hand, it can be affected by current events, and vary. Educational strategy selected by the educator can affect students' mood and influence the educational process. Summing up the students and teachers' well - being in the educational interaction, a relation between the selected strategy of training and students and teachers' well-being can be detected (Fig. 1).

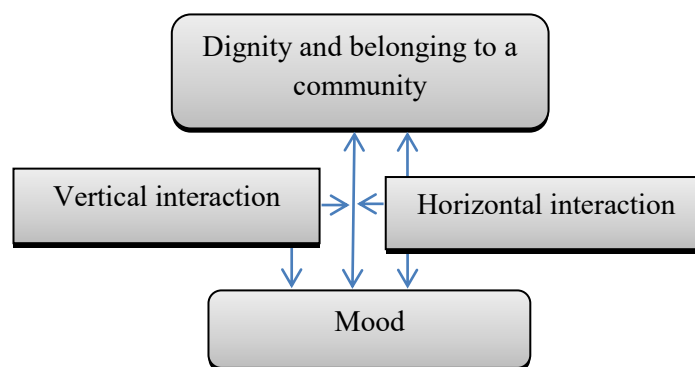


Figure 1 **Factors influencing well - being of the educational participants in the pedagogical interaction**

The research results show that the recognition of their dignity and the sense of belonging to the community are essential for students with behavioral disorders. Educational strategy selected by the educator determines a horizontal or a vertical relationship with the students. In case of the teaching strategy, the teacher creates a vertical educational relationship. In this case, the students' mood will depend on two components; newsworthiness of the proposed training material and the student's learning performance. In case of success the student's mood will be elevated, the feeling of dignity will be supported. It is understandable that the feeling in the teacher - student interaction will be good. In case of failure, the student's mood will be bad, and feelings of dignity and belonging to the community will become vulnerable. Volatility of stress in educational interaction will be felt. This conclusion can be supported by the teachers' statements: *"The atmosphere is very diverse, everything mostly depends on students' mood and lesson theme"* (T). Meanwhile, when creating a horizontal interaction which is an element of the learning strategy, and responding to the students' need to have dignity intact and the sense of belonging to the community, the students' good mood is supported, and, thereby, well – being of all the participants of the educational reality. Thus, a reasonable question arises: *"Which education organization components enable you to create a horizontal interaction of education participants?"*

Lesson organization. The research findings show that teachers, when organizing lessons, apply methods attributable to the traditional teaching strategy: *"explanation"* (T), *"narration, only I try to make it shorter"* (T), *"example demonstration"* (T), practical assignments, self studying, etc. Application of these methods determines a vertical educational interaction. Collaborative techniques assist the creation of a horizontal interaction. Students that took part in the research indicate only one method that generates cooperation relations, i.e., teamwork *"we work in groups"* (S), *"Some teachers*

organize group work sessions” (S). This method was mentioned by half of the students involved in the research and this presupposes that it has been applied only episodically *“we have worked in a group with other friends, but this happens very rarely”* (S). It is understandable that application of cooperation fostering techniques in a group of students with behavioral disorders requires a particular organization and is not always possible *“some teachers organize group work sessions, but do not take part”* (S). It is much easier to organize individual work of these students *“...all the learning is independent”* (S) say students. Teachers adapt the assignments for the students with respect to their needs and abilities *“sometimes it happens so that I select different tasks for nearly all the students in the classroom according to their capabilities”* (T). Most commonly, the assignments are prepared individually for each student, but sometimes, when the students’ capabilities are comparable, the assignments are prepared for separate groups of the students. *“If it is possible, I tailor the content of the lesson to several groups of the students according to their abilities and prepare tasks according to it”* (T). However, an individual organization of work does not create a horizontal educational interaction, but consolidates the individuality not only in learning, but also in the wider social context *“I get additional tasks that I do independently and alone”* (S). Pupils’ statements prove that individual activities do not encourage motivation to learn either *“I get individual tasks designated especially for me, but I do not do them”* (S). Moreover, too immoderate individualization of the activities in a socially sensitive environment provokes greater tension in interpersonal relations. Individual teacher’s relationship with a student with behavioral disorder is a very important sign that consolidates his relationship of belonging to the community. However, from the perspective of the community, it is very important that this relationship would be balanced and would not cause others such feelings as exclusion and lack of such relationships *“I don’t get any individual tasks”* (S), *“I don’t get anything”* (S).

Cooperation culture. The research results reveal a more developed culture of individual work than that of cooperation among teachers. A significant aspect of communication between students’ teachers is one of the components of cooperation. Teachers note that the issues of the efforts of the students’ learning and their behaviour are discussed with all of their teachers *“we talk about the behavior, speech, performance in certain subjects, how the pupil adapts or does not adapt, how he feels in class and in the surrounding environment and among other students”* (T), *“...with each other, with other subject teachers very often...”* (T). However, this communication does not develop into overall activities designed develop students’ communication culture, specifically targeted to develop their interpersonal relationships. Individual activities also dominate in the group of specialists for assistance to students *“Self – awareness programme*

for children with special educational needs is being conducted, but it is more like individual counseling, according to an individual scheme” (SAS). A pronounced separation of functions between the teachers and student assistance specialists has been observed “Unfortunately, we communicate on these issues very rarely” (SAS). This way, the specialists’ team acquires a negative connotation of problem solvers among students. If you turn to a specialist, it means that you publicly acknowledge your problems. Therefore, students tend to avoid meetings with them “I know that the school has such specialists as psychologist, social educator, but I do not communicate with them because I don’t like them” (S). This is not always the case. Some of the students trust the professionals and make use of their assistance “when I have problems, I turn to a psychologist or a social educator and get the assistance from them that I need” (S). However, these are more solitary cases.

Difficulty coping strategies. Research results show that students’ with behavioral disorders difficulty coping mechanism in this educational institution is more associated with incentive system of the students “I often receive incentives” (S), “...every lesson” (S). Most commonly, the students are encouraged by a good mark or praise “nobody evaluates badly, they give remarks for me to react to them; they do not say that you are unable to do something, do not humiliate in front of the others” (S). When evaluating students, teachers try to form an adequate ratio of the efforts made and the results “your evaluation, the mark, depends on how well you perform. When you work little, you get little, and when you work normally and you try, the evaluation is also good” (S). However, maintaining the balance between the requirements and the result in this environment is a complex task “If the teachers begin to demand too much from me, I call them names, then the teachers write official reports on me” (S). Performance evaluation is important for the students “good marks and evaluations are also important, but only because they affect vacations” (S). Status in the community is very important for the students, which is also developed by the feedback on their performance “teachers’ incentives are of importance” (S), “friends’ opinion about me is important” (T).

The expected success denial signs are pronounced in the students’ discourse as well. They can be seen as defensive postures, avoiding a possible failure “...I don’t try to learn, I don’t learn, I just sit in class and that’s it; I tell the teacher to give me a four and that’s it” (S), “Recognition of classmates or teachers’ opinion about me are not important” (S). Meanwhile, teachers tend to support these students, foster their self-esteem and develop self-confidence as much as possible. Attitudes of sympathy are prominent in the teachers’ discourse “We teach these children, with a very good will, you can do nothing about them, we all make mistakes and it requires patience to teach such

children” (T). This attitude helps the teacher to mobilize himself and shape tolerance when raising requirements *“I can see that at least he does a minimum during my classes and I give a positive mark”* (T). This attitude encourages providing assistance, responding to the needs and supports self-confidence *“I try to support them, once again demonstrating tasks and so on. I try to ensure that pupils do not suffer from frustration”* (T).

The research results indicate that the difficulty coping mechanisms, when educating students with behavioral disorders, on the one hand reflect each student - oriented relationship, but on the other hand, the vertical educational interaction takes place which does not unite for consolidated purpose or search for common solutions. The elements characteristic of the traditional educational paradigm are very much pronounced in this educational system.

Discussion and conclusions

When responding to the research question: “How do educational paradigm transformation components reflect in the educational interaction of the students with behavioral disorders?” it is worth emphasizing the teaching and the learning strategies, as presuming, respectively, the traditional and the progressive educational paradigms. Expression of the teaching and the learning strategies in the educational process is revealed through cooperation component (McManus, 2001) of students with behavioral disorders, which manifest in constant difficulties when cooperating with people and the environment, due to lack of capacity to manage conflict situations, understand their own behaviour and other people’s feelings and intentions (Pukinskaite, 2008).

Learning strategy based on the culture of cooperation prioritizes learners’ overall activities, and, at the same time, personal and shared responsibility and success experiences. Students with behavioral disorders due to a lack of internal impulse control can hardly restrain their emotions, feelings, and adapt in the society. External control is especially important for them (Kalpokiene & Gudaite, 2007). A cooperating group when seeking the overall success reinforces the external control with respect of each other and supports group balance. Our research results show that, when applying the teaching strategy and focusing on individual tasks, a student individually experiences success and failure situations. In order not to suffer a possible failure, no opportunity remains to share responsibility, therefore, avoidance strategy is chosen and activities are ignored. Basing education organization on the learning strategy, cooperating groups are purposefully formed to carry out various activities and to solve problems. Our research results show that the teachers work cooperatively to discuss their students’ educational performance and progress. Specialists organize a target group for students’ deeper self - awareness. However, other

authors' experience shows that pupils with behavioral disorders gain experience of functioning in the society by participating in group activities, which simulate social situations. Students participating in activities of such groups learn experience from recognizing social characters and their correct interpretation to an appropriate choice of response to social challenges (Mitchell, 2014). Education organization focused on the individual impact hinders the organization of similar activities. The results of this research indicate that specialist assistance has a connotation of a possibility of difficulty solving and evokes denial of meeting with such specialists. Meanwhile, each community member's success and strength prioritized in a collaborative culture emphasizes the performance goals for achieving the common good. The phenomenon of help becomes a natural part of common activities that helps not only to deal with social problems, but also to learn to live without them. Our research results confirmed the observation of Visser & Rayner (1999) that flexibility and a good mood when educating students with behavioral disorders not only reduce the number of unwanted behavior episodes, but they help to overcome even the occurrences of aggression.

Conclusions

The results of this research revealed that the educational system of adolescents with behavioral disorders at the center of socialization is based on the traditional educational strategy. Educational interaction is dual, it takes place between a teacher and a student, and individual students' activities dominate. Students and teachers' cooperation has not been developed and it hinders learning to master a variety of social situations, to establish more flexible mutual relations, and to focus on the creation of the common good. Teachers are creating a sensitive relationship with the students in order to understand their situation and to respond to their needs. Although a sensitive teacher's relationship reinforces individual relationship, a faster reorganization of the whole educational system into education strategy based on the creation of a progressive social capital would help speed up to achieve the results of the mission of this centre.

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ИНКЛЮЗИВНОЕ ОБРАЗОВАНИЕ И ФАКТОРЫ, ОКАЗЫВАЮЩИЕ ВЛИЯНИЕ НА ВЫБОР ПРОФЕССИОНАЛЬНОГО ПУТИ УЧАЩИМИСЯ С НАРУШЕНИЯМИ СЛУХА В ЧЕШСКОЙ РЕСПУБЛИКЕ / INCLUSIVE

Education and Factors Affecting Choice Career of Pupils with Hearing Disability in Czech Republic

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Abstract. *The paper focuses on the issues of inclusive education and possible factors that influence the choice of further education and preparation for the professional path of learners with hearing impairment in the Czech Republic. In the research, the survey is based on the quantitative assessment of the factors that may affect the choice of the profession by learners with hearing impairment, in particular, degree of hearing impairment, influence of parents, school, friends, values inculcated in the learning process, and information on education acquisition opportunities. Learners of Form 8 and Form 9 of elementary schools for learners with hearing impairment participated in the survey. Based on the survey, one can speak that elementary schools have low awareness of the equipment possibilities, as well as of small influence of parents and friends on the choice of further education. An important discovery was that learners with hearing impairment do not connect the value of "happy life" with education acquisition, but they consider success at work as an important component of the quality of life.*

Keywords: *disability studies, inclusive education, professional path, learners with hearing impairment.*

Introduction

Предлагаемое исследование посвящено проблематике образования и последующего профессионального пути, который следует за образованием. Кроме того, оно нацелено на высокую актуальность этой проблематики для общества с учетом увеличения количества самостоятельных граждан с нарушениями здоровья и ростом их

требований быть включенными в рынок труда. Исследование воспринято с точки зрения специальности disability studies, в которой ограниченные возможности рассматриваются не с точки зрения медицинского лечения или медицинской реабилитации, но в качестве социальной категории, на том же уровне, что и половая идентичность, этническая и расовая принадлежность или сексуальная ориентация. (Adams, Reiss, & Serlin, 2015). Такой подход к ограниченным возможностям по состоянию здоровья открывает новые перспективы для анализа данного явления в составе общественных и гуманитарных наук. Disability studies могут рассматриваться в качестве контрапункта к рассмотрению ограниченных возможностей с точки зрения медиализации на основе применяемых специальностей. (Linton, 1998; Heyer, 2007). Основными «китами» в основе идеи инклюзивного подхода стали также принципы европейской стратегии (образование, прием на работу), которые основываются на равных возможностях и вовлечении людей с ограниченными возможностями во все сферы общественной жизни. Обеспечение таких равных возможностей требует реализации широкой шкалы мероприятий, поддерживающих вовлечение таких людей в систему образования и социальной жизни.

Aims

Цель работы заключается в идентификации, анализе и интерпретации факторов, которые оказывают влияние на выбор профессионального пути учащихся с нарушением слуха в начальной школе.

Sample and methods

Был использован количественный подход. Исследованию предшествовало предварительное исследование. С учетом выбранной группы респондентов в качестве цели предварительного исследования мы старались проверить вопросники, составленные нами для учащихся с нарушением слуха. Учитывая специфику нарушений слуха, мы предполагали, что лица с нарушением слуха будут испытывать затруднения с пониманием вопросов. Поэтому мы проверяли пригодность вопросников для респондентов, формулировку и содержание вопросов.

На основании предварительного исследования была составлена концепция вопросника, который распределялся в 12 начальных школах для учащихся с нарушением слуха в Чешской Республике. На вопросы анкет ответили 83 учащихся 8-х и 9-х классов начальных школ для учащихся с нарушением слуха, что составило 77 % от общего числа опрошенных (n=108).

Results

Анализ вопросников дает следующие результаты, говорящие о возможных факторах, влияющих на выбор профессионального пути учащимися с нарушением слуха в Чешской Республике.

Таб.1. Characteristics of the sample of respondents based on age

Возраст	Учащийся с нарушением слуха (учащиеся 8-х и 9-х классов нач. школ)
14–15 лет	50,6 % (n=42)
16-17 лет	44,6 % (n=37)
18 лет	2,4 % (n=2)
Не ответили	2,4 % (n=2)
Σ	100,0 % (n=83)

Таб.2. Characteristics of the sample of respondents in terms of type of hearing impairment

Вид нарушения слуха	Учащийся с нарушением слуха
Слабослышащий	39,8 % (n=33)
Неслышащий	50,6 % (n=42)
Не знаю	2,4 % (n=2)
Не ответили	7,2 % (n=6)
Σ	100,0 % (n=83)

Таб.3. Criteria for the selection of high school

Критерии	a	b	c	d	e	f	Σ
Учащиеся	18,3 % (n=31)	6,5 % (n=11)	8,3 % (n=14)	3,0 % (n=5)	11,3 % (n=19)	1,2 % (n=2)	100 % (n=82)

Легенда: a = То, что меня интересует; b = То, что будет хорошо оплачиваться в будущем; c = То, что выбрали для меня родители; d = То, что выбрали для себя мои товарищи; e = Учебное заведение, расположенное поблизости от дома; f = Другое

Таб.4. Preference of specialization for students with hearing impairments

	Отдавал/а ли ты предпочтение, выбирая среднее учебное заведение, специальности для людей с нарушением слуха?		
	ДА	НЕТ	Σ
Учащиеся	28,4 % (n=48)	20,1 % (n=34)	100 % (n=82)

Таб.5. The frequency of hearing impairment in parents of children with hearing impairment

Родители неслышащие?	
Да, оба	14,5 % (n=12)
Один из родителей неслышащий	7,2 % (n=6)
Оба родителя неслышащие	78,3 % (n=65)
Σ	100 % (n=83)

Таб.6. Advice of parents

Вы советовались с родителями о выборе профессии?			
	ДА	НЕТ	Σ
Учащиеся	78,3 % (n=65)	21,7 % (n=18)	100 % (n=83)

Таб.7. Consensus among pupils with special needs and their parents

Твой выбор соответствовал выбору твоих родителей?			
	ДА	НЕТ	Σ
Учащиеся	62,6 % (n=52)	37,4 % (n=31)	100 % (n=83)

Таб.8. Assistance in selecting high school

Кто помогал тебе выбирать среднее учебное заведение?					
	Родители	Товарищи	Учитель/школа	Кто-то другой	Σ
Учащиеся	50,0 % (n=41)	34,1 % (n=28)	12,2 % (n=10)	3,7 % (n=3)	100 % (n=8)

Таб.9. The information provided by the primary and secondary school

Информировала ли тебя начальная школа о возможностях выбора среднего учебного заведения?			
	ДА	НЕТ	Σ
Учащиеся	82,3 % (n=68)	17,7 % (n=14)	100 % (n=82)

Таб.10. Preference field for pupils with hearing impairments

	Специальность для учащихся с нарушением слуха		
	ДА	НЕТ	Σ
Учащиеся	58,5 % (n=48)	34 % (n=41,5)	100 % (n=82)

Discussion

Уточнить факторы, которые оказывают влияние на выбор дальнейшего профессионального пути, а значит и выбор дальнейшего образования в начальной школе, представляется проблематичным. Причина заключается в недостаточном количестве релевантных эмпирических исследований, рассматривающих указанный аспект у учащихся с нарушением слуха.

На основании изысканий мы нашли статьи, в которых рассматриваются вопросы, связанные с факторами, влияющими на выбор среднего учебного заведения. Тем не менее, в этих статьях рассматриваются люди с ограниченными возможностями в целом, и все доступные сведения касаются всех категорий нарушения здоровья. Исходя из специфики восприятия и личности у лиц с нарушением слуха, мы не сравнивали результаты с результатами указанных исследований.

Авторами было найдено исследование *Young people's perceptions of their vocational guidance needs: I. Priorities and pre-occupations*, проведенное в Англии в 1981. В нем приняло участие 1712 учащихся третьего, четвертого и пятого года обучения на второй ступени 20 начальных школ. Их задачей было заполнение вопросника о приоритетах, которые оказывают влияние на выбор специальности и подготовки по данной специальности. Исследование было направлено на учащихся без нарушений здоровья. (Cherry & Gear, 1981). Тем не менее, один из результатов данного исследования подтверждает и обнаруженный нами факт, а именно то, что на выбор среднего учебного заведения, а значит и будущей специальности, оказывают существенное влияние родители.

Следующее исследование дает основания предполагать о том, что наибольшее влияние на выбор среднего учебного заведения респондентов будут иметь их родители. (Foskett & Hesketh, 1997). Этот фактор указывается всего 22 % респондентов. Отвечая на вопрос, в котором мы спрашивали о родителях, как одном из возможных факторов, влияющих на выбор среднего учебного заведения, в этом отношении высказались 8,3 % респондентов. Когда мы выясняли, кто помогает в выборе среднего учебного заведения, вплоть до 50 % респондентов указало именно родителей. Родители – это не только те, кто принимает решение, но и те, кому принадлежит инициатива процесса принятия решения, причем они являются и первичным источником помощи и советов.

Что касается конкретного способа предоставления информации, учащиеся получали ее посредством классного руководителя, причем для учащихся с нарушением слуха это дополнялось в форме информационных встреч и посещений бюро по трудоустройству. Учащиеся также указали, что они получали информацию от старших товарищей.

На основании интервью с директорами нам стало известно о том, что информация часто искажается или не предоставляется объективно по причине того, что они не хотят терять учащихся. Поэтому большая часть информации о возможностях обучения подается с целенаправленной ориентацией на соответствующее среднее учебное заведение, связанное с данной начальной школой. Эти сведения тем не менее не подтверждены у нас результатами исследования, так как они были получены в ходе

интервью с директорами, которые проводились без записи. Это были неформальные беседы между научно-исследовательскими работниками и директорами школ. Эти беседы проходили перед использованием вопросников в конкретной школе. Исследование источников информации у учащихся и родителей свидетельствует о том, что и родители, и учащиеся ищут информацию скорее неформальным путем. Наиболее распространенным источником является посещение средних учебных заведений. (Hammond & Dennison, 1995)

В настоящее время существует много исследований, посвященных факторам, оказывающим влияние на образование, тем не менее нам не удалось найти ни одного исследования, которое бы проводилось в отношении лиц с нарушением слуха. Большинство исследований и проектов в настоящее время посвящены информированности работодателей.

Limitations of the study

Настоящая проблематика чрезвычайно широка, так как в ее составе имеется очень большое количество переменных (само наличие нарушения слуха, спецификация особенности, социокультурные различия, воспитание и образование, ценности, пожелания, ожидания, состояние функциональности / социальные проблемы потребностей и т.д.) Сюда же относится и возможность нахождения всех могущих быть релевантными исследований, посвященных исследуемым явлениям.

Переменные со стороны исследователей играют свою неотъемлемую роль в методике исследования. Определенное значение, оказывающее свое влияние, может иметь и тот факт, что у самих исследовательниц (авторов) нарушение слуха отсутствует.

Авторам не удалось обнаружить подобные исследования по данному вопросу, проведенные в условиях Чешской Республики. В случаях проверочного количественного исследования можно усмотреть проблему именно в недостатке релевантной информации для последующей дискуссии и создания отправной точки для дальнейших исследований в последующих областях.

Авторы полагают, что одним из ограничений исследования была также подверженность влиянию учителей при выборе среднего учебного заведения у учащихся с нарушением слуха. В Чешской Республике общеизвестно, что число учащихся с нарушением слуха в школах сокращается, и школы борются за каждого из них с целью сохранения финансирования. В этой связи директора и учителя направляют учащихся в те средние учебные заведения, которые организованы как продолжение

оконченной начальной школы, в которой заполнение мест обеспечивается обязательностью школьного образования.

Нежелание принимать участие в исследованиях часто наблюдается у лиц с нарушением слуха, а также у соответствующих учреждений. Это связано с тем, что им приходится заполнять большое количество анкет в составе различных исследований.

Conclusion

В заключение мы предлагаем некоторые рекомендации, которые могли бы оказаться полезными для меньшинств с нарушением слуха с точки зрения образования, в контексте инклюзивного подхода, при трудоустройстве на рынке труда и одновременно для создания равных возможностей для полноценной жизни таких людей.

В первую очередь необходимо заняться широкой просветительской работой посредством тех организаций, которые поддерживают трудоустройство лиц с нарушением слуха, а также повышением уровня знаний о проблематике профессионального трудоустройства и его специфических чертах у людей с нарушением слуха; это можно было бы обеспечить посредством различных мероприятий, подключения средств массовой информации и стремления избавиться от предрассудков по отношению к лицам с нарушением слуха. Не только среди потенциальных работодателей, но и среди широкой общественности.

Распространение образования и других навыков среди воспитателей по профориентации на курсах, в ходе специального обучения и на семинарах, благодаря чему удалось бы повысить эффективность работы и эрудированность в области профориентации. Увеличить участие в профориентации со стороны воспитателей и консультантов.

Обеспечить проведение различных лекций, которые дадут учащимся представление о предложении конкретных мест в бюро по трудоустройству, которые рекомендуются в том числе для людей с нарушением слуха. Учащиеся имели бы возможность принять решение о том, на какую специальность ориентироваться при выборе среднего учебного заведения, в том числе исходя из потребностей рынка труда.

Приглашать родителей на различные лекции, встречи, которые посвящены конкретным профессиям и возможностям выбора среднего учебного заведения (в том числе для учеников с нарушением слуха) или непосредственно самому выходу на рынок труда, чтобы у них было представление о ситуации в настоящий момент, что также помогло бы избежать переоценки учащихся, а также неправильного выбора учебного заведения со стороны родителей. Этот факт важен и с той точки зрения,

что родители и ученики, принимающие решения по данному вопросу, преследуют различные цели и имеют разное представление о будущем, а также применяют различные стратегии источников информации.

Повышать уровень стремления своих детей с нарушением слуха в контексте дальнейшего образования или трудоустройства чрезвычайно важно, причем это необходимо делать, поддерживая те их личные качества, которые связаны с успехом.

Помочь родителям осознать свою центральную роль в процессе формирования профориентации и подготовки их детей, подключив их к определенным видам деятельности, связанной с профориентацией.

Подготовку к профессии вести индивидуально. Начиная с начальной школы, продолжая выбором среднего и высшего учебного заведения, и вплоть до помощи поиска места трудоустройства и сохранения этого места.

В ходе подготовки педагогов высших учебных заведений подчеркивать значение культуры Неслышащих и специально изучать ценности этого сообщества.

В программу подготовки будущих учителей добавить такие области, как консультирование по профориентации с нескольких точек зрения (поддержка при поиске рабочего места, преодоление препятствий, связанных с трудоустройством, помощь в сохранении полученного рабочего места, сотрудничество между лицом с нарушением слуха и работодателем, формальное обеспечение работы и т.д.). Не следует забывать также о языковой и культурной разнице, которая влияет на профессиональный путь. Будущим педагогам следует получать знания о языке, его структуре и национальной культуре. (Růžička, 2013)

Поддержка дальнейших научных исследований и поиска новых возможных решений трудоустройства лиц с нарушением слуха. Расширять знания в данной области и направлять свои исследования более конкретно и на более узкую часть представленной проблематики. Применять результаты научной работы на практике, в частности использовать конкретные сведения, полученные в ходе исследования, на конференциях, в школах и в публикациях.

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Summary

The paper focuses on inclusive education and possible factors influencing the choice of further education in preparation for a career of pupils with hearing disability in the Czech Republic. The objective is the identification, analysis and interpretation of the factors that influence the choice of the career of pupils with hearing disability in primary schools. It was used a quantitative approach.

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SPECIĀLĀS IZGLĪTĪBAS IEKĻAUŠANA PIRMSKOLAS UN PAMATSKOLAS VISPĀRĒJĀ IZGLĪTĪBĀ LATVIJĀ

The Inclusion of Special Education into Preschool and Elementary General Education Institutions in Latvia

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Abstract. *The statistics of the Ministry of Education and Science show a positive dynamics in the availability of special education. However, for inclusion of children with special needs into the mainstream education, the provision of support staff (psychologist, speech therapist, special educator) is essential. The aim of this research is to investigate the national legislation on the inclusion of children with special needs in the pre-school and elementary school education system, exploring the funding aspect. The study analyses the legislative basis for the provision of special education in mainstream schools. The research investigated the provision of special education in general education institutions in Alūksne Municipality in September - December 2016 (case study) and carried out several interviews with field experts. The study is conducted in the context of theory of inclusive special education. The study shows that in providing education support staff in an educational institution in the framework of the existing public education and special education funding model and in the context of a rural region with a low population density, there is a need for a rational approach, careful planning and process management: gathering information about all pupils with special needs in a municipality, cooperation with parents, management and mobilization of all resources.*

Keywords: *pre-school and elementary special education, children with special needs, support personnel, Alūksne Municipality.*

Ievads

Introduction

Gatavojoties iestāties Eiropas Savienībā, LR valdība un Eiropas Komisija 2003. gadā parakstīja Kopējo sociālās iekļaušanas memorandu, kurā definēti galvenie mērķi nabadzības un sociālās atstumtības jautājumu risināšanai, t.sk., iekļaujošas speciālās izglītības īstenošanā (Saeima, 2004). Izglītības un zinātnes

ministrijas dati parāda pozitīvu dinamiku speciālās izglītības pieejamībā, vispārējās izglītības iestādēs licencētu speciālo izglītības programmu (SIP) un iekļauto bērnu ar speciālām vajadzībām (BSV) skaita pieaugumu (IZM, 2014, IZM Invalīdu lietu nacionālā padome, 2016). Taču ne vienmēr izglītības iestāde, kas ir licencējusi SIP, spēj nodrošināt kvalitatīvu izglītības atbalstu. Valstī nav radīta sistēma, kas garantētu, ka katrs konkrētais bērns tiešām saņems viņa speciālajām vajadzībām nepieciešamo atbalstu (IZM, 2014). Izglītības attīstības pamatnostādnes 2014.-2020. gadam uzsver, ka efektīvam atbalstam bērnam ar speciālām vajadzībām ir būtiski, ka vispārējās izglītības iestādēs ir atbalsta personāls. Rīcības virziens “Iekļaujošās izglītības principa īstenošana un sociālās atstumtības riska mazināšanā” paredz atbalsta personāla (psihologs, logopēds, speciālais pedagogs) pieejamības nodrošināšanu, īpaši pirmsskolas un pamatizglītības posmā: 2017. gadā +5 % un 2020. g. + 7 %; skolotāja palīgu un pedagoga palīgu atalgojuma nodrošināšanu vispārējās izglītības iestādēs no valsts budžeta finanšu līdzekļiem (Saeima, 2014). 2016. g. 1.septembrī spēkā stājās trīs jauni MK noteikumi, kas pamatā regulē izglītības finansēšanu no valsts budžeta, paredzot lielāku finansējumu izglītības atbalsta pasākumiem (05.07.2016. MK not. Nr. 445), (05.07.2016. MK not. Nr. 447), (15.07.2016. MK not. Nr. 477).

Lai arī valsts statistikas dati par iekļaujošās speciālās izglītības pieejamību dinamikā ir pozitīvi, ir konstatētas nozīmīgas iekļaujošās speciālās izglītības īstenošanas problēmas un viena no tām ir izglītības atbalsta personāla nodrošināšana izglītības iestādēs. Pētījuma mērķis ir izpētīt valsts likumdošanu par bērnu ar speciālām vajadzībām iekļaušanu izglītības sistēmā pirmsskolā un pamatskolā no 2012. - 2017. gadam, apskatot finansējuma aspektu atbalsta personāla nodrošināšanai. Pētījumā tiek izmantota normatīvo dokumentu izpētes un analīzes metode. Lai apzinātu speciālās izglītības nodrošinājuma situāciju lauku novadu kontekstā, tika veikta gadījuma izpēte Alūksnes novadā: izpētīti Alūksnes pašvaldības normatīvie dokumenti, iegūti Alūksnes novada pašvaldības Izglītības pārvaldes statistiskie dati par 2016. gada septembri – decembri un veiktas 2 ekspertu intervijas par speciālās izglītības finansējumu no valsts budžeta un pieejamajiem atbalsta pasākumiem BSV. Izglītības BSV finansējuma sistēma ir samērā sarežģīta un visai grūti izprotama cilvēkiem, kas nav tieši saistīti ar šo jomu. Ekspertu intervijās tika gūta skaidrība par finansējuma aprēķināšanas, sadales kārtību un norisi. Pamatojoties uz pētījuma datiem, tika izveidots apskats par izglītības atbalsta personāla nodrošinājumu pirmsskolas un pamatskolas posmā Alūksnes novadā.

Iekļaujoša speciālā izglītība ***Inclusive Special Education***

UNESCO Politikas vadlīnijas nosaka, ka iekļaujoša izglītība ir process, kas stiprina izglītības sistēmas kapacitāti un, ka “iekļaujošu izglītības sistēmu var izveidot tikai tad, ja parastās skolas kļūst daudz iekļaujošākas – citiem vārdiem sakot, ja tās labāk izglīto visus savas pašvaldības bērnus”. Iekļaušana un kvalitāte ir savstarpēji atkarīgas, pieejamība un kvalitāte ir saistītas un tās abpusēji pastiprina viena otru un iekļaujošas izglītības nodrošināšanā svarīga ir kvalitāte (UNESCO, 2009). Eiropas speciālās izglītības attīstības aģentūra ir atzinusi, ka finansēšanas politika un sistēma joprojām ir viens no svarīgākajiem faktoriem, kas nosaka iekļaušanu. Ierobežota pieeja vai pieejas trūkums noteiktiem pakalpojumiem var ierobežot iekļaušanu un vienlīdzīgu iespēju nodrošināšanu izglītojamiem ar speciālām izglītības vajadzībām (Eiropas speciālās izglītības attīstības aģentūra, 2009).

Latvijā speciālā izglītība tiek īstenota divu veidu pirmsskolas un pamatskolas izglītības iestādēs: 1. Speciālās izglītības iestādēs un 2. Vispārējās izglītības iestādēs 1)vispārējās izglītības klasēs (grupās) - pirmsskolas posmā iekļauj ne vairāk par 3 bērniem ar attīstības traucējumiem, izstrādājot viņiem individuālu mācību plānu, un ieteicamais bērnu skaits grupā nepārsniedz 20 (31.07.2012. MK not. Nr. 533) un pamatskolas posmā vispārējās izglītības klasēs tiek iekļauti 2-4 skolēni; 2) tiek veidotas speciālās izglītības klases (grupas) - pirmsskolā (6-15 skolēni klasē atkarībā no traucējumu veida) un pamatskolā (6-20 skolēni klasē atkarībā no traucējumu veida) (13.10.2015. MK not. Nr. 591). LR Vispārējās izglītības likums (1. pants) nosaka, ka speciālās vajadzības ir nepieciešamība saņemt tāda veida atbalstu un rehabilitāciju, kas rada iespēju izglītojamajam apgūt izglītības programmu, ņemot vērā viņa veselības stāvokli, spējas un attīstības līmeni (Saeima, 1999, likuma redakcijā 01.07.2011.).

No 2012. gada iekļaujošas speciālās izglītības veicināšanā periodiski tika rediģēti un pieņemti jauni normatīvie akti: noteikumi par vispārējās pamatizglītības iestāžu nodrošinājumu atbilstoši izglītojamo speciālajām vajadzībām(16.10.2012. MK not. Nr. 710) (sk. 1. tab.); kārtība, kādā piešķir un finansē asistenta pakalpojumu izglītības iestādē (09.10.2012. MK not. Nr. 695); pieņemti noteikumi par pirmsskolas speciālās izglītības programmu paraugiem (31.07.2012. MK not. Nr. 533); pieņemti jauni noteikumi par pedagoģiski medicīniskajām komisijām (16.10.2012. MK not. Nr. 709). 2014. gadā stājās spējā jauni noteikumi par valsts pamatizglītības standartu, mācību priekšmetu standartiem un programmu paraugiem, t.sk., pieņemti noteikumi par speciālo pamatizglītības programmu paraugiem (10.08.2014. MK not. Nr. 468). 2015. gadā noteikta kārtība un kritēriji, kādā izglītojamie tiek uzņemti izglītības iestādēs, tai skaitā speciālās izglītības programmās. Skolēnus ar funkcionāliem

traucējumiem uzņem speciālās izglītības programmā, pamatojoties uz pedagoģiski medicīniskās komisijas (PMK) atzinumu, kurā norādīta izglītojamam ieteicamā izglītības programma vai atbalsta pasākumi(13.10.2015. MK not. Nr. 591).

1.tab. Vispārējās pamatizglītības izglītības iestādēm nepieciešamais papildu pedagoģiskais personāls un atbalsta personāls (MK noteikumi Nr. 710)

Table 1 Elementary education institutions required additional teaching and support staff (Cabinet Regulations Nr. 710)

Speciālā izglītības programma (SIP)	Speciālā izglītības klase	Vispārējās izglītības klase
izglītojamiem ar valodas traucējumiem	logopēds, <i>vēlams</i> psihologs	logopēds, <i>vēlams</i> psihologs
izglītojamiem ar mācīšanās traucējumiem	logopēds, speciālais pedagogs vai pedagoga palīgs, psihologs	logopēds, <i>vēlams</i> speciālais pedagogs vai pedagoga palīgs, <i>vēlams</i> psihologs
izglītojamiem ar garīgās attīstības traucējumiem	logopēds, speciālais pedagogs, pedagoga palīgs <i>vēlams</i> psihologs. <i>Ja nepieciešams</i> , skolotāja palīgs. <i>Vēlams</i> bērnu psihiatrs	speciālais pedagogs, pedagoga palīgs (atsevišķās stundās atkarībā no izglītojamā veselības stāvokļa un attīstības līmeņa). <i>Ja nepieciešams</i> , skolotāja palīgs

Vispārējās pamatizglītības izglītības iestādēm nepieciešamais papildu pedagoģiskais personāls un atbalsta personāls speciālām izglītības klasēm un vispārējām izglītības klasēm ir noteikts atšķirīgi, norādot vairākus atbalsta personāla speciālistus kā *vēlamus*, kas rada nenoteiktību un interpretācijas iespējas par nepieciešamajiem atbalsta pasākumiem.

2016. gada 1.septembrī spēkā stājās trīs jauni MK noteikumi par izglītības finansēšanu: pedagogu darba samaksas noteikumi (05.07.2016. MK not. Nr. 445), valsts budžeta mērķdotācijas pedagogu darba samaksai pašvaldību vispārējās izglītības iestādēs, kur finansējums iestādes vadītāja, viņa vietnieku un atbalsta personāla darba samaksai paredzēts par 3 % lielāks (18 % tagad, 15 % iepriekš) un tiek piemērots lielāks koeficients (2 iepriekšējo 1.84 vietā) skolēniem SIP (05.07.2016. MK not. Nr. 447) un speciālās izglītības iestāžu, internātskolu un vispārējās izglītības iestāžu speciālās izglītības klašu (grupu) finansēšanas kārtība (05.07.2016. MK not. Nr. 477). Piemaksa pedagogiem speciālās klasēs par darbu īpašos apstākļos ar skolēniem SIP ar garīgās attīstības traucējumiem, ar vairākiem attīstības traucējumiem noteikta mazāka, 15 % (05.07.2016. MK not. Nr. 445), nekā iepriekš, 20 % (28.07.2009. MK not. Nr.836, redakcijā 24.08.2010). Iepriekš bija noteiktas arī piemaksas pedagogiem par darbu ar skolēniem SIP arī vispārējās izglītības klasēs līdz 10 % par attiecīgajām mācību priekšmetu stundām (28.07.2009. MK not. Nr. 836, redakcijā 27.08.2013), atbilstoši jaunajiem noteikumiem šīs piemaksas nav paredzētas.

Pirmsskolas speciālā izglītība Alūksnes novadā
Pre-school Special Education in Alūksne Municipality
(September – December 2016)

LR Izglītības likuma 7. pants nosaka divas pirmsskolas izglītības mērķgrupas: 1) pirmsskolas vecuma bērni (līdz 5 gadiem); 2) obligātās izglītības vecuma bērni (no 5 gadiem). Izglītības finansējums no valsts budžeta paredzēts bērniem no 5 gadiem, t.i., pedagogu un atbalsta personāla darba samaksu un VSAOI pašvaldību izglītības iestādēm no valsts budžeta līdzekļiem tiek nodrošināta obligātā izglītības vecuma bērnu izglītošanā. Pirmsskolas bērnu no 1.5 līdz 5gadiem apmācība un ar to saistītie izdevumi ir pašvaldības kompetence (Izglītības likuma 17. pants; MK not. Nr. 447).

Alūksnes novadā kopumā izglītības iestādi apmeklēja 693 pirmsskolas vecuma bērni, no tiem 434 bērni no 1.5 līdz 5gadiem, 259 obligātā pirmsskolas vecuma bērni no 5-7gadiem, no kuriem 92 obligātā pirmsskolas vecuma bērni no 5-7 gadiem ar diagnosticētam speciālām izglītības vajadzībām (PMK atzinums).

Alūksnes novadā ir 6 pirmsskolas izglītības iestādes (PII), no kurām 4 īsteno speciālās izglītības programmas (sk. 2. tab.). Jaunie MK noteikumi par valsts mērķdotāciju pedagogu darba samaksai un VSAOI vispārējām pamatizglītības iestādēm paredz uz 200 obligātā vecuma pirmsskolas bērniem 1 logopēda darba likmi (05.07.2016. MK not. Nr. 447). Alūksnes novadā no paredzētās valsts mērķdotācijas uz 210 obligātā pirmsskolas vecuma bērniem Izglītības pārvalde tarifēja 2 logopēdus ar 0.909 darba likmi (Kupča, 16.12.2016, intervija). Tiek nodrošinātas 2 pirmsskolas skolotāju likmes uz vienu speciālās izglītības grupu, kurā izglītojamo skaits atbilst normatīvajos aktos noteiktajam; finansējums atbalsta personāla darba samaksai 15 % apmērā no pedagogu darba samaksas aprēķinātās mērķdotācijas (Alūksnes novada pašvaldības not. Nr. 2/2016). No pašvaldības pamatbudžeta bērniem līdz 5 gadiem Alūksnes PII „Pienenīte” nodrošina logopēdu (0.74 darba likme) un Alūksnes PII „Sprīdītis” ir izveidota 1 logopēdiskā grupa (1 logopēds ar 1.1 darba likmi) (Alūksnes Izglītības pārvaldes dati, 2016).

2.tab. Alūksnes novada pirmsskolas speciālā izglītība
 Table 2 Pre-school Special Education in Alūksne Municipality

PII un speciālās izglītības programmas (SIP)	Skolēnu (no 5 gadiem) skaits SIP	Atbalsta pedagogu skaits, darba likmes un finansējuma avots
Alūksnes PII „Cālis” SP ar valodas traucējumiem, ar fiziskās attīstības traucējumiem un ar somatiskām saslimšanām	21	Valsts mērķdotācija speciālām skolām un speciālām klasēm (grupām) (atbalsta personāls tarifēts PII): 2 logopēdi / 1.8 likmes 1 psihologs / 0.045 likmes

Malienas PII „Mazputniņš” SP ar valodas traucējumiem; ar fiziskās attīstības traucējumiem; ar somatiskām saslimšanām; ar jauktiem attīstības traucējumiem.	20	Valsts mērķdotācija speciālām skolām un speciālām klasēm (grupām) (atbalsta personāls tarificēts PII) 1 speciālais pedagogs/ 0.395 likmes 1 logopēds/ 0.507 likmes
Alūksnes PII „Pienenīte” SP ar valodas traucējumiem	18	Valsts mērķdotācijas vispārējām PII un speciālām klasēm (grupām). Izglītības iestādi apkalpo Izglītības pārvaldes atbalsta pedagogi.
Alūksnes PII „Sprīdītis” SP ar somatiskām saslimšanām, ar valodas traucējumiem	33	Valsts mērķdotācijas vispārējām PII un speciālām klasēm (grupām). Izglītības iestādi apkalpo Izglītības pārvaldes atbalsta pedagogi.

Avots: Alūksnes Izglītības pārvaldes dati, 2016

Alūksnes novadā ir samērā liels pirmskolas vecuma bērnu no 5-7 gadiem ar speciālām izglītības vajadzībām skaits. Katrā PII, kas īsteno SIP, ir izveidotas vairākas speciālās izglītības grupas un atbalsta personāls ir pieejams gan PII (2 pedagogi uz vienu speciālo grupu, logopēds, speciālais pedagogos), gan ārpus PII - Izglītības pārvaldes atbalsta pedagogi, tādejādi radot optimālo izglītības atbalsta sniegšanas veidu, ņemot vērā pieejamos cilvēkresursus un finansējumu. Finansējums tiek iegūts ne tikai no valsts mērķdotācijas vispārējām izglītības iestādēm, bet arī no valsts mērķdotācijas speciālām skolām un speciālām klasēm.

Pamatskolas speciālā izglītība Alūksnes novadā *Elementary General Special Education in Alūksne Municipality*

Alūksnes novadā ir 14 vispārējās izglītības iestādes, kas īsteno pamatizglītības programmas. 6 izglītības iestādēs ir licencētas SIP. Alūksnes novadā ir Liepnas internātpamatskola (atbalsta personāls tarificēts skolā), kur mācās 8 Alūksnes novada BSV. 2016./2017. m.g. mācījās 1368 pamatskolas skolēni (1.-9. kl.), no kuriem SIP 40 skolēni (23 Alūksnes pašvaldībā deklarētie skolēni un 17 skolēni no cita novada skolām). Nav apkopotu datu par Alūksnes novada BSV skaitu, kuri mācās izglītības iestādēs ārpus Alūksnes novada. Alūksnes novada vidusskolā (295 skolēni / 3 skolēni ar speciālām vajadzībām) pirmo gadu tiek nodrošināts pedagoga palīgs (no valsts mērķdotācijas vispārējām izglītības iestādēm tarificēta 0.433 darba likmi) un sociālais darbinieks ar pilnu darba likmi no pašvaldības budžeta. Malienas pamatskolā (55 skolēni / 4 skolēni ar speciālām vajadzībām) ir tarificēts viens logopēds ar 0.1 darba likmi. Pamatskolas skolēni ar speciālām vajadzībām mācās vairākās Alūksnes pilsētas un nov. izglītības iestādēs, nevienā nav nokomplektēta speciālās izglītības klase (Alūksnes Izglītības pārvaldes dati, 2016). Alūksnes novadā valsts mērķdotācija pedagogu darba samaksai un VSAOI uz 1.-12. klases skolēnu skaitu (1631) 2016.

gada sept.- dec. veidoja 746,520 EUR. Pēc Alūksnes nov. pašvaldības noteikumiem mērķdotāciju izglītības iestādēm vispārējās pamatizglītības iestāžu pedagogu darba samaksai aprēķina, piemērojot pedagogu darba samaksas noteikumos noteikto zemāko mēneša algas likmi (680 EUR) un no aprēķinātā finansējuma pedagogu darba samaksai papildus aprēķina finansējumu 13,5 % apmērā pedagogu papildu pienākumiem. No kopsummas aprēķina finansējumu Izglītības pārvaldes Rezerves fondam 1,0 % apmērā un Izglītības pārvaldes atbalsta personāla pedagogu darba samaksai un VSAOI 1,0 % apmērā (Alūksnes nov. pašvaldības not. Nr. 3/2016). No 1,0 % aprēķinātās mērķdotācijas Izglītības pārvaldes atbalsta personāla pedagogiem tika tarifcētas 1.6 darba likmes. No Alūksnes novada pašvaldības pamatbudžeta līdzekļiem finansē Izglītības pārvaldes atbalsta personāla pedagogu trīs darba likmes (Alūksnes nov. pašvaldības not. Nr. 3/2016) (sk. 3. tab.). No valsts mērķdotācijas pedagogu darba samaksai aprēķina papildus finansējumu iestādes vadītāja, viņa vietnieku un atbalsta personāla darba samaksai 18 % apmērā (2016.07.05. MK not. Nr. 447).

3.tab. Izglītības pārvaldes atbalsta personāla pedagogi darbam ar obligātā pirmskolas vecuma bērniem un 1.-12. klases skolēniem

Table 3 Educational administration support educators with pre-school children and 1-12 class of students

Atbalsta personāls	Darbinieku skaits	Darba likmes
Speciālais pedagogs	2	1.36
Logopēds	4	2.409
Psihologs	3	1.6

Avots: Alūksnes Izglītības pārvaldes dati, 2016

Tā kā pamatskolas skolēni ar speciālām vajadzībām mācās izklīdēti pa vairākām izglītības iestādēm un nevienā izglītības iestādē nav izveidota neviena speciālās izglītības klase, nevar iegūt valsts mērķdotāciju speciālām klasēm. Esošais izglītības atbalsta personāls tiek nodrošināts no valsts mērķdotācijas vispārējām izglītības iestādēm un pašvaldības budžeta. Ierobežota finansējuma apstākļos optimāls risinājums atbalsta personāla nodrošināšanai, ir atbalsta personāla tarifcēšana Izglītības pārvaldē. Izglītības pārvaldes atbalsta pedagogi apkalpo visas Alūksnes pilsētas un nov. izglītības iestādes un strādā ar visiem obligātā pirmskolas vecuma bērniem un 1.-12. kl. skolēniem, kuriem nepieciešams izglītības atbalsts neatkarīgi no tā, vai skolēnam ir ar PMK atzinumu noteikta SIP. “Ir daudz bērnu, kuri var mācīties pēc vispārējās izglītības programmas, bet viņiem ir nepieciešami izglītības atbalsta pasākumi, kas tiek noteikti ar PMK lēmumu.” (Bērziņa, 16.12.2016, intervija). Vispārējās izglītības iestādēm ir paredzēts asistenta pakalpojums (valsts finansējums līdz 40 st. nedēļā) pārvietošanās un pašaprūpes veikšanai bērniem no 5 gadiem, kuriem piešķirts

īpašās kopšanas statuss (09.10.2012. MK not. Nr. 695). Alūksnes novadā 7 bērni saņēma asistenta pakalpojumus (Alūksnes Izglītības pārvaldes dati, 2016).

Lai iegūtu pilnīgu skaidrību par situāciju izglītības atbalsta nodrošināšanā BSV vispārējās izglītības iestādē ar nelielu skolēnu skaitu, tālāk tiks apskatīts konkrēts piemērs. Alūksnes pilsētas sākumskola ir skola ar vislielāko skolēnu skaitu no visām Alūksnes novada skolām - 397 skolēni. 5 skolēni mācās pēc SIP integrēti vispārējās izglītības klasēs. Alūksnes pilsētas sākumskola īsteno SIP 1.-6. klases skolēniem ar mācīšanās traucējumiem. Izglītības iestādē nav neviena izglītības atbalsta pedagoga. Valsts mērķdotācija pedagogu darba samaksai par 2016./2017. m.g. ir 95,465.48 €. No esošās dotācijas 1,0 % tiek novirzīts Izglītības pārvaldes atbalsta personāla pedagogu darba samaksai, t.i., 954.64 € (skolēniem ir pieejams Izglītības pārvaldes atbalsta personāls ārpus skolas). No valsts dotācijas pedagogu darba samaksai (95,465.48 € - 954.64 € - 954.64 € (1,0 % Izglītības pārvaldes Rezerves fondam) = 93,556.2 €) 18 % tiek aprēķināti izglītības iestādes vadībai un atbalsta personālam (16,840.12 €) un no šiem līdzekļiem 6,0 % atbalsta personālam skolā (1,010.41 € 2016./2017. m.g.). Šie finanšu līdzekļi tiek izlietoti bibliotekāra darba samaksai. Esošos aprēķinos netika aprēķināts finansējums VSAOI. No summas 93,556.2 € atsevišķi aprēķinot summu (2.488 %), ko veido valsts dotācija 5 sākumskolas skolēniem SIP ar koeficientu 2, tā ir 2,327.68 €, bet uz 5 skolēniem vispārējās izglītības programmās (1.244 %) tā ir 1,163.84 €, tātad papildu finansējums BSV ir 1,163.84 € 2016./2017. m.g.; 290.96 € mēnesī (L. Kūles veikti aprēķini). Šie finanšu līdzekļi atrodas kopējā skolas pedagogu algu fondā, nav paredzēta to aprēķināšana, nodalīšana un iegrāmatošana atsevišķā pozīcijā. Vispārējās izglītības iestāde valsts speciālās izglītības finansējumu (mērķdotāciju speciālām klasēm) var iegūt tad, ja bērnu skaits klasē vai apvienojamās klasēs SIP ir tāds, lai varētu nokomplektēt speciālās izglītības klasi (pēc MK not. jābūt 6 BSV). Mūsu gadījumā BSV mācās dažādās neapvienojamās klasēs.

Secinājumi **Conclusions**

Valstī notiek virzība uz iekļaujošu izglītības sistēmu, tiek regulēts izglītības atbalsts skolēniem ar speciālām vajadzībām. Valsts piešķir arvien lielāku finansējumu atbalsta pasākumu īstenošanai vispārējās izglītības sistēmā. Alūksnes pašvaldība liek akcentu uz izglītības atbalsta pasākumu nodrošināšanu agrīnā vecumposmā un izglītības atbalsta personāla speciālistu pieejamība pirmskolas posmā ir lielāka nekā pamatskolas posmā. Tas ir izskaidrojams arī ar vajadzīgo bērnu skaitu esamību SIP īstenošanai.

Pētījums parāda, ka izglītības atbalsta personāla nodrošināšanai izglītības iestādē esošā valsts izglītības un speciālās izglītības finansēšanas modeļa ietvaros

nepieciešama arī racionāla pieeja pretstatā pašorganizēšanās principam, rūpīga plānošana un iekļaušanas procesu vadība pašvaldībā: visu pašvaldības skolēnu ar speciālām vajadzībām apzināšana, sadarbība ar vecākiem, visu resursu pārzināšana un mobilizēšana. Valsts finansējuma apmērs izglītības atbalsta pasākumu nodrošināšanai ir tieši atkarīgs no bērnu ar speciālām vajadzībām skaita vispārējās izglītības iestādē un būtiska ir arī speciālo izglītības klašu izveide. Jaunie MK noteikumi (2016) paredz lielāku finansējumu vispārējām izglītības iestādēm, taču praksē lauku novada kontekstā finansējuma pieauguma ietekme uz vispārējās izglītības iestādēm ar nelielu skolēnu skaitu un nelielu skolēnu skaitu specialās izglītības programmās, ir minimāla un, bez papildu risinājumiem, neatrisina izglītības iestādēs atbalsta personāla nodrošināšanas problēmu.

Lai maksimāli nodrošinātu visus nepieciešamos atbalsta pasākumus izglītības iestādē valsts izglītības un speciālās izglītības finansēšanas modeļa ietvaros lauku novada kontekstā, ir nepieciešams bērnus ar speciālām vajadzībām apvienot dažās vai arī vienā skolā atkarībā no situācijas un veidot speciālās izglītības klases.

Summary

The financial support to a great extent determines the inclusion of children with special needs into the general education system. In Latvia laws and regulations define the educational support for pupils with special needs in mainstream schools. The Ministry of Education and Science allocates increasing public funding for implementing support measures for children with special needs in the general education system. The availability and provision of the educational support staff has a decisive role in inclusive education. The study examines the changes in the national legislation on inclusion of children with special needs into the pre-school and elementary school education system in 2012 – 2017. The research also investigates the changes in funding rules and assesses the situation regarding the provision of the support staff in special education on pre-school and elementary school level in Alūksne Municipality immediately after the new regulations came into force, namely, in September – December 2016. In accordance with the Cabinet of Ministers regulations the amount of state funding for ensuring educational support measures depends directly on the number of children with special needs in a general education school. In pre-school education institutions in Alūksne Municipality the number of children with special needs allows providing the necessary funding for the support staff. The majority of children with special needs from primary schools receive support staff services outside their schools. There are minimum changes because the number of children with special needs is not sufficient to recruit the support staff in the school. The researchers conclude that the principle of self-organization cannot be relied on in the inclusion of children with special needs. In addition there is a need for careful planning and inclusion process management on the municipality level: gathering information about all pupils with special needs in a municipality, cooperation with parents, management and mobilization of all resources. Since only in this case the

real effect of the additional funding can be achieved and the necessary support staff obtained. The study shows that in the context of rural areas the impact of the funding increase on general education institutions with a small number of pupils and particularly a small number of pupils in special education programs is minimal. Additional efforts are necessary to improve the availability and provision of support staff in the educational institutions in such cases.

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SUPPORT FOR THE PROCESS OF SOCIAL ADAPTATION OF STUDENTS WITH SPECIAL EDUCATIONAL NEEDS

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Abstract. *The most recent tendencies in teaching children with developmental deficits advocate using inclusive educations which allow for an optimization of the process of social adaptation. Rehabilitation programs to support these children are an integral part of individual educational programs which are developed for each student and based on the positive diagnosis that accentuates child's strengths. The process of social adaptation of a child with disability starts in families and is continued in nursery schools and schools. Lessons at schools and extra-curricular classes open up opportunities for starting interpersonal contacts that play a fundamental role in the process of social adaptation. The particular importance can be from physical activity and various forms of physical recreation. The support for the development and process of social adaptation through various forms of physical activity results from the natural needs of a child. The questionnaire survey conducted among parents and teachers demonstrated that the respondents realize the importance of physical activity in the process of social development of children with developmental dysfunctions.*

Keywords: *adaptation, inclusive education, physical activity, recreation, sport, special needs, school, family.*

Introduction

Recent several years have seen a substantial interest of the pedagogical, medical and ethical environments, with particular focus on parents, attracted to the initiatives aimed at supporting the development and providing equal educational opportunities for children with developmental difficulties and dysfunctions. This group of children is substantially varied in terms of the depth and extent of disturbances, but all of them are prone to the difficulties with sufficient development, abilities to familiarize with the world and adapt to social requirements.

Children and young people with special developmental and educational needs include those with symptoms that make it difficult or prevent from development of motor, sensory, cognitive, communicational, emotional, social and psychical functions that have an effect on the quality of life and social

adaptation. Modern education should be adjusted to the needs of this group of students and oriented towards finding individual opportunities and barriers to the process of social adaptation. (Zaremba, 2014). Social adaptation results from a long-term process of learning conceptual skills (learning the language, reading, writing, self-control, concept of cash), social skills (responsibility, respecting the principles of social and legal interactions, self-assessment, interpersonal skills) and practical skills (life-related and professional skills, self-care, safety) which should be learnt in order to function properly in everyday life (AAMR, American Association on Mental Retardation, 2001). People with disability are often unable to learn all adaptive skills areas, thus needing the systems of support (D. Deutsch Smith, 2008). They should receive the support from schools, families and local environments.

The approach to educating children with developmental dysfunctions in Poland is twofold. Besides special schools with curricula adjusted to the specific types of disorders, integration classes and divisions in public institutions, a new organizational solution is provided by inclusive (open) teaching, which consists in education of these children in public schools for healthy children. Obviously, this requires greater financial, organizational and modern pedagogical solutions but prevents from stigmatization and marginalization, thereby opening up the opportunities for acquiring greater social competencies. The researchers in the field of integration and inclusion problems emphasize that this process leads to many changes at individual and general social levels while raising the awareness and changing social attitudes (Zacharek, 2011). This problem seems to be even more important assuming that the most essential task of the modern educational system is to meet educational needs of all children. Analysis of the problems of equal opportunities seems to be important given that the risk of marginalization and social exclusion are not reducing in modern societies, which is connected with substantial socio-cultural differentiation among citizens. Contemporary school has to accept and appreciate differences between people, adopt the approach of social model of disability and determine environmental barriers concerning the strategy of support for the process of social adaptation in different environments. It is also necessary to ensure "close cooperation with parents or legal guardians of a child and also tailor the pedagogical and educational programs to these people" (Karpuszenko, 2008).

The data presented by the Central Statistical Office of Poland show that the number of disabled children aged from 0 to 15 years accounts for 13 % of the general population, with higher number of boys from bigger cities (58.3 % living in cities compared to 41.7 % in rural areas). Greater percentage of people with dysfunctions was found in older children. Some 80 % of children had one dysfunction while others had two or more. According to the definition adopted by the Central Statistical Office of Poland, the disabled children are those with

current medical certificate of disability and those who, without such a legal statement, experience limitations in performing basic activities compared to their peers.

The focus of the study was on selected forms of support for physical and social development of children which are used in schools, family and local environments, with particular focus on motor and recreation activities. The questionnaire survey conducted among parents and teachers concerned their opinions about the effect of motor and recreational activity and sports on the process of learning independence by children and young people and their social adaptation.

Social adaptation of students with special educational needs and its determinants

The overriding objective of educational activities is child's adaptation to the social environment. Adaptive competencies are acquired for the whole life. However, the first experiences connected with starting the education are critical. This is particularly important with respect to children with limited abilities and reduced level of functioning, who have greater problems with adjustment to the environment. Adaptation means a dynamic process of changes occurring in the behaviour and emotions of a child and its environment. It consists in stimulation of the harmony between the needs and activities of a person and the requirements and expectations of the environment (Kupisiewicz & Kupisiewicz 2009).

The basis for adaptation is incessant interaction between the individual and his or her environment, leading to the transformation of the structure of the person (child) to meet the requirements of the environment, and the transformation of the environment and its adjustment to the internal structure of the entity.

In the process of adaptation, psychologists distinguish between several stages:

- psychological reorientation, i.e. learning new behavioural patterns and using them in practice,
- tolerance, meaning respect for others' views, beliefs and tastes,
- assimilation means total adjustment of a person to current conditions.

Through adaptation, humans meet their needs and are better prepared for living in society (Smolski et al., 1999).

Social adaptation is affected by such factors as age, gender, development of the nervous system, psychophysical development, temperament, intelligence, knowledge of your own strengths, independence, responsibility and association

to the group. Children with disabilities experience certain adaptive difficulties connected with immaturity or disturbances in the function of the central nervous system, emotional disturbances and deficits in orientation and cognitive (perception, attention, memory) and intellectual processes. Slower development of speech, limited communication and low level of self-care abilities have a negative effect on the processes of social adaptation and cognitive development. Furthermore, they can also lead to lower interest in the world while difficulties with spatial orientation may increase fear and lack of sense of security (Gruszczyk-Kaczyńska & Zielińska, 2000). Lower resistance of human body, illnesses and isolation make the adaptation process even more difficult.

The principal effect on the process of adaptation of children with disabilities is from family environment, previous experiences and the environment where adaptation occurs (nursery school, school, peer group). The important factor in the development of adaptation abilities in families is ties between the child and his or her parents that ensure the sense of safety and represents the basis for further socialization. Parenting styles have also a considerable effect on adaptive abilities. If parents are inconsistent, overprotective, excessively liberal or rigorous and they do not ensure the feeling of security and consistency, the adaptive process is much more difficult (Gołaska, 2013).

The principal process of social adaptation occurs in the peer group in intentional educational environments, such as nursery schools and schools.

In Poland, inclusive education is preferred with respect to children with developmental deficits, thus allowing them to learn in general education environments and local schools which are located nearby their family homes. This is the most convenient solution from the standpoint of social adaptation and peer integration. Inclusive education means learning according to a general education program and using the same educational paths based on similar contents with adequate modifications and individual approach to the child. Inclusive learning is a continuous process, which is aimed at reaching a high quality of education of all children, especially those who are threatened with exclusion through the use of updated and modified teaching methodologies (European Agency for Development, 2009).

The legal context concerning inclusive education was presented in the UNESCO document, which emphasized variety of educational needs of all children, the need for living in local society and elimination of any forms of discrimination (UNESCO 2009).

The class with a child with disability should represent a group which is internally differentiated in terms of socio-economic and mental development, which has a positive effect on individual development of students and their accepting the dysfunctions as one of many traits they have. The major emphasis

should be on strengths of the child which help them be successful, thus increasing their self-assessment and self-esteem. Therefore, the particular role is assigned to teachers and therapists (Gil, 2009) who should support students in finding their personal potential, build good relations and friendly atmosphere in the class. The relations between teachers and students can be conducive to revealing student's difficulties or aptitudes and should be viewed as an opportunity for implementation of supportive actions which should be taken according to a specific order:

- noticing and initial definition of difficulties (multi-expert evaluation of the level of functioning of a student),
- determination of the educational needs of the child,
- preparation of an individual educational and therapeutic program (IPET),
- implementation of actions and measures,
- evaluation of the effectiveness of the actions (Dotka, Kazimierzak et al., 2009)

The IPET program discusses the scope of adjustment of the educational requirements contained in curricula to individual developmental needs and psychophysical abilities of a student, type and scope of integrated activities of teachers and experts.

Providing adequate conditions for education and adaptation includes in particular:

- adjustment of the method to communicate with students,
- elongation of work time necessary for a student to perform tasks,
- division of the learning material into smaller parts, reduction in the number of tasks to be performed and higher number of material repetitions,
- frequent reference to reality i.e. using the reference methodologies that allow for multisensory cognition and the alternate use of the expository and activation methods,
- adjustment of the number of stimuli connected with the educational process, e.g. in children with ADHD or autistic children, such that they are not excessively frequent,
- the use of additional didactic and technical resources,
- the use of individual assessment of students (J. Gładkowska 2010).

Students with special educational needs in the system of open (inclusive) education need additional support in the form of special classes focused on correction, compensation, speech therapy, rehabilitation and social therapy.

In order for the process of adaptation to the peer environment to be effective, the conditions that help students be more successful and improve their self-assessment should be provided.

The best opportunity to start and maintain social contacts is extra-curricular classes adapted to the people with different adaptive abilities, especially classes focused on sport and recreation.

Sport and recreation activity in the process of social adaptation of children with developmental limitations

Adaptive factors are understood to mean the stimuli used to ensure best adjustment of the person possible to the changing conditions of living, physical, natural (temperature, atmospheric pressure, air humidity), social and civilization environments as well as to physical exercise and overcoming difficulties. The successful effects of adaptation depend on the intensity of stimuli that cause specific adjustment changes. The adaptive stimuli which are adjusted to human tolerance limits have a beneficial effect, whereas the stimuli that exceed these limits can be the reason for disturbances in functional balance of the body.

The sport and recreation classes represent the perfect opportunity for adaptation to the social environment for children and young people with different developmental potential. Social attitudes are best developed through teamwork, practising with a partner, collaboration and competition. Movement-based games and playing limit the selfishness and egocentricity since performing a task requires respecting specific rules and principles (J. Bielski 2005).

Modern rehabilitation concepts assume inclusion of the people with developmental deficits in social life, which results from humanitarian and ethical reasons. Since the objective of rehabilitation and, consequently, social adaptation is to improve the disturbed functions of human body, the controlled movement seems to be critical. The movement can be ensured by various forms of participation in the physical culture connected with physical education, sport, tourism and forms of treatment (motor rehabilitation). Physical recreation contributes to the development of personality, interests, elevates activity, relieves tension, prevents from hypokinesia, and improves resistance and mood.

Sport performs stimulating, adaptive, compensatory, informational, pattern-creating, hedonistic and recreational functions. Physical activity increases self-esteem, supports people in their believing in his or her strength, instils persistence and consistency in actions, allows for integration in the group, improves emotional health, satisfies the need for security, supports social development and prevents from risky behaviours (A. Marzec 2008).

Sport can be used for education and adaptation that integrates all the environments of children and young people, allows for familiarizing with the student and paves the way for other methods of educational effect.

Sport activities for children and young people organized at school and local environments must be adjusted to individual abilities according to the rehabilitation program while maintaining its entertaining character. They have to be safe, limit the risk of accidents and injuries, consistent with regulations and rules and realistic planning of training sessions. They should be easily available and adjusted to the abilities of all the disabled people who want to participate in sport classes.

Sport for disabled people offers opportunities for self-realization, overcoming their own weaknesses and loneliness and, first and foremost, adaptation and social integration. From the standpoint of the biological and health-related needs, the need for physical exercise seems to be obvious. Regular physical activity is one of the major components of healthy lifestyles and an element of health education.

Physical exercise is a stimulating factor in the process of adaptation, encourages people to be active and start contacts. The utilitarian aspect of physical exercises and playing is also important since they help extend and improve the activities and motor habits in everyday life and improve the level of adaptive and socially useful abilities. Physical activity and sport are essential for the development of social attitudes, performing the functions resulting from social needs and they rise social awareness and show young people how to spend their leisure time.

Sport, games and playing based on physical exercise help children start contacts with their guardians who are older and more experienced as well as with peers and establish social ties based on affection, empathy, consideration and goodwill.

There are a number of examples that demonstrate that sport can positively change lives of people with disabilities, challenge the stereotypes, contribute to better social adaptation and integration between generations.

The questionnaire survey conducted among parents (N = 62) and teachers (N = 35) of children with developmental difficulties asked the respondents about "What are the benefits of common education of children with disability and their healthy peers?". Most of parents (91 %) and teachers (83 %) answered that inclusive teaching is the best form of education since children with dysfunctions are not isolated (R = 72 %, W = 86 %), can familiarize with each other (64 %, 47 %), better adjust to future life (74 %, 51 %), and can observe and learn from healthy peers (52 %, 48 %), participate together in organized extra-curricular classes (49 %, 38 %) and learn rules of living in a community (52 %, 48 %).

It can be noticed that the most of the answers emphasized the adaptive and integration values of open teaching and the parents were more positive about this form of education.

With regard to the question "Which forms of activity are the most beneficial from the standpoint of the process of social adaptation and peer integration?", the answers were as follows (multiple-choice options):

- games and playing based on physical exercise (83 %, 79 %)
- sport classes (76 %, 59 %)
- ball games, volleyball (56 %, 64 %)
- hiking and bus trips (43 %, 51 %)
- movement and dancing classes (29 %, 33 %)
- Classes in a classroom (17 %, 28 %)
- arts classes (8 %, 15 %)
- billiard (2 %, 4 %)
- cycling (1 %, –)
- swimming (–, 2 %).

The next question concerning the benefits of physical activity showed that the most parents and teachers realize the health and adaptation values of sports and recreation classes and they responded that these classes: improve health and physical fitness (86 %, 87 %), improve mood and give happiness (79 %, 80 %), help develop interests (22 %, 60 %), integrate the group (66 %, 71 %), instil resourcefulness (55 %, 64 %), facilitate mental processes (5 %, 49 %), teach how to spend leisure time (47 %, 39 %), offer opportunities for relieving tension (26 %, 13 %), teach discipline, diligence and tolerance (25 %, 17 %), teach healthy competition (7 %, 9 %), offer opportunities for trips (4 %, –), help receive rewards (2 %, –).

Conclusions

- The most of parents want their disabled children to learn with healthy peers as close to their family homes as possible in their local environments. They claim that this helps them adapt to life through participation in classes and extra-curricular classes with healthy children. The views of parents and teachers about inclusive education are similar, although teachers expressed more doubts about this organizational form. This may result from their experiences concerning organizational difficulties which are connected with this form of education. Participation of a child with disability in classes is connected with additional duties of teachers who implement teaching programs based on the individual educational and therapeutic programs (IPETs) and are obliged to cooperate with other specialists.
- Parents and teachers agree that the best form that stimulates social adaptation is physical activity i.e. games and playing connected with physical exercise, sport, team games and trips. Less important factors include didactic classes, arts and music.

- All the respondents realize the importance of physical activity in the process of adaptation and social integration. They emphasize first and foremost health benefits (improved health status and psychophysical fitness), relax and entertainment (source of happiness and improved mood) and opportunities for development of personality traits (diligence, persistence, discipline and competition).
- Teachers emphasize more often the general development benefits of physical activity that allow students to actively relax and facilitation of mental processes such as perception, attention, memory, concrete and visual thinking, cause-and-effect thinking, development of interests, development of habits of polite behaviour in the group, development of independence and abilities to cope with new situations.

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INFORMĀCIJAS TEHNOLOĢIJU IZMANTOŠANAS IESPĒJAS BĒRNU AR SPECIĀLĀM VAJADZĪBĀM SAGATAVOŠANĀ SKOLAI

Information Technology Opportunities for Children with Special Educational Needs Preparatory to School

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Abstract. Modern educational process is a qualitative condition in preparation of children with special educational needs for school. Information and communication technologies incorporation in the educational process is a requirement of modern learning environment. Preparation of children with special needs for school, inclusive education and individual approach is possible with innovative methods in the educational process in preschool. On one hand, information and communication technologies are learning environment improvement factors, as well as a challenging factor for teachers affecting teachers' professional competence development.

Keywords: Information and communication technologies, special needs, preschool education, inclusion, learning environment, preparation for school, teachers' professional competence.

Ievads

Introduction

Šobrīd mūsdienu pasaule piedzīvo spēcīgu tehnoloģiju ietekmi visās dzīves jomās, kas rada pārmaiņas mūsu ikdienā, un šo pārmaiņu epicentrā atrodas bērni. Informācijas tehnoloģiju lietojums sākas arvien agrākā vecumposmā un izglītojamiem, tai skaitā izglītojamiem ar speciālām vajadzībām, arvien agrāk tiek piedāvātas jaunas un aizraujošas iespējas.

Jaunās tehnoloģijas nepārprotami rada izaicinājumus, bet tās arī piedāvā milzīgas iespējas, tāpēc svarīgi ir izglītojamiem ar speciālām izglītības vajadzībām paplašināt piekļuvi un līdzdalību.

Mērķis paplašināt piekļuvi izglītībai ar jaunām tehnoloģijām atbilst Apvienoto Nāciju Organizācijas Konvencijai par personu ar invaliditāti tiesībām, kura atzīst fiziskās, sociālās, ekonomiskās un kultūras vides, veselības aprūpes un izglītības, kā arī informācijas un sakaru pieejamības nozīmi, kas

personām ar invaliditāti ļauj pilnībā izmantot visas cilvēktiesības un pamatbrīvības (Apvienoto Nāciju Organizācija, 2006).

Informācijas tehnoloģijas piedāvā izglītojamiem līdz šim vēl nekad nebijušā veidā mācīties, apgūt jaunas prasmes, mācīties daudz ko izvērtēt, domāt. Digitālās prasmes tiek uzskatītas par svarīgākajām prasmēm, kas nodrošina sociālo iekļaušanu indivīda līmenī, un par galveno dzinēj spēku, kurš veicina „virzību uz atvērtu, ekoloģisku un konkurētspējīgu zināšanu sabiedrību” Eiropas mērogā (Post-i2010 Strategy, 2009).

Projekta Informācijas un komunikācijas tehnoloģija iekļaušanai (ICT4I) secināts, ka informācijas un komunikācijas tehnoloģiju (IKT) efektīva izmantošana, lai atbalstītu mācīšanos iekļaujošā izglītībā, ir labas mācīšanas piemērs visiem izglītojamiem, tāpēc turpmāk:

1. Visiem izglītojamiem ir jāspēj efektīvi izmantot IKT savās mācībās iekļaujošā vidē.
2. Visiem skolotājiem jāspēj efektīvi izmantot IKT, lai atbalstītu mācīšanos iekļaujošā vidē.
3. Visām skolām jāspēj ieviest un uzturēt lietderīgu un ilgtspējīgu ICT4I infrastruktūru.
4. ICT4I infrastruktūrai valsts un/vai reģionālā līmenī jāspēj efektīvi atbalstīt visu iekļaujošā vidē strādājošo skolu un skolotāju darbs (ICT for Inclusion, 2013)

Latvijas Nacionālajā Attīstības plānā (NAP) 2014.-2020. gadam atzīmēts, ka tieši ieguldījums bērnu izglītībā nodrošina paaudzes konkurētspēju darba tirgū, veicinot Latvijas ekonomikas izaugsmi kopumā (NAP, 2014.) Bērnu turpmākā personīga izaugsme, aktīva ekonomiskā un sociālā nostāja nākotnē ir atkarīga no šodienas izglītības kvalitātes un individualizētas mācību vides, kas nosaka zināšanu, prasmju un nepieciešamo kompetenču veidošanos. NAP vīzijā par kvalitatīvu un iekļaujošu izglītību 2020. gadā tika uzsvērtas izmaiņas izglītības telpā, kuras notiek pasaules mērogā, līdz ar ko ir nepieciešamas būtiskas izmaiņas vispārējā izglītībā Latvijā. Pirmsskolas izglītības ir viena no vispārējās izglītības daļām, līdz ar ko pieaug pirmsskolas izglītības kvalitātes lomā vispārējā izglītībā. Pirmsskolas izglītībā NAP uzsver kvalitātes paaugstināšanu, attīstot 3 būtiskākos elementus: saturs, pedagogu kapacitāte un infrastruktūra.

Pētījuma mērķis: balstoties uz teorētiskiem avotiem, atspoguļot informācijas un komunikācijas tehnoloģiju izmantošanas iespējas bērnu ar speciālām vajadzībām sagatavošanā skolai un anketēšanā noskaidrot pedagogu un vecāku viedokli par to izmantošanas iespējām pirmsskolā.

Pētījuma metodes: zinātniskās literatūras, izglītību regulējošo normatīvo aktu un politikas plānošanas dokumentu analīze, speciālās pirmsskolas izglītības

iestādes pedagogu un 5-6 gadīgo bērnu vecāku anketēšana, datu attēlošanas metodes, izmantojot SPSS programmu.

Teorētiskās pamatnostādnes *Theoretical guidelines*

Mūsdienu gadsimtu raksturo informācijas sabiedrības veidošanās, tāpēc, ka ikvienu sabiedrības locekli apņēm milzīgs informācijas apjoms, nebijuši zinātnes attīstības tempi un informācijas un komunikāciju tehnoloģiju attīstības tendences. Modernās tehnoloģijas ietekmē un maina izglītības sistēmu visos tās posmos, arī pirm skolā.

IKT potenciālu bērna sagatavošanā skolai, lai atbalstītu līdzdalību, savos pētījumos atzīmē daudzi pētnieki. Par IKT iesācēju bērnu apmācībā var uzskatīt franču pedagogu S. Frenē (1896-1966), kurš apvienoja klasiskās un mūsdienu pedagoģijas idejas, integrējot tajā tās IKT, kuras eksistēja XX.gs., ieviešot savā programmā “Apmācošās tipogrāfijas” metodiku (Френе, 1990). IKT nodrošina, pateicoties personalizētām mācīšanās pieejām, ka visi bērni, neatkarīgi no viņu vajadzībām var būt iekļauti mācību procesā, ja tiek pielāgoti apstākļi (Price (Ed.), 2009). Par IKT ietekmi uz matemātisko spēju attīstību liecina D. Klementa (Clements, 2002) pētījumi, kur tiek īpaši uzsvērta pedagoga loma līdzekļu un instrumentu pielāgošanā jaunākā vecuma bērnu domāšanas attīstības veicināšanai. Pēc J. Siraj-Blatčforda (John Siraj-Blatchford) un D. Waitebreda (David Whitebread) atziņām, kuri savos pētījumos analizē IT izplatīšanu pirmsskolas vecuma bērnu attīstībā un apmācībā tiek secināts, ka:

- IKT lielā mērā ietekmē bērna dzīvi,
- vecāki ne vienmēr pilnā mērā apzinās, ka bērni jau eksistē IKT pasaulē un kāda veidā materiāli viņiem ir pieejami;
- daudziem bērniem mājās IKT iespējas krietni lielākās, nekā izglītības iestādēs;
- pedagogiem bieži vien trūkst nepieciešamo IKT prasmju,
- pedagogu un vecāku sadarbībā trūkst saskarsmes par bērnu IKT izmantošanu (Siraj-Blatchford & Whitebread, 2003).

J. Siraj-Blatčforda (John Siraj-Blatchford) un D. Waitebreda (David Whitebread) pētījuma dati liecina, ka var izdalīt četras jomas, kurās IKT ir nozīmīga loma:

- komunikācija;
- daiļrade;
- sociālo lomu spēles;
- mācības.

Saskaņā ar D. Passey prasmīga un kritiska tehnoloģiju pielietošana mācību procesā var palielināt izglītojamo motivāciju mācīties, ļaujot viņiem vairāk kontrolēt mācību pieredzes gūšanu (Passey et al., 2003). Pētījumi rāda svarīgo IKT nozīmi pašmotivācijas paaugstināšanā (Kington et al., 2002). Turklāt IKT izmantošana noteiktu priekšmetu apgūvē var pozitīvi ietekmēt mācību rezultātus (Eurydice, 2011) un tās tiek uzskatītas par priekšnoteikumu pamatprasmju ieguvei gan noteiktos priekšmetos, gan starppriekšmetu jomā.

Neskatoties uz IKT strauju iekļaušanu bērna dzīvē jau pirmsskolā, vecākus un pedagogus uztrauc tie aspekti, kas skar IKT ietekmi uz bērna attīstību, drošību un turpmāko atkarību no IT. (Plowman L. & Mc Pake J., 2013). Mūsdienu ģimenes mājsaimniecības aprīkotas ar plaša spektra tehnoloģijām, kuras ikdienas dzīvē lieto vecāki un bērni, bet zinātnieku dati liecina, ka pastāv kļūdaini priekšstats par to, ka tehnoloģijas aizņem vadošo lomu pirmsskolas vecuma bērna ikdienas dzīvē. (Gutnick, Robb, Takeuchi, & Kotler, 2011; Rideout, 2011). Zinātnieku atziņas liecina, ka IT izmantošana pirmsskolas vecumā mājās atbalsta tādas mācīšanās jomas, kas attīsta digitālās prasmes, veicina ziņkārību un apkārtējās pasaules izzināšanu, paškontroles un koncentrēšanās spējas un veido IKT izmantošanas noteikumu izpratni. (Plowman, Stevenson, Stephen, & Mc Pake, 2012).

Pētījuma iegūtie rezultāti ***Results of the reserch***

Lai izvērtētu pedagogu un vecāku viedokli par IKT izmantošanas iespējām sagatavošanā skolai un tās potenciālu pirmsskolā, tika aptaujāti 15 pedagogi: pirmsskolas izglītības skolotājas, logopēdi un speciālais pedagogs un 19 vecāki, kuru 5.-6. gadīgie bērni ar speciālām vajadzībām apmeklē speciālo pirmsskolas izglītības iestādi.

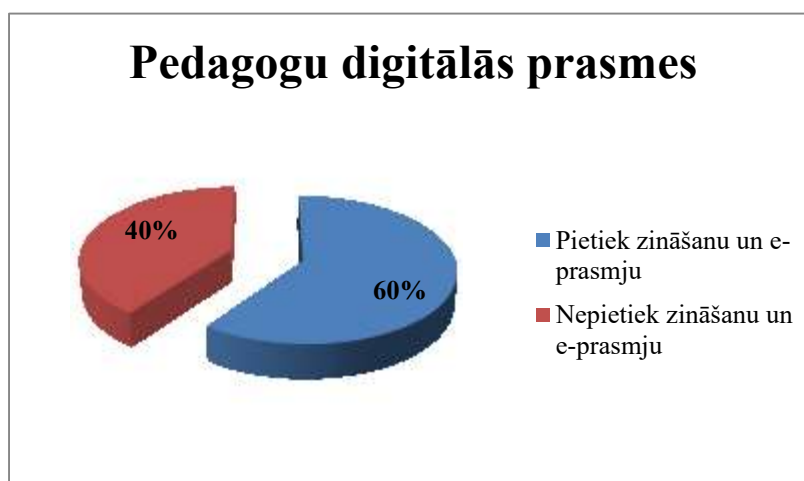
Pētījumā tika analizēts pedagogu un vecāku viedoklis par IKT izmantošanas iespējām matemātisko priekšstatu veidošanā, runas attīstībā, sociālo iemaņu veidošanā, sagatavošanā skolai, korekcijas darbā, izziņas procesu attīstībā, kā arī e-prasmju nepieciešamība pirmsskolas vecuma bērniem.

Pētījuma dati liecina, ka pedagogu viedoklis par IKT izmantošanu sagatavošanā skolai ir atkarīgs no pedagogu darba stāža. Pedagogi ar darba stāžu no 3-4 gadiem uzskata, ka IKT par mazāk svarīga loma runas attīstības pilnveidošanā. Aprakstošās statistikas dati liecina, ka pirmsskolas izglītības skolotājas uzskata, ka IKT vairāk palīdz matemātisko priekšstatu, sociālo iemaņu veidošanā, bet mazāk runas attīstībā. (Asymp.Sig.= 0,026, p<0,05).

1.tab. IKT izmantošanas iespējas sagatavošanā skolai atkarībā no pedagogu stāža.
 Table 1 Descriptive statistics. Options of using ICT (Information and communication technologies) in preparation for school depending on the teachers' work experience.

IKT izmantošana runas attīstībā	Darba stāžs	N			Mean Rank	Asymp.Sig.
		Jā	Nē	Cits		
Vai IKT palīdz runas attīstībā?	0 - 2 gadi	6	0	0	8,25	0,026
	3 - 4 gadi	0	1	0	14,50	
	5 un vairāk	8	0	0	7,00	

Aptaujas dati liecina, kas runājot par IKT izmantošanas iespējām, pedagogi atzīmēja, ka kvalitatīvai un daudzpusīgai IKT izmantošanai viņiem pašiem trūkst digitālo prasmju.



1.att. Pedagogu digitālās prasmes
 Figure 1 Teachers' digital skills

Vecāku aptaujas pētījuma datu analīze liecina, ka uz 95 % bērnu sagatavošana skolai ir atkarīga no IKT izmantošanas pirmsskolā un vecāki uzsver nepieciešamību aprīkot sagatavošanas grupas ar datoriem un interaktīvo tāfeļi, kas ietekmē uz izglītības procesa kvalitāti, bet tajā pašā laikā 30 % vecāku saskata negatīvo risku no IKT izmantošanas, ja netiek ievērots laika ierobežojums, cik ilgi drīkst bērniem izmantot IKT mācību procesā.

Pedagogu un vecāku aptaujas dati pilnīgi sakrīt, ka IKT palīdz attīstīt atmiņu, domāšanu, uzmanību, veicina lasīšanas iemaņu veidošanos, bet atšķiras viedoklī par IKT izmantošanu speciālo vajadzību korekcijā, ko apliecina 2.tabulā iegūtie aprakstošās statistikas dati par IKT izmantošanu speciālistu darbā.

2.tab. IKT izmantošana speciālo vajadzību korekcijā atkarībā no respondentu grupas
Table 2 Descriptive statistics. ICT using in correction of special needs depending on the group of respondents

IKT izmantošana speciālistu darbā	Respondenti (34)	N			Mean Rank	Mann-Whitney U	Wilcoxon W	Z
		Jā	Nē	Cits				
Vai IKT ir nepieciešama speciālo vajadzību korekcijā?	pedagogi	15	0	0	15,00	105,000	225,000	-2,119
	vecāki	13	6	0	19,47			

Aprakstošās statistikas dati (Asymp.Sig.= 0,034, $p < 0,05$) liecina, ka atšķirībā no pedagogiem, vecāki uzskata, ka IKT vairāk palīdz matemātisko priekšstatu, sociālo iemaņu veidošanā, nevis speciālo vajadzību korekcijā.

Secinājumi **Conclusions**

IKT izmantošana mācību procesā ir mūsdienīgas, kvalitatīvās izglītības prasība, kas ir atspoguļots reglamentētajos dokumentos, Izglītības attīstības pamatnostādņēs, jo ieguldījums nākošās paaudzes izglītībā ir Nacionālās attīstības pamatnostādņēs 2014.-2020. uzdevums. Izglītības iestāžu attīstošās mācību vides, infrastruktūras pilnveide iekļauj sevī arī iestādes aprīkošanu ar IKT, kas veicina uz kompetencēm balstīto mācību procesa nodrošināšanu un pielāgošanu bērnu ar speciālām vajadzībām pielāgošanu, it sevišķi bērnu sagatavošanu skolai. Pētījuma dati liecina, ka:

- gan pedagogi, gan vecāki uzskata, ka bērnu sagatavošanas skolai kvalitāte ir atkarīga no IKT izmantošanas iespējām;
- IKT palīdz psihiski izzināšanas procesu attīstībā, matemātisko priekšstatu veidošanā, sociālo iemaņu veidošanā, lasīšanas iemaņu veidošanā;
- pedagogi gatavi daudzpusīgi izmantot IKT darbā ar pirmsskolas vecuma bērniem, bet skolotājiem ir nepieciešami kursi digitālo prasmju kompetenču paaugstināšanā;
- pedagogiem trūkst izstrādāto mācību līdzekļu interaktīvai tāfelei pirmsskolas vecuma bērniem;
- nepieciešams atbalsta materiāls vecākiem par/praktiskās aktivitātes par IKT iespējām speciālo vajadzību korekcijā;

- IKT ir palīgs un atbalsts gan pedagogiem, gan vecākiem bērnu attīstībā.

Kopumā var secināt, ka jaunā paaudze veiksmīgi sagatavosies dzīvei strauji ekonomiski un tehnoloģiski mainīgajā laikā tad, ja tiks panākts, ka izglītības procesā pielietos informācijas un komunikāciju tehnoloģijas, tādējādi tiks nodrošināta mācību mērķu optimāla sasniegšana, ievērojot gan sociālo pasūtījumu, gan izglītojamo intereses.

Summary

Nowadays society is closely linked to the multimedia site where ICT is a normal operation of the daily life so that the use of ICT in the educational process is a modern, competence-based educational process tendency also on the preschool education level. In Latvian National Development Plan 2014 – 2020 it was especially noted that exactly the investment in children's education ensures competitiveness of generation in the labor market, contributing to the growth of the Latvian economy as a whole. (*NDP, 2014*) Children's future personal growth and active economic and social position in the future depends on the today's education quality and the individualized learning environment that determines the formation of knowledge, skills and necessary competences. Individualization of the learning environment, as well as incorporating of information and communication technology equipment is able to raise the quality of education, which will contribute to children's learning program content, ensuring a successful transition for learning at school. ICT options are source of information which is met by each of us on a daily basis, so the education should adapt to this essential change, which is reflected in education and digital multimedia sites interaction and use the potential of ICT in children's development. Especially in context of ICT use options the role of the use in an inclusive education aspect should be emphasized. In order to assess teachers' and parents' views on the use of ICT options in the preparation for school and its potential in preschool, 15 teachers were interviewed: early childhood education teachers, speech therapists and special teachers and 19 parents who have 5 to 6 years old children with special needs, and whose children are attending special preschool educational institution. The research analyzed teachers' and parents' views on ICT usage options in formation of mathematical idea, speech development, social skills, preparation for school, correction work, areas of mental cognitive development as well as necessity of e-skills to children of preschool age.

The research data shows that:

- Both teachers and parents consider that the quality of children's preparation for school depends on the use of ICT options;
- ICT helps in mental cognitive process development, formation of mathematical idea, formation of social skills, forming of reading skills;

- Teachers are versatile and ready to use ICT to work with preschool children, but teachers are required to attend digital literacy courses in order to raise their competence;
- Teachers lack developed teaching aids for an interactive whiteboard working with preschool children;
- Support material for parents about practical activities on ICT options for correction of special needs is necessary;

ICT is an assistant and support for both teachers and parents in the children's development.

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EDUCATIONAL INSTITUTION ACTIVITY IN THE INCLUSIVE EDUCATION PROCESS

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Abstract. *The article provides a summary of a theoretical study on the main provisions of the activity of the educational institution's administration in creating and implementing an inclusive educational process at the institution. Inclusive education is teamwork – the responsibility and obligation shared by the whole educational institution is a challenge to the whole team of the educational institution and first of all, a challenge to the administration of the educational institution. Inclusive education can be implemented in various ways all united by organizational culture with positive perception of student diversity, an understanding that the leaders working at educational institutions with their colleagues have a central role in promoting the inclusive culture. The role of administration in the development of the inclusive educational process at an educational institution is to ensure the implementation of the norms concerning the rights of students with special needs to be included, to maintain inclusive policy in the activity of the educational institution, to provide everyone involved in the learning process with information about the special needs of the students, to allocate funds for providing for the special needs, to guarantee accessibility of the educational institution. The administration and the support specialists of the educational institution must work as a team, must develop a plan of measures for the implementation of a further inclusive education process of the educational institution, for providing the support in education where the measures for educational support include determining and assessment of the needs of a student; consultations and support for all students, including the students with special needs, professional development, consultations and support for teachers, the students' parents and the specialists; consultations of the support team specialists and services, also attracting specialists from other institutions; technical aids and equipment (if necessary); an opportunity to study using sign language and the services of an interpreter (if necessary); transportation services (if necessary, also with an accompanying person); assistant services, etc. The make-up of specialists of the support team of the educational institution – speech and language pathologist, psychologist, social pedagogue, special education pedagogue, medical specialist, etc. can vary depending on the needs and circumstances of the students of the specific educational institution. Work responsibilities of these support team professionals in the general support system of the educational institution are analyzed in the article.*

Keywords: *inclusive education, teamwork, support system, support team.*

Introduction

According to the main inclusive education principles of UNESCO, inclusive education is considered a process where the diversity of needs of all persons who

study must be taken into account and satisfied by the participation of adults in the learning process, in the culture and the values of the community to decrease social rejection and poverty (UNESCO, 2005/a). The reasons for choosing the inclusive education model are: *educational*, for the education system must be qualitative and accessible to everyone from early childhood; *social*, for education must promote a change of attitude creating a society free of prejudice, discrimination and rejection; *economic*, for education helps improving competitiveness in circumstances where new tasks need to be solved. The aim of education is to create a better society that promotes integration and cooperation instead of status and competition (Cardona, 2011).

To create inclusive education, the content of education, the approach, structure and education strategies must be changed (Education White paper 6, 2001; NAP, 2006; World Health Organization, 2011), after which the teaching staff training systems must be developed and more funds must be allocated to it; furthermore, a global view is necessary, which would include all students, and the belief that the obligation of the general education system is to educate all persons. The aim of inclusive education is to adequately provide for the educational needs of various social groups, which can be achieved through both formal and informal education. An effective, perfect process of inclusion is the symbiosis of the inclusive activity of the educational institution and society (UNESCO, 2005/a; Education White paper 6, 2001).

Inclusive education is teamwork – the responsibility and obligation shared by the educational institution as a whole (Jonsson, 2006; Mitchell, 2010; Turnbull, Turnbull, Shank & Smith, 2004). Inclusive education is a challenge for the whole team of the educational institution and first of all a challenge to the administration of the educational institution, for “the development and effectiveness of the educational institution is influenced by the organization philosophy of administration together accepted by the employees and the administration and by the social roles (leader, administrator) implemented in practical activity” (Celma-Zīda, 2013, 69).

The main approach – to solve the issues of creating inclusive educational institution activity and support system at three levels: administration, teachers and students (Education White paper 6, 2001; Mitchell, 2010, 11. ch.; Ras, 2008; Wolfendale, 1987), which means – *support* to the educational institution, *support to teachers*, *support to students*. V. Birkett also specifies that when creating a system for the activity of an inclusive educational institution, it is important to provide support to students, to teachers and to the implementation of the education programme, thus – support to the educational institution (Birkett, 2004, 14-15).

Research aim: analysis of scientific literature, determining the main conditions for the activity of an educational institution while promoting the inclusive education process. *Research method*: analysis of scientific literature.

The research results

A. Dyson, based on comprehensive research of the activity of inclusive educational institutions and significant personal experience, believes that there is no unified model of how an inclusive educational institution works and what it looks like, *for each country, municipality, educational institution creates their own inclusive education support system* (Dyson, 2010, 79; Nīmante, 2008/c, 156). UNESCO studies also allow stating that *there is no perfect model for creating a system of inclusive education but all created models are based on the main principles of inclusive education implemented in a local context* (UNESCO, 2009, 144).

The following are involved in the creation of an inclusive educational institution: at the strategic level – directors of educational institutions, the responsible staff of municipalities, assistant directors, methodologists and other decision-making persons; at the tactical level – teachers of school subjects, psychologists, special education pedagogues, speech and language pathologists and other specialists, students' parents, students. For a common inclusive activity, physically and mentally orderly environment of the educational institution is necessary, the support of parents and society and where necessary, opportunities provided by the ministry of education, municipalities, social services, school support centres, higher education institutions and special education institutions.

The administration of educational institutions that begin working on creation of an inclusive educational institution *must create their own educational institution support team*, which through cooperation with the support staff of the municipal department of education (EDUCATION WHITE PAPER 6, 2001; Ras, 2008) implements the support necessary to all those involved in the inclusion process. The element of the inclusive education support system – the support team – must be created in the framework of each specific institution so that each one involved could help each other (Reid, 2006, 101).

In 1998, UNICEF recommendations state 12 steps in the direction to an inclusive education institution (UNICEF, 1998). These are: create learning methods that promote participation and personal development; reassess the principles of student selection and formation of classes in educational institutions; guarantee a fair examination system that would let each student demonstrate their own achievement; promote the expansion of support beyond the programme in educational institutions; expand the involvement of parents and society in education; study students' work and its relation to attendance and learning in educational institutions; pay more attention to the access to education for students from poor families and to the quality of education, to the integration of students with disabilities in normal schools; pay attention to the needs of ethnic minorities; promote early childhood development – in the widest sense using various means;

perform sufficient centralized control of the local administration of educational institutions, including the study programme; guarantee sufficient funds to local municipalities with poor resource base (UNICEF, 1998; Jackson, Ryndak, & Billingsley, 2003).

T. Booth has expressed an opinion that changes need to be introduced at all levels and in the whole system of the field if we wish for development of inclusive education (Booth, 2000). It is not allowed to distort facts, to pretend, hide the truth at all levels, because all this creates a deforming aspect in the development of inclusive education (Ainscow, 2004, 10). M. Ainscow and S. Miles define the criteria for the promotion of the implementation of inclusive education in educational institutions, in the system, in the policy in general (Ainscow & Miles, 2009, 5-6).

An educational institution becomes inclusive when educational institutions have a strategy that promotes presence, participation and achievement; educational institutions provide support to students who are rejected, weak, vulnerable; teachers are prepared to work with diversity; teachers participate in professional development activities focused on inclusive education.

Education at an educational institution becomes inclusive when there is highly qualified support in the education process; all institutions, service providers involved in the work are implementing inclusive policy and practice; resources (also financial) are available; the role of specialist support is clear (also from special education institutions).

The policy of education becomes inclusive when the thought of promoting inclusive education is highlighted in important documents on education; older staff provides clear administration of inclusive education; inclusive practice is supported in educational institutions, which is consistently formulated and shown by all members of administration at all levels; administration of all levels does not argue the inclusive practice at educational institutions.

The education system becomes inclusive when inclusion is considered a general principle that governs the policy and practice of all education; study programmes, systems of assessment take into account all the students; all agencies working with children, including healthcare and social services, understand and support political efforts to promote inclusive education; systems are introduced to monitor the presence, participation and achievements of all students (Ainscow & Miles, 2009, 5-6).

R. Rieser and H. Peasley (Rieser & Peasley, 2000, 6) believe there are important tasks in the promotion of obtaining inclusive education for students with special needs: work with parents, creation of partnership schemes; development of the basis of the educational institution focusing on the possibility to provide practical support to students so that as many parents as possible feel confident that the educational institution is able to satisfy the needs of their

children; the development of knowledge and skills of the educational institution staff, administration, specialists working with students with special educational needs; cooperation with all institutions, organizations involved in the process of educating students with special educational needs. S. Pijil and C. Meijer share a similar opinion stating that inclusive education is a structure to provide specialized help at an educational institution, other support systems, decentralization and cooperation among educational institutions (Pijl & Meijer, 1997, 12).

In order for the learning process (policy and practice) at an educational institution to become inclusive, M. Ainscow, A. Dyson and S. Weiner state the necessity to be clear on what is understood by inclusive education, to mobilize all available human resources in order to overcome obstacles in the learning process and to ensure participation, to provide different kinds of proof of the possibility of good practice, to encourage teachers for further inclusive work, to carefully plan additional possibilities of providing support to students who need it, to accordingly train support providers, to understand that inclusive education can be implemented in various ways but all these ways are united by the organizational structure with a positive perception of student diversity, to understand that the leaders working with their colleagues at educational institutions have a central role in promoting inclusive culture (Ainscow, Dyson, & Weiner, 2013).

The school administration attitude and understanding is very important in the issue of inclusion (*Pop, Powell, Miljevic, & Crighton, 2009*). The role of administration in the development of the inclusive education process at an educational institution is to guarantee the satisfaction of the rights of students with special needs to inclusion, to maintain inclusive policy in the activity of the educational institution, to provide all those involved in the learning process with information on the special needs of the students, to allocate funding for satisfying special needs, to guarantee accessibility of the educational institution (Department of education, 2011).

S. Peters (Peters, 1999) states that good administration of an educational institution determines the mood in the whole process of inclusive education. The role of administration in the development of an inclusive education process can be viewed from four perspectives: the vision and work order of the educational institution, the structure and organization of work of the educational institution, staff training, providing with resources for work. Administration should have a positive attitude to inclusion, the work of teachers in a corresponding environment must be supported: teachers who work well must be positively evaluated, help must be provided if things go wrong and time must be given for teacher interaction, for planning the work of teachers, solving cooperation problems, participation in support team meetings and adaptation of materials. Teachers who have the support of the educational institution administration are always more

successful in the times of change. Administration must create a supportive environment for the inclusion requirements, organize staff training, professional development and the opportunities for professional development (Expert Panel on Literacy and Numeracy Instruction for Students with Special Education Needs, 2005, 113).

There are golden rules approved by teachers all over the world – for a learning process to be inclusive, involvement of all students is important, interaction, good process management, experience planning, personal learning plans, personal help, the use of technical aids, behaviour management, everybody's work together (UNESCO, 2001). For development of the inclusive processes, a team leader approved and respected by all, able to take responsibility and risk must be chosen, a general understanding of how the support team is going to work at the educational institution must be created, each team member must be encouraged to take responsibility for participation in the team work, open communication must be established, constantly maintaining open relationships, and to admit that disagreements among team members are a part of the cooperation process, ways of constructive conflict resolution must be created (Danielsa & Steforda, 1999; Reid, 2006; Glynis, 2006, 9-11).

The process of inclusion at the educational institution must also be supported by the students, parents, other educational institutions and higher education institutions (Expert Panel on Literacy and Numeracy Instruction for Students with Special Education Needs, 2005, 112). M. Giangreco, S. Broer and S. Edelman point out that a lack of support for professionals at an educational institution can lead to a crisis because the educational institution employees do not understand what to do (Giangreco, Broer, & Edelman, 2003, 168). The make-up of the support team specialists of the educational institution – speech and language pathologist, psychologist, social pedagogue, special education pedagogue, medical specialist etc. – may vary depending on the needs and circumstances of the students of the specific educational institution (Hunt, Doering, Hirose-Hatae, Maier, & Goetz, 2003; Vasilevskis, Falka, b.g.; Expert Panel on Literacy and Numeracy Instruction for Students with Special Education Needs, 2005, 114). The educational institution administration and support team specialists must work as a team, “must develop a plan of measures for the implementation of a further inclusive education process of the educational institution, for providing the support in education” (Apeirons, 2007) where the measures for educational support include determining and assessment of the needs of a student; consultations and support for all students, including the students with special needs, professional development, consultations and support for teachers, the students' parents and the specialists; specialist consultations and services, also attracting specialists from other institutions; technical aids and equipment (if necessary); an opportunity to study using sign language and the services of an

interpreter (if necessary); transportation services (if necessary, also with an accompanying person); assistant services, etc.

For effective cooperation of the support team specialists, teachers, parents and other staff of the educational institution, all the persons significant to the student with special needs must be involved in the inclusion process. Active involvement of the students' parents and other significant persons in the work of the support team improves the effectiveness of the team's work; for the parents it is also important to feel that their input is valuable in the working process of the educational institution team (Expert Panel on Literacy and Numeracy Instruction for Students with Special Education Needs, 2005, 114). During the meetings of the student and the support team of the educational institution it is advised to hear the student's thoughts and to include the student in making important decisions that affect the student; the student's "advocate" must be allowed to speak if the student themselves is afraid to speak or cannot due to other problems; the student may need help in writing their thoughts if it is easier than speaking; an adult employee of the educational institution who shows a positive tendency towards the student could be included in the conversation; similar advisers or groups of advisers could be included, promoting the participation of people; it is necessary to obtain assurance that everything is clear and correctly understood by the student or the young person (Bibby, Davey, Hudson-Vaux, Miller, Morling, & Stitt, 2005).

It is necessary to arrange a class or just a room in the educational institution that could be used as a room for the meetings and work of the support team, at the same time, a as a working room for the specialists and individual work after class – a resource room. The room must meet the specific problems of the students: if the educational institution has students with vision problems, there should be good lighting and sound equipment; if there are students with hearing problems, the room must have sound isolation, good lighting so that students could read the teacher's lips and signs; if there are students with mental development disorders, the level of noise and other stimulators must be low because it can impede concentration (Apeirons, 2007; Friend & Bursuck, 2002; Kirk, Gallagher, & Anastasiow, 2000; The Utah Education Association, 2009). The resource room can be used to provide the special needs student with individual specialist consultations, for individual classes with specialists and individual acquisition of various learning strategies, for the others involved – for consultations, education, supervision, support team meetings etc. (Kirk, Gallagher, & Anastasiow, 2000).

Cooperation of the support team specialists has a huge importance, regular meetings where work strategies with specific special needs students and their effectiveness are discussed with the participation of study subject teachers and parents. When deciding to apply a new work strategy, the person to implement the strategy must be given at least a month of time for its implementation, then

the results obtained are analyzed during another meeting: detailed description of activities tried, detailed report on the student's reaction to the new activities, any new information must be provided that was received during the implementation of the strategies, information on any changes (for example, changes in family circumstances, stands that can affect the effectiveness of intervention), as well as any questions and uncertainties that emerged during the testing of the strategy. If the new strategies proved to be effective, the meeting members can agree on the continuation of these strategies regarding the specific student, but if the strategies did not produce results, new strategies are developed and tried (Glynis, 2006, 9-11). The support team specialists and parents decide on the necessity of support measures, application and effectiveness in the learning process of specific students (Giangreco, Broer, & Edelman, 2003, 168), decide whether the student needs an individual support person if the student's behaviour disturbs the class, the student cannot take care of themselves, does not have independent mobility, poses a safety risk to themselves or other students, if constant support is needed in a specific field (Giangreco, Broer, & Edelman, 2003, 171).

In an inclusive educational institution, various support measures are used during the learning process and tests depending on the specific special needs of the students. The support teams of the educational institution have an important role in evaluation of the student's special needs and choosing the necessary support measures to eliminate or reduce the obstacles caused by each specific disorder or disorders. A correct decision will provide the student with an opportunity to show their knowledge and skills without suffering from limitations caused by their health or developmental disorders. The task of the educational institution support team is "to ensure that the decision made on the support measures minimizes as much as possible the risk of a student receiving an inadequate grade on an ordinary day or for a test" (Vasiļevskis, Falka, year not indicated). The support teams of educational institutions should provide support for the teachers working in the class, help decrease the difficulties that the student encounters in class, after classes, to support students and parents, provide an opportunity to cooperate, to consult and exchange information and knowledge in order to identify strategies that can improve learning achievements of the student.

When starting the creation of the inclusive educational institution learning process, the support team specialists and the educational institution administration must analyze the existing basic training of the teachers of the educational institution: the level of knowledge and skills of work with students who have special needs, which can be very different, the opinions existing among staff, views on their own readiness and that of the educational institution for work in an inclusive learning process, for teachers usually have a lot of knowledge and skills necessary to work with all students but do not have real confidence about their correctness; professional development of teachers is needed that would give the

teachers an additional feeling of confidence about the correctness of their work and the understanding that the inclusive work practice is more than just differentiation, that would allow acquiring new work strategies, learn to cooperate with everyone involved in the inclusion process, to work for one shared aim in a united team, instead of the usual responsibility for and emphasis on only the results of their personal work and not taking responsibility in general.

Each support team specialist in the educational institution has their own specific responsibilities. One of the support providers to a student with special needs in the learning process can be a special education pedagogue (Jonsson, 2006, Janney & Snell, 2003, 103, Giangreco, Broer, & Edelman, 2003). The work of a *special education pedagogue* in the educational institution support team and in the educational institution in general is determined by the description of work responsibilities prepared by the Ministry of Education and Science (IZM, 2009). Special education teacher helps the pedagogue of a general education institution during work with students who have pronounced physical or mental developmental disorders (vision, hearing, neuropsychological, somatic, language disorders) or learning disorders, implementing a special primary education programme for the students included; implement the education programme in a specific study subject according to the State Education Standard and according to the health and level of development of each student; agree on the content of their work with the teachers of the corresponding study subject; determine individual work hours and participation in classes with other students; in cooperation with the study subject pedagogues, class masters, educational institution support team staff and educational institution administration, analyze the learning, psychological and adaptation problems of each student and determine the learning methods to be applied to solving such problems; perform individual work with students to explain the learning material that is unclear, to create motivation to learn and to develop cooperation and communication skills, help students to prepare for classes and after class activities, create their self-care skills; cooperate with the students' parents in order to understand the students' problems and to inform the parents of the student's difficulties at the educational institution to search for solutions together; perform the analysis of the dynamics of students' development and self-analysis of one's own work; plan one's work and inform about the results of the work following the order established by the educational institution etc. (IZM, 2009).

In cooperation with subject teachers, the special education pedagogue consults teachers on how to use materials and methods that will suggest the correct answer to the student (simplifying the tasks and allowing to participate in class with the sense of a job well done); how to encourage for further work when providing comments about a correct or incorrect answer, an assessment of the answer, focusing on the correct answers; how to motivate a student to work,

finding the correct level without overcomplicating or oversimplifying the tasks; how to systematically move from the unknown to known, slowly, step by step; how to avoid forgetting, by repeating at frequent intervals, returning to the learned material at specific time intervals; how to gain more time for exercises using the teaching of peers, allowing classmates to help; how to use specific items in the learning process instead of abstract concept; how to work flexibly, using various methods and techniques in the learning process (Vasiļevskis, Falka, year not indicated).

Another specialist working on the educational institution support team and providing support to those involved in the inclusion process is an *educational psychologist*, the description of work responsibilities has also been approved by order No. 425 of 16 October 2009 of the Ministry of Education and Science (IZM, 2009). The responsibilities of an educational psychologist include psychological analysis of students, including observation in class and after class; analysis of the students' psychosocial environment; consulting students, parents and pedagogues in cases of students' psychological problems; development of main principles of promoting the students' mental development in case of difficulties with acquisition of learning material and developing recommendations for pedagogues and parents for providing support; ensuring prophylactic measures: educating the students' parents and pedagogues on the issues of psychology; participation in activities aimed at reducing the influence of unfavourable factors found in psychosocial studies at the educational institution; providing support to students during the adaptation process; preparation of written conclusions on the results of a psychological analysis or a consultation of students; cooperation with parents, informing them on the achievements and problems of the student at the educational institution, looking for solutions together; perform the analysis of students' development dynamics; plan one's work and inform about the results of the work following the order established by the educational institution etc. (IZM, 2009).

Work responsibilities of another support team specialist – the *speech and language pathologist teacher* – include improving the student's "spoken and written language development skills for complete acquisition of linguistic competences (requirements) put forward by the State Primary Education Standard; promote the growth of a student's self-esteem and provide support during the adaptation process; perform frontal diagnostics of a student's spoken and written language and reading skills; create groups for speech and language pathology exercises according to the student's age, language disorders and the level of mental development; if necessary, work with students who have spoken or written language disorders individually; consult students, parents and teachers in cases of spoken or written language disorders and developing recommendations for providing help to the students; prepare a written report on the development of

a student's spoken and written language when a student is sent to the state or municipal medical pedagogical committee as well as in cases provided for in the normative acts or upon a written request of the parents; perform analysis of the students' development dynamics and self-analysis of one's own work; plan one's work and inform about the results of the work following the order established by the educational institution" (IZM, 2009) etc., which is set forward in order No. 425 of 16 October 2009 of the Ministry of Education and Science (IZM, 2009).

When beginning the implementation of inclusion of students with special needs in educational institutions, it is important to provide the support required by each student, and one of the ways of support could be *pedagogues' / teachers' assistants* (Birkett, 2004; IZM, 2013). The author of the dissertation, while studying the practical work of introducing inclusive education at London educational institutions, observed that the task of a pedagogue's/ teacher's assistant based on the English experience (beginning with year 1990, the position of a teacher's assistant is introduced into the educational institutions of England) is: be together with the special needs student in class (especially mathematics and native language, decision on the other subjects is made by the support team depending on the student's needs); pass work tools and materials to the student with special needs, consulting with the teacher before the class; read to the student with special needs individually or in a small group and listen to the student's reading; play games with the student or a small group of students; check the student's with special needs work and help correct mistakes; work as a writer if necessary; help students with behavioural disorders change their attitude; explain words that the student does not understand, encouraging to find them in a dictionary; help a student with special needs to work with specialized computer software; supervise the process of performing practical work; help start unsuccessful work again; observe how the student is performing a task, getting involved only if the student cannot do it independently; prepare audio recordings and encourage to use a voice recorder for recording information as well as control what the student is recording; inform teachers about results and problems; help with planning and with preparation of reports; teach the student to spell, etc. (Fox, 2003, 2; Handbok of learning, 2003; Hanko, 1986).

In Latvia, model regulations of the general education institution teacher's/pedagogue's (both terms are used in Latvia) assistant's work were approved by the Ministry of Education and Science on 18 July 2003, amended and approved again on 16 October 2009 (IZM, 2009); they provide that the teacher's/pedagogue's assistant helps students with learning, social, psychological difficulties when implementing the primary education programme at general education institutions to promote the improvement of learning achievements, growing of their self-esteem and successful adaptation in the environment of the educational institution; in cooperation with the study subject

teachers, class master, educational institution support staff (psychologist, social pedagogue, speech and language pathologist, medical specialist) and administration, analyze each student's learning, psychological and adaptation problems and determine the methods to be applied to solving such problems; ensure the students' (refugees, asylum seekers, nationals of third countries of Europe) inclusion into the education system of Latvia; perform individual work with students to explain unclear learning material, create motivation to learn and develop cooperation and communication skills; follow the instructions of the corresponding study subject teacher, class master and educational institution administration; prepare information on the achievements and problems of the student at the educational institution; together with the study subject teacher, plan the work to be done in class – lesson aims, material to be taught, teaching methods to be applied; perform analysis of student development dynamics and self-analysis of one's work; plan one's work and inform about the results of the work following the order established by the educational institution etc.

In order for a student with special needs to be successfully included into the education process and acquire social skills, it is important to develop *an individual education plan and implement it in the learning process* (Kirk, Gallagher, & Anastasiow, 2000). To create an individual education plan means to adapt the education process to the specific character of the student's cognition processes, experience, skills in order to acquire the requirements of the education standard and study subject programmes (Snowman & Biehler, 2000, 181; Kirk, Gallagher, & Anastasiow, 2000, Hodkinson & Vickerman, 2009). Individual general developmental and educational programmes that correspond to the guidelines of special primary education programmes but still refer to a primary education programme for a specific school year, are developed by the support team specialists and study subject teachers.

Conclusions

1. To ensure optimal development of students with developmental disorders, the administration of the educational institution, support team specialists, teachers (and students' parents) must consider the following: the aim of education in general and to what extent a specific student will be able to achieve it; how the unity of learning and upbringing in the education process is expressed in the education of a specific student; the abilities of a specific student and related developmental possibilities; developmental disorders of a specific student to be aware of and the kind of support that helps them learn more successfully and feel better; whether the teacher sees the achievements of the student, gives recognition and helps the student be aware of them too (Florian, 2008; North & McKeown, 2005).

2. Inclusive education cannot be perceived as the only possible solution; the real situation of each student with special needs must be assessed and the ability of the chosen educational institution to provide the student with the necessary support. When including a student with special needs into a general education institution, the student's situation cannot worsen and the amount of necessary help received cannot decrease compared to what the student would receive studying at a specialized educational institution, which is also an expression of humanity in the educational process.

Discussion

The theoretical study has shown that when beginning the activity of an inclusive educational institution, the administration of the educational institution must perform substantial analysis of the existing situation, must perform sufficient preparation work in order to ensure real support, based on the needs of the students and teachers. It is important that the educational institution employees receive all the necessary resources for their professional activity, including paid work hours, to agree with each other on their work, for consultations with each other and cooperation. In practice, it is impossible for specialists with part-time workloads to actually organize the work of a support team as a team.

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CHARACTERISTICS OF SELF-DETERMINATION OF STUDENTS WITH DISABILITIES

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Abstract. *The article describes the psychological characteristics of students with disabilities. Their individual psychological characteristics are identified and they indicate the existence of effective models of interactions with their social environment, adequate self-acceptance, enough active life philosophy in such students. The article determines that such personality formations as life goals, personal autonomy, desire for personal growth, self-confidence are the most important for the development of self-determination of students with disabilities.*

Keywords: *personal autonomy, personal potential, psychological well-being, self-determination, subjectivity.*

Introduction

The significant social demand for psychological studies of people with disabilities has been shaped in the last decade, although the need for researches has always existed, because there are many people with diagnosed disabilities. According to the World Health Organization, 10 % of the world adult population have disabilities; and 2.2 % to 3.8 % of population have complicated disability forms.

The transformation of human life in self-realization is the finding of a personal meaning for a person with the chronic medical conditions and disabilities. That is why the finding of new meanings can be important for a person in critical situations, even when he/she thinks that available personal resource is depleted.

So, the researches aimed at identification of factors that stimulate innate human potential, contribute to internal reserve finding, ensure independence of choice, self-development and self-realization, and help to withstand negative influences of the environment become especially important. That is why it is necessary to develop thoroughly psychological foundations of personal self-determination, particularly vocational formation.

The studies of self-determination in the context of preparation of young people with disabilities to their future in different employment or educational areas and independent living demonstrate that a higher level of self-protection/self-determination correlates significantly with enhanced possibilities of further education (Test et al., 2013; Getzel, 2014.). It is also confirmed by the revealed correlation between education after secondary school graduation and improvement of vocational employment statistics of people with disabilities (Stodden & Dowick, 2001).

According to the existing researches (Getzel & Thoma, 2008), the optimization of environmental parameters in the form of improvement of socio-economic and medical assistance to people with disabilities does not solve the problem of improvement of the subjective aspect of their life.

The conceptual basis of self-determination as the ability to define and achieve objectives is based on self-knowledge and self-assessment (Field & Hoffman, 1994).

The powers important for personal self-determined behaviour include the capacities for choice, problem solving, self-defence, internal locus of control, self-awareness and self-knowledge (Wehmeyer, Agran, & Hughes, 1998).

In this aspect the studies of Deci E. and Ryan R. (Deci & Ryan, 1985; Ryan & Deci, 2000) are considered to be classic. These works belong to the positive psychology aimed at drawing of psychological scientific attention not to the correction of negative effects but to the creation of personal positive components (Seligman & Csikszentmihalyi, 2000).

The theory of self-determination and personal autonomy (Ryan & Deci, 2000) is aimed at identifying of the factors that stimulate inherent human potential, which shapes the growth, integration and health, and at researching of process and conditions supporting healthy development and effective functioning of persons, groups and communities. Deci mentioned (Deci & Ryan, 1985), that self-determination is not only the power, but also a need. He defined it as the main inherent tendency leading an organism into involvement in the behaviour of interest, which usually has some advantages for development of abilities to carry out flexible interaction with the social environment.

Using the 'internalization' term to describe the process by which personal behaviour becomes relatively autonomous, the self-determination theory identifies three psychological needs, critical for internalization and supporting of optimal development of motivation and personal well-being:

- autonomy reflects the urge to be a causal agent and a provider of own acts;
- competence involves the need to have a feeling of personal capability to achieve the desired results; it is conceptually similar to self-efficacy

- in the social cognitive theory (Bandura, 1997);
- relatedness reflects the need to feel closer and be understandable to significant others.

The least autonomous form of regulated behaviour is an external form; it reflects behaviour performed because of an external demand or a possible reward or avoiding of certain negative circumstances (Ryan & Connell, 1989).

At the same time, autonomous self-regulation is particularly important for health protecting behaviour, because at this case a person more autonomously regulates own efforts, persistence, stability, etc. (Deci & Ryan, 1985).

Over the past 10-15 years, we can see the growth of researches based on the self-determination theory in the context of healthy lifestyles, including healthy environment and behaviour. The results of such studies demonstrate the role of autonomous self-regulation and support of the needs in various aspects of mental and physical health. An integrated approach to the study of healthy behaviour focuses on the role of a social context in optimal motivation maintaining or disrupting (Ryan et al., 2008).

Thus, the leading role, as it was mentioned, is in advancement to improve the quality of life of persons with disabilities belongs to persons' psychological resources and their own attitudes to their disabilities. Therefore, our research is focused on the determination of these peculiarities and factors.

The object of the research is the psychological foundations of self-determination of students with disabilities during vocational formation.

The aim of the research: to reveal the psychological characteristics of students with disabilities and to identify the factors of self-determination of their personal development.

Participants of the research:

The study involved 116 students with disabilities who are enrolled in various specializations and 83 typical (without disabilities) students of the Open International University of Human Development 'Ukraine' (Kyiv, Ukraine). The respondents' age was from 18 to 22 years old. The psychological research of personal qualities of the students allowed us to collect the considerable empirical material, the analysis of which has led us to conclusions regarding personalities of this category of people, their adaptation to life, behavioural styles in everyday situations, orientations for the future.

Methods of the research.

The following methods were used at the study:

Mini Mult Questionnaire (MMPI shortened version), adapted by Berezin and Miroshnikov (Березин et al., 1994);

Crumbaugh and Maholick's Purpose in Life Test, adapted by Leontiev (Леонтьев, 1992);

Ryff's Scales of Psychological Well-being, adapted by Shevelenkova,

Fesenko (Ryff, 1995);

Hardiness Survey of Maddi, adapted by Leontiev and Rasskazova, designed to determine personal ability and willingness to act actively and flexibly in situations of stress and difficulties (Leontev & Rasskazova, 2006);

Self-Determination Test of Osin for estimation of person's subjective experience how he/she determines his/her life course and how his/her life meets his/her desires (Osin & Leontev, 2008).

Results and Discussion

At first, let us examine the psychological characteristics of students with disabilities, their types of attitude to the disease and characteristics of social and psychological adaptation.

Table 1 presents the results of our study of personal psychological characteristics of the students with disabilities.

Table 1 Personal psychological characteristics of the students with disabilities

	Hypochondria	Depression	Hysteria	Psychopathy	Paranoia	Psychasthenia	Schizoid personality	Hypotension
\bar{X}	51,9	48,2	52,6	48,3	49,8	49,8	52,9	49,3
Md	52	46	51	49	50	51	52	51
Mo	48	46	55	49	50	51	49	40
S_x	7,77	9,2	10,4	10,7	11,5	10,9	9,5	11,4

Note: \bar{X} – mean; Md – median; Mo – mode; S_x – standard deviation

The high scores on all scales means that they excess 70 points, the low results are if they are below 40. All parameters are within the statistical norm at average values, based on the obtained values of central tendency. A more detailed frequency analysis presents that there are high parameters for the following basic scales: hypochondria (Hs), i.e. the disposition to the asthenic-neurotic personality type is in 2.1 % of the respondents; prone to hysteria (Hy), i.e. neurological protective reactions of the conversion type, is shown by 8.8 % of the respondents, it is the category of people that use their symptoms of physical illness as a way of avoiding responsibility; predisposition to psychopathy (Pd), manifested in social exclusion, aggression, conflicts, disrespect of social norms and values, is shown by 2.1 % of the subjects; paranoia (Ra) is typical for 5.4 % of the respondents; psychasthenia (Pt), which

is characteristic for people with the anxiety-distrustful personality type, is shown by 2.7 % of respondents; schizoid personality (Se) is typical for 5.5 % of the surveyed students; hypotonia (Ma) is shown by 2.1 %. Distribution of these parameters is shown in Figure 1.

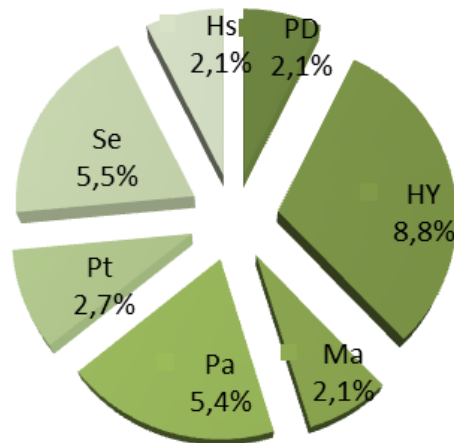


Figure 1 **Distribution of the individual psychological characteristics of students with disabilities**

Thus, the obtained data show that the individual psychological characteristics of students with disabilities lay within the statistical norm and are usual peculiarities characteristic for any other person.

So, disabilities can act and are actually acting in some cases as a constructive resource for constructing a special self-regulation system. That is the limited opportunities of health or injury are transformed into a personal resource.

Importance of scientific researches carried out with the participation of people with disabilities is based on the opportunity to analyze from the standpoint of the modern psychology how their self-regulation and self-determination system is organized, which their reserves and powers help to transform their limitations into an advantage, minus to plus and to examine possible ways to provide assistance both for people with disabilities and for those who are considered to be 'healthy', 'normal', to optimize their self-realization in their personal sphere and professional work.

Usually, a person does not feel directly the deficiencies of his/her development; he/she perceives only difficulties because of such conditions. Adler (Адлер, 1995) noted, that organic, congenital causes do not act by themselves, not directly, but indirectly, through lowering of a personal social position.

Overall, the success of personal self-realization and psychological well-being of all people, including those having medical conditions and disabilities, is

determined by the existence of personal desire for self-development and disclosure of own potential, assessment of their own personal resources as sufficient for success and holistic perception of life's journey, including available realistic life goals.

In the context of our study, *self-determination of professional development* of people with disabilities creates conditions for achievement of high performance and thereby improvement of their *psychological well-being*. Personal psychological well-being, which is an integral self-estimation of own self-efficacy under certain developmental conditions, becomes, therefore, the main concept of the self-development of a personality, because it allows a person to coordinate available resources (skills, personality traits, unrevealed powers, inclinations) for own life organization, in general, and goal achieving, in particular.

Based on the integration of the various theories related to well-being, Ryff (1998) proposed a generalized model of psychological well-being, which includes six components: a positive attitude to oneself and own past life (self-acceptance); availability goals and interests that give life meanings (purpose of life); ability to meet the requirements of daily life (environmental mastery); feeling of continuous development and self-realization (personal growth); relationships with others, imbued with care and confidence (positive relationships with others); ability to comply with own beliefs (autonomy) (Ryff & Singer, 1998).

Psychological well-being can be defined as an integral indicator of the personal orientation onto implementation of the main components of positive functioning as well as a degree of the fulfilment of this orientation, which is perceived by people as a sense of satisfaction with themselves and their lives.

The study of personal psychological well-being components is also interesting because psychological well-being is understood not only as personal mental and physical health but also as self-realization, fulfilment of own potential and powers, including professional identification throughout all career.

The results of the students with disabilities and their comparison with typical students (on Ryff's scale of psychological well-being) are shown in Figure 2.

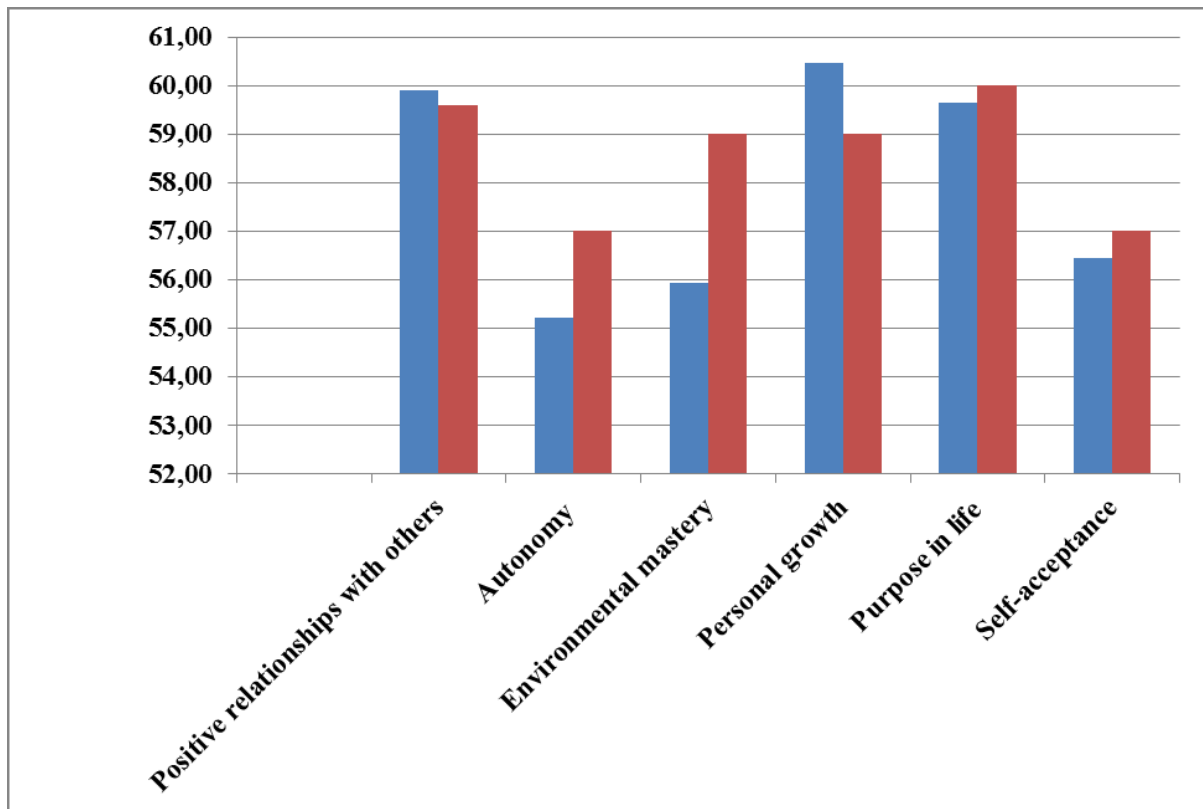


Figure 2 Comparison of psychological well-being of the students with disabilities and typical students

Note: the first column – students with disabilities; the second column – typical students

A characteristic feature of the obtained results is that they are almost indistinguishable for these two groups of students.

All components of psychological well-being have above average levels for the majority of the respondents. The above average results on the “positive relationships with others” scale are shown by 61 % of the studied students; on the “autonomy” scale they are indicated by 48 %; on the “environmental mastery” scale it is done by 51 %; on the “personal growth” scale it is done by 62 %; on the “purpose in life” scale it is done by 59 %; on the “self-acceptance” scale it is done by 48 %.

However, Figure 2 presented that the following indicators at the overall ‘picture’ of respondents’ psychological well-being for both students with disabilities and typical ones have lower values: ‘autonomy’, ‘environmental mastery’ and ‘self-acceptance’. So, they make a negative contribution to psychological well-being, become barriers to personal self-determination and a place to apply corrective work by psychologists.

The correlation analysis of the results (see Table 2) shows that the indicators related to psychological well-being are related with purport

orientations (goals in life, the process of life, life results) and especially with personal hardiness.

Table 2 Correlation of psychological well-being with life-purpose orientations and hardiness of students with disabilities

	Positive relationships with others	Autonomy	Environmental mastery	Personal growth	Purpose in life	Self-acceptance
Goals in life	0.17	0.28*	0.22	0.18	0.47**	0.49**
Process of life	0.48*	0.27*	0.27	0.29	0.34*	0.49**
Life results	0.46*	0.21	0.45*	0.26	0.46*	0.59**
Locus of control – self	0.24	0.34*	0.17	-0.11	0.25	0.44**
Locus of control – life	-0.14	-0.23	-0.26	-0.32*	-0.23	0.18
Overall indicator of life meaningfulness	0.27	0.28	0.26	0.24	0.29*	0.52**
Commitment	0.46**	0.32*	0.35*	0.30	0.34*	0.54**
Control	0.18	0.36*	0.19	0.23	0.26	0.46**
Challenge	0.41**	0.31*	0.37**	0.52**	0.45**	0.58**
Self-determination	0.15	-0.07	0.27	0.56**	0.53**	0.38*
Self-expression	0.47*	0.03	0.42*	0.49*	0.57**	0.55**

** – correlation is significant at the 0.01 level (2-sides); * – correlation is significant at the 0.05 level (2-sides).

Basing on Table 2, we can say in general that there are the next personal resources of psychological well-being of students with disabilities, underlying their self-determination: life goal awareness, holistic perception of own life course, active involvement in social life, self-acceptance and personal growth.

Expressiveness of hardiness components is important for maintaining of health, optimal level of work efficiency and activity in stressful living conditions (Мадди, 2005).

40 % of the surveyed respondents show above average values for the “commitment” scale of hardiness; 45 % for the “control” scale; 30 % for the “challenge” scale. Given the obtained data, we should note that most of our respondents, unfortunately, do not have enough strong belief that they can enjoy their own activities; they can have a sense of helplessness.

The obtained results (see Figure 2 and Table 2) indicate that, as a whole, our respondents can be characterized as having positive relationships with others, understand that human relationships are based on mutual actions; they are quite autonomous and independent, able to regulate themselves, their own behaviour, can create conditions and circumstances relevant to meeting personal needs and achieving their goals, they are seeking for personal growth, understand their goals for the future. However, many of the respondents are unsure of their ability to achieve their goals.

A quite important construct is personal autonomy, which means a power to determinate own position by oneself and is associated with one of the highest personal characteristics – spirituality (Gabanska, 1995). This means that personal autonomy is understood as an ‘inner core’, an internalized form of external regulation, which became self-regulation and obtained a qualitatively new form.

The Figure 2 data presents that personal autonomy has the lowest value in the psychological well-being structure. Since the concept of personal autonomy is associated with personal ‘positive’ image formation (Seligman & Csikszentmihalyi, 2000), its manifestations can be one of the ways to describe a full-fledged personality, being able to determine and regulate one’s own life.

The performed regression analysis determinates the most important parameters that have the greatest impact on self-determination of the students with disabilities. It was performed with the self-determination scales of Osin (this technique measures subjective experience by a person of how he/she determines him/herself the course of own life and how he/he meets his/her own desires) (Осин & Леонтьев, 2008).

So, based on the regression analysis, we will determine which of the independent variables are the most significant and important for the prediction of the self-determination index. The self-determination can be predicted by using four models (see Table 3).

The first model includes the ‘life goals’ indicator, explaining 43 % of variance ($R\text{-square}=0.43$). The second model includes two indicators – ‘life goals’ and ‘autonomy’, which together explain 45 % of variance. The third model includes three indicators – ‘life goals’, ‘autonomy’ and ‘personal growth’, which together explain 52.4 % of variance. The fourth model includes four indicators – ‘life goals’, ‘autonomy’, ‘personal growth’ and ‘challenge’, which together explain 53.7 % of variance.

Table 3 “Summary for the model” e

Model	R	R-square	Corrected R-square	Standard error of estimation
1	0.654 ^a	0.428	0.413	3.817
2	0.671 ^b	0.450	0.456	3.727
3	0.724 ^c	0.524	0.488	3.715
4	0.733 ^d	0.537	0.511	3.636

a. Predictors: (const) life goals

b. Predictors: (const) life goals, autonomy

c. Predictors: (const) life goals, autonomy, personal growth

d. Predictors: (const) life goals, autonomy, personal growth, challenge

e. Dependent variable: self-determination

The ‘Coefficients’ table (see Table 4) allows us to create a regression equation. As Fisher criterion <0.05, so the findings are statistically significant.

Table 3 Coefficients a

Model		Non-standardized coefficients		Standardized coefficients	t	α
		B	Standard error	Beta		
1	(Constant)	-8.72	2.58		-3.33	0.00
	Life goals	0.59	0.07	0.64	7.42	0.00
2	(Constant)	-7.91	2.52		-3.11	0.00
	Life goals	0.61	0.08	0.65	7.94	0.00
	Autonomy	-0.41	0.13	-0.24	-2.65	0.01
3	(Constant)	-7.93	2.44		-3.20	0.00
	Life goals	0.51	0.07	0.53	6.17	0.00
	Autonomy	-0.49	0.15	-0.24	-3.14	0.00
	Personal growth	0.25	0.10	0.22	2.45	0.02
4	(Constant)	-11.24	2.91		-3.82	0.00
	Life goals	0.37	0.13	0.44	3.53	0.00
	Autonomy	-0.45	0.15	-0.25	-3.12	0.00
	Personal growth	0.24	0.11	0.23	2.33	0.02
	Challenge	0.33	0.17	0.22	2.01	0.05

a. Dependent variable: self-determination

As we use the fourth model for the self-determination index prediction (53.7 % of variance), the factors only for this model are taken into account. The regression equation for the fourth model is as follows:

$$y = -11.2 + 0.37 X_1 - 0.45 X_2 + 0.24 X_3 + 0.33 X_4 + e.$$

Comparing beta, we conclude that the 'life goals' indicator influences mostly the self-determination index prediction.

Thus, the performed regression analysis revealed that self-determination is most accurately predicted with the model including the indicators of 'life goals', 'autonomy', 'personal growth' and 'challenge' which explained 63.3 % of variances. The largest impact on self-determination has the 'life goals' indicator (the highest beta).

So, the development of these characteristics of students during their study at the university is essential for the formation of self-determination, psychological foundations of personal development and future vocational self-realization.

Conclusions

From the point of view of the humanistic, existential positions, both health and disease are the methods of personality functioning, self-organization of personal life values, goals, prospects, freedom of choice, and interpretation of challenges a person faces.

The main factors of self-determination, successful self-realization and psychological well-being of typical students as well as the ones with disabilities are awareness of their purposes, meanings, prospects for their future, presence of motivation for self-development and self-realization, understanding of own potentials, belief in own powers, personal autonomy, capability of conscious control and assessment of own achievements and prospects.

A significant barrier to students' self-determination is raised because of unclear and undifferentiated picture of their own future and lack of understanding of the ways and means to achieve their life goals. These factors determine motivation for goal-setting and determine integration of the past, present and future in a personal psychological life space.

The obtained results demonstrate the necessity to develop life perspective during university years. Therefore, higher education should be aimed at solving of such tasks as the development of initiative, responsibility, and integrity of life journey perception, which will allow students to be active agents of professional and personal development, self-development and self-realization.

Promotion of students' self-determination is one of the most important tasks of their university learning.

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SUPPORTING FAMILIES IN CORRECTING DYSLALIA IN CHILDREN

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Abstract. *The text deals with issues related to the effective support of speech and language therapy for children with dyslalia. The effectiveness of speech and language stimulation is determined by a wide range of determinants. Individual predispositions, influences of educational environments, personality, professionalism, the scope of speech and language therapists' knowledge and abilities as well as a variety of methods used by them play an essential role. Dyslalia, which is one of the most frequent speech disorders, has a negative and significant impact on children's psychosocial functioning. Children's attitudes toward peers with speech articulation disorders not only seem to affect intellectual, cognitive and motivational processes, including perception, attention, memory, thinking, but also transform social behaviours. Therefore, the profound significance of the family's influence on the effectiveness of speech and language therapy for children with dyslalia has been emphasised. It is assumed that educational activities require planned, intentional and regular collaboration with various environments in order to achieve desired goals and shape comprehensive individual development.*

Keywords: *child's development support, compensation, deformation, dyslalia, early intervention, elision, substitution, therapeutic procedure.*

Introduction

Speech defects are one of the most common speech disorders observed, among others, in improper construction and functioning of articulation organs, delayed speech development, aphasia, cerebral paralysis of children, intellectual disability or hearing damage (Sołtys-Chmielowicz, 2012). In the terminology of speech therapy and phonetic terminology, speech disorders are referred to as "dyslalia". Describing dyslalia as "speech defects" is also present in the European literature, eg. Czech, Slovak, German, Russian. In Polish literature the term "dyslalia" operates in two senses:

- descent, lighter form of alalia, or untrained speech, which is the result of cortical brain damage;
- a separate unit in the symptomatology classification of speech disorders (Minczakiewicz, 1997).

Dyslalia, in understanding of Hanna Rodak, is a symptom of speech disorders referring to the articulatory aspect of language (Rodak, 2002). Grażyna Jastrzębowska understands dyslalia (synonyms: articulation disorders, speech defects, articulation defects, incorrect realisations of phonemes, the distortion of the substance of phonic plane segmentation) in terms of disorder implementation of peripheral phonemes, manifested by distortion, replacement or abandonment of speech sounds that result in abnormal spoken sound. (Jastrzębowska, 2003). According to Antoni Pruszewicz, referring to dyslalia as “mumbling”, only covers disorders of central articulation for the changes of patterns of phonetic-phonology with the proper operation of the other functions of speech, for example: naming, comprehension, repetition, lexical resource, grammatical and syntactic structure (Pruszewicz, 1992). According to Agnieszka Hamerlińska-Latecka dyslalia is an articulation disorder having diverse aetiology and revealing the incorrect pronunciation of sounds or sounds as a result of elision, substitution, deformation or compensation (Hamerlińska-Latecka, 2012). Elision (*mogilalia*), is a lack of implementation of the phoneme in the form of separate sounds. It can take the full form when it relates to items pre-, inter- and post vocal or limited only to certain items (eg. word initial position), and the total - in the pursuit of the phoneme as zero phonetic and partial, the changes include a nearby vocalic segment or there appears noiseless segment instead of the phoneme. Substitution (*paralalia*) occurs in case of implementation of specific phonemes present in the execution of another phoneme, two phonemes of the general system are pronounced in the same way. A phoneme may be represented by several or even a dozen substitutes. Primarily changed phonemes are those called as “consonant”, but also vocalic. Such form of defective speech appears as loose (*facultative variant*) or structural (*combinatorial and lexical variant*). In case of the optional variant, one of the two substitutes of the phoneme is realised in the onset, the other in the centre of a word and coda or it appears as first only in groups of consonants, the second one appears outside of these groups. When the lexical variant occurs, one of the substitutes is still in certain words, the second in other words. Deformation is the realisation of a particular phoneme that does not fit the realisation of this phoneme, as well as other phonemes. This includes sounds unusual for a phonetic system, including interdental sounds, side spirants, variously localised vibrational sounds. The most common are deformed “consonant” phonemes, but also a vocalic ones (Kania, 2001). Compensation means articulation while doing speech therapy, and it is about repeating the same, previously incorrectly spoken sounds with greater correctness, but still in a way that does not meet all the distinctive features due to the inability to eliminate the causes of incorrect pronunciation (Hamerlińska-Latecka, 2012).

Dyslalia disorders and family support to stimulate the language development of the child

The aetiology of articulation disorders refers to two groups of factors: exogenous (external) and endogenous (internal). The first one is related with negative patterns of environmental changes in family structure (eg. the emergence of younger siblings) and the intended or unconscious actions to support the articulation of previous periods of development. Endogenous factors include:

- anatomical changes of the articulatory apparatus;
- malfunction of speech organs;
- malfunctioning of phonic hearing;
- other difficulties relating to the central processing of speech, eg. the absence of appropriate representation of phonemes (or possible variants of sounds contained therein), words, slow access to individual lexical network, problems with planning sequence (Czaplewska, 2015).

In speech therapy practice, one cannot clearly separate the internal and external factors.

Among the various causes of dyslalia disorders one can therefore include:

1. Anatomical changes of articulation apparatus:
 - improper tongue construction – macro-tongue, too long or too short tongue, too thick, short under tongue frenulum;
 - incorrect construction of the palate - too strongly arched, narrow hard palate, so-called. Gothic palate, cleft palate;
 - malocclusion - open bite, overshoot, undershoot bite, overbite, cross-bite;
 - Dental anomalies - diastema, protrusion, retrusion, transient anomalies, eg. during replacement of teeth;
 - third tonsil hypertrophy;
 - polyps;
 - nasal septum deviation;
 - hypertrophy of the nasal mucosa.
2. Improper functioning of speech organs:
 - low lips and tongue functioning;
 - impaired work, muscle tension and adductors ligaments voice;
 - difficulty in coordinating the work of vocal cords with the articulation of the base;
 - impaired operation of shortening ring throat;
 - lack of verticalisation language called: infantile swallowing.
3. Improper construction and functioning of hearing organ:
 - distortion of hearing analysis and synthesis;

- selective hearing loss;
 - reduction of hearing (hearing loss, deafness);
 - phonetic hearing impairment.
4. Improper speaking learning conditions:
 - wrong speech examples;
 - unwilling atmosphere, education conditions and parents' approach;
 - lack of speech development stimulation.
 5. Malfunction of the central nervous system (central dyslalia, central dyslalia appearing in the case of aphasia and dysarthria).
 6. Mental substrate:
 - lack of interest with the speech of others;
 - feeling own statements as tiring, unsatisfactory and its reduction, resulting in disruption of normal development of speech (associative dyslalia).
 7. Delayed psychomotor development (developmental dyslalia) and the child's emotional development (Jastrzębowska, 2003).

The most important etiological factors of dyslalia by H. Rodak are:

- phoneme hearing disorders hindering the auditory recognition of sounds;
- not paying attention to the pronunciation;
- reduced the level of intelligence;
- anatomical damage to peripheral organs of speech;
- the low efficiency of the speech organs;
- the organic diseases of the nervous system and paralysis around the medulla (Rodak 2002).

In the literature one can find different classifications of dyslalia, for example. Causal, qualitative, quantitative or qualitative phonic linguistics. Taxonomic diversity is a source of number of criteria, which are the base for the division, which is illustrated in the table below:

Conducting diagnostic procedure is the starting point for the development for an individual program of speech therapy. Treatment of speech disorders is made of complex actions aimed for eliminating irregularities of articulation and compensates for the dysfunction in both adults and children (Rodak, 2002). Its aim is to increase the intelligibility of speech (with substitutions), verbalisation aesthetics in both auditory and visual area (with deformities), but also remove any defective elements, calling attention of listeners (Sołtys-Chmielowicz, 2008).

Table 1 Types of dyslalia taking into account different criteria of division

DIVISION CRITERIA	TYPE OF DYSLALIA
Number of improper realised distinctive character of phoneme	<ul style="list-style-type: none"> • Simple Dyslalia • Complex Dyslalia
Number of wrongly spoken vowels	<ul style="list-style-type: none"> • Same kind dyslalia • Partial dyslalia • Many kinds dyslalia • Total dyslalia
Number of disrupted articulations spheres	<ul style="list-style-type: none"> • Monomorphic dyslalia • Polymorphic dyslalia
Manner of improper realisation of sound	<ul style="list-style-type: none"> • Mogilalia • Paralalia • Proper dyslalia
Name of vowel or vowels which are articulated wrongly	<ul style="list-style-type: none"> • Sigmatism • Rotacism • Kappacism • Gammacism • “Kiganie” • “Giganie” • Lambdacism • Betacism • Soundless pronunciation • Rynolalia - nasal speech • Palatolalia - inborn anatomic defects
The length of wrongly spoken vocal line	<ul style="list-style-type: none"> • Vowel dyslalia • Syllable dyslalia • Words dyslalia • Sentence dyslalia
Reoccurrence of wrong articulation in particular communication situations	<ul style="list-style-type: none"> • Constant dyslalia • Non-constant dyslalia
Vocal positions and phonetic neighbouring in which the improper speech appears	<ul style="list-style-type: none"> • Consequent dyslalia • Inconsequent dyslalia
The stage of solidification of improper articulation	<ul style="list-style-type: none"> • Lingering dyslalia • Non-lingering dyslalia
Origin of cause	<ul style="list-style-type: none"> • Central dyslalia • Peripheral dyslalia • Autogenic dyslalia • A-social dyslalia • Environmental dyslalia • Coupled dyslalia
Type of cause	<ul style="list-style-type: none"> • Functional dyslalia • Organic dyslalia

Therapeutic procedure includes such areas as:

- I. Therapy programme. Scope of programme:
 1. Speech therapy procedures.
 2. Strategies and methods of action.
 3. Organisation of procedure.
- II. Therapeutic procedure:
 1. Organisation of therapy stages and its evaluation. Choice of resources and help.
 2. Appropriate documentation.
 3. Verification of diagnostic hypotheses.
 4. Programme modification (Grabias, 2010/2011).

Anna Sołtys-Chmielowicz distinguishes, in case of dyslalia, three phases of corrective work:

1. Preparation phase - exercises which increase the ability of phonemic hearing, as well as motors of speaking organs.
2. The phase of forcing the sound with the use of various methods.
3. The phase of implementation, meaning using correct sound in various situational contexts (Sołtys-Chmielowicz, 2002).

On the other hand, Józef Surowaniec mentions such phases as:

- preparation phase which includes making contact with a patient and encouraging him to active participation in a therapy;
- the phase of shaping abilities and habits of proper vowel use, which was earlier pronounced wrong;
- the phase of abilities and habits development in the correct verbalisation in every communication situation and place (Surowaniec, 1993).

G. Jastrzębowska and Olga Pelc-Pękala, in the scope of articulation disorder, point out:

1. Preparation phase - a collection of actions which happen before the proper speech therapy work, which consists of various exercises that expedite articulation, breathing organs, and point out the rhythm and hearing abilities.
2. The phase of actual speech therapy - forcing a proper articulation of a disrupted vowel in an isolation.
3. The phase of embedding the forced sound, its stabilisation in a controlled speech - embedding vowel in: isolation, syllables, words in all possible positions (out loud, invoice, and outvote) and neighbouring phonetics, two-word expressions, sentences, short texts.
4. The phase of automatization of the forced sound, its realisation in spontaneous speech - tearing it from speech fact awareness by

embedding kinetic-movement examples and hearing auto-control (Jastrzębowska & Pelc-Pękala, 2003).

As it seems, speech therapy hinders on the therapist exercises such as: security of the child, mental comfort and trust - providing attention, positivism, pointing out what is good in a child; marking development, changes which have been made and not the lack of abilities; choosing methods of work in the scope of passions and development level; shaping positive motivation to learn in, faith in ones own strengths and abilities, fighting difficulties - delicate persuasion, acceptance, stimulation strengthening, equivalent; pedagogical optimism and faith in child's abilities, noticing even the smallest achievements and strict cooperation with parents and teachers - their involvement in the therapeutic process.

Each pedagogical activity, in order to be effective and properly shaped overall individual development, forces planned, intentional and regular cooperation of various environments, as the education is about, on one side, direct influence on a person by supporting her in a natural and spontaneous development, and on the other, about influencing by consciously used actions (Smykowska, 2008). Development, which is emphasised by Anna Brzezińska (Brzezińska, 2004), including the language development, as a result of exchange between an identity and its surrounding, is determined not only by the own potential but also environmental resources, meaning directed actions taken by the society. Family support in a process of language development stimulation of a child, according to the needs reported by the parents (Mrugalska, 1999), should then consider:

- early, multidisciplinary diagnosis in a long term observation;
- common evaluation by the group of specialist the stimulation programme, rehabilitation or therapeutic ones and its complex realisation;
- providing exact directions in a scope of own work at home, including specially child's activities understanding and motivation to work, creating atmosphere which is good for child's state of mind;
- psychological help, especially in a scope of providing proper information and advice;
- possibility to make contact with other parents, who deal with similar problems.

Necessity for a multidisciplinary language development stimulation, raises from the understanding of speech therapy as a science, which not only is based on the achievements of other fields, but also integrates their studies' results. Beata Cytowska (Cytowska, 2006), by analysing the aspects of early intervention and support for a small child development, notices that this area of action is within a scope of interest of many disciplines: medicine, psychology, neurology or social

pedagogy. Contemporarily, as a result of EU directives and the changes in law regulations, in a scope of early intervention and early help, it is observed that there are two tendencies concerning: direct involvement of health service, school, social studies, psychology, as well as stepping away from intervention focused only on a child and concentrating on an intervention focused on family and environment (Prysak & Wrona, 2013).

The team of professionals to help the family in supporting child development are: educator, with qualifications appropriate for the type of disability of a young man (oligophrenic therapist, optician, deaf educator), a psychologist, a speech therapist, and other specialist depending on the needs of a child. Jacek Zalewski (Zalewski, 2009) calls for a creation within a scope of territorial government, an assistant for the family with disabilities, who would make a function of guide in a present reality, by pointing optimal ways to deal with unexpected or problematic situations. The first meeting with assistant would have been on the new borns award, and in the effect of the actions taken by the therapist, the family activity should increase. It should be mentioned that early intervention and early support of development consider the disabled children from the very first moments of their lives, or those who are endangered with disability, with genetic disorders, too early born or in the high risk groups. However, the professional help is not only needed for the parents of such child, but also for those who have, so called, healthy children. As not always they possess exact level of knowledge and abilities in a scope of care, education or stimulation of various areas of young man functioning. The meaning of supporting process is focused mainly on parents, on what should they achieve, so learning how to become a better mother or father (Kwaśniewska, 2009). Stimulation of child's language development is focused mainly around the family home, then it needs to be conducted with presence of professionalises, among whom one should mention: speech therapist, psychologist, teacher, and the paediatrician. It would have been perfect to create in every clinic a group of the above mentioned specialists, the purpose of which would be directing and strengthening actions in order to learn language properly, which is actually a fundamental point of school successes and then professional ones, some kind of a language code which determines human's live possibilities.

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TASK OF SPEECH THERAPIST IN THE CARE OF NEWBORN BABIES WITH SUCKING PROBLEMS

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Abstract. *This article points to the importance of speech therapy already in the neonatal period. When a baby is born, he should be equipped with primary reflexes that allow us to survive (e.g. sucking and swallowing). Food intake and physiological sucking is a prerequisite for adequate development of oral motor functions. If baby is not able to suck or suction is insufficient, we stop the breastfeeding and the baby is feeding by alternative method like nursing bottle, syringe or nasogastric tube. Mother often will not return to the breastfeeding. The task of the speech therapist is using stimulation to activate sufficient sucking reflex and using the child to swallow properly. When baby has no problem with swallowing, he constitutes a prerequisite for the proper development of oral motor functions and consequently speech. In the introduction of this article we deal with the theoretical definition of the problem- the classification of newborn, development of sucking and swallowing, the importance of breastfeeding. In the second part of this article we write about stimulation of sucking and swallowing in high birth weight infants and low birth weight infants. Data were obtained through interviews with parents, they completed anamnestic questionnaire, therapists observed and works with babies.*

Keywords: *newborns, oral motor function, orofacial stimulation, speech development, speech therapy, sucking problems.*

Introduction

The aim of the paper is to share the experience how to work with children who are born by C-section and have problem with sucking. From the perspective of speech therapists it is necessary to check the correct function of sucking reflex after the birth of these babies. Weak sucking reflex often leads to difficulties with breastfeeding, babies are bottle fed and in this period can start creating differences in speech development.

Neonatal period lasts six weeks after childbirth. This is a period of adaptation to the new environment. Child has to adapt to new internal and external conditions. We distinguish newborn after gestational age, after birth weight and after proportion between birth weight and gestational age. In terms of birth weight of infants can be divided into five categories:

- high birth weight infants (4500g or higher),
- newborns with normal birth weight (2500 g- 4499 g),
- neonates with low birth weight (less than 2500 g),
- infants with very low birth weight (less than 1500 g) and
- newborns with extremely low birth weight (less than 1000 g).

Based of gestational age babies are classified as premature newborns (to 36 weeks and 6 days), full term (from 37 weeks to 41 weeks and 6 days) and at the transmitted (42 weeks and more). We divided newborns according to gestational age and birth weight into three categories: eutrophic newborns (weight corresponds to achieved by gestational age), hypotrophic neonate (SGA- small for gestational age) and hypertrophic infant (LGA- large for gestational age) (Poláček, 1981; Pugnerová & Šimíčková-Čížková, 2008; Dort et al., 2013).

Child's first experiences in sucking are already in the prenatal period. We observed in fetal swallowing movements already in the 13th to 14th week (the beginning of the swallowing reflex). In the 15th week of prenatal age we can see at the ultrasound child's sucking movements- fetus sucks his fingers. From the 17th week increases the amount of suction and swallowing movements of the fetus. The pattern of these movements is: movement of the tongue backwards and forwards, regular opening of the mouth and rhythmic movements of the jaw. Through regular practice of sucking we can improve swallowing pattern. Between 30th and 34th week of maturation the ability to coordinate sucking, swallowing and breathing is developing. A child born in the 39th week of pregnancy should show a definite oral reflexes, reactions and adequate coordination of sucking, swallowing and breathing (Arvedson & Brodsky, 2002; Biber, 2014).

Immediately after birth rooting reflex is activated by touching the baby's face. The baby reacts by turning a header for this initiative, at the same time he opens his mouth and looking for what might suck. Reaction of turning the head from one side to the other occurs in premature and full term infants. This reflex should disappear within the first month of life. If there is inserted a nipple or a finger into the child's mouth, sucking reaction occurs. Sucking reflex allows the baby immediately after birth start to suck food. This reflex is described as the process during milk extraction from the breast through nipple, by compression of the nipple against palate, by rhythmical movements of the surface of the tongue. This reflex is mediated at the level of the pons and the medulla oblongata, there are participate V., VII., IX. and XII. cranial nerves. Change from sucking to suckling is in two to three months so it becomes more effective and activity engages the lower jaw. Involuntary intake should be inhibited between 6 months and a year. However, if it's activated properly or is activated later than the time of birth, it can leads to its persistence. If the activity of rooting and suckling reflex persist, we can see some of these problems: hypersalivation, frontal or interdental

position of tongue, formation of high and narrow palate, drooling, leaking, child doesn't want to eat different consistence of food, it has difficulty coordination of speech and breathing, it has increased need for oral stimulation (thumb suckling, suckling hair, biting pencils, shirts etc.). Persistent or inadequate sucking reflex may be a sign of brain damage. (Love & Webb, 2009; Volemanová, 2013).

Initial suction is usually irregular, uncoordinated and poor. In this case we are talking about non-nutritive suction when the child is not yet ready to suck breast milk from the breast, it is recommended to feed the child different way. With the increase activity of the child the amount of received milk from the breast during breastfeeding increases and the numbers of breastfeeding during the day increase too (Čapková in Janáčková & Kantor, 2015).

Breastfeeding is the natural way to feed newborns and infants. It is individual according taste and need of the child. Infant should be breastfed for at least 6 months. Benefits of breastfeeding include immunological factors, the optimum diet composition for healthy grow and development, the prevention of lifestyles diseases, support for the development of the child and the child's mother ties, economic profitability. Mother must learn how to properly breastfeed her child. After birth, lactation occurs physiologically. It starts the production of prolactin which begins milk production. Neonate stimulates nipples by his sucking and facilitates greater milk production. Breastfeeding mother must observe sufficient drinking regime. She must be careful because some herbal teas can decrease lactation e.g. sage, mint, ginseng, St. John's wort, Echinacea and aloe. If a child doesn't have a sufficiently developed sucking reflex or milk production is not sufficient, it performs stimulation stoking baby to the breast (must not be accompanied by a fear of failure and stress) (Frühaufer, 2011; Mydlilová, 2011; Janáčková & Kantor, 2015). Dort et al. (2013) reported that in the Czech Republic approximately 95 % of newborns are breastfed after discharge from hospital and the portion of children who are breastfed for longer than six months is about 60 %.

Sucking affects the development of the hard palate and jaw. Muscles of the tongue, lips and chewing muscles gradually involve to the sucking and influence oral conclusion and articulation itself, which we understand as the fines motor act. During breastfeeding all muscles in the orofacial area are symmetrically activate - elevation movements of the tongue, contraction of the lips is ongoing. When the baby is drinking from the inappropriate bottle, orofacial muscles are insufficiently active, the lips are hypotonic. Facial muscles are mainly involved during sucking. Sucking plays a very important role in the development of feeding, speech and language. In the course of sucking from the nipple or bottle, the cheeks are pulled inward and up, milk is moved towards the back of the tongue and initiated a swallow. A very similar pattern we can see in the development of fricative sounds. A pre-cursor for the development of the intra-oral pressure and oral closure

required for explosive sounds is the good lip closure around the nipple or bottle. When the tongue compresses the nipple, it becomes more strength. Tongue strength is very important for sounds like “L” and “R” (Morris, 1998; Biber, 2014; Fábianová, 2014).

It should be noted that the feeding skills are not the pre-cursor to talking. Feeding plays an important role. Children with problems of oral control during feeding may have the same oral difficulties during talking (Morris, 1998).

Research methodology

The aim of this article is to demonstrate the benefits of speech therapy from birth. In order to achieve the aim of the research, the qualitative research was chosen.

The objectives of the research study are as follows:

- To determine the ability of suckling in babies born by C-section
- To identify stimulations techniques to improve suction of these individuals.

The following criteria were used to form the **research sample**:

- Babies not born before 33th weeks of pregnancy
- Infants born by C-section
- Child development monitored at least four months and was documented.

The research sample included one boy and one girl.

Case 1: Monitoring of the five months long course of orofacial stimulation. The therapy began when the boy was two days old. The boy was transmitted, the weight was high so we can say that the boy was hypertrophic.

Case 2: A girl was born premature with low birth weight. She was hypotrophic. We observed the girl from the first day of her life into her six months.

Data collection was performed by means of interviews with parents, analysis of medical documentation and analysis of therapeutic techniques. These therapeutic techniques included stimulation of sensorimotor zones, stimulation of facial muscles, tongue muscles and movements. All relevant data relating to individual cases were collected.

During interview with parents we asked questions about their medical history- how old were they at the time of becoming pregnant, if they were healthy or had problems with blood pressure, cholesterol, sugar etc. We asked if they had heart diseases, hormonal diseases, neurological diseases, psychiatric illness or any other illness. Then we inquired the mother about pregnancy- if there were complications or everything was alright, which examinations she underwent

during pregnancy and what was the outcome. We interviewed with doctors too. We asked about the court of labor and the newborns reactions and adaptations.

Results of individual cases

Case 1

The hypertrophic boy was born to the 31 years old mother and 37 years old father as a second child. Both parents were healthy, they had no diseases. Their first baby was born full-term with normal weight and without complications. During pregnancy mother underwent ultrasound examination and other routine examinations. Because she felt older, she opted for genetic testing. These tests were without pathological findings.

The baby was born in the 42th week of pregnancy during C-section because during ultrasounds examination the doctor found out that the weight of the baby is almost 5000 g. After birth the baby cried, Apgar score was 10-10-10. Baby's weight was 4736 g and length was 52 cm. After washing the child was wrapped in blankets and carried away to the nursery. The child's mother was taken to the surgery department.

The first try of breastfeeding was 16 hours after birth. Mother had weak lactation and the child could not suck and started crying. Nurse took baby away and fed him with a syringe. Next attempt of breastfeeding was 21 hours after birth. This try was identical to the previous attempt. Mother lactation was still weak. The situation did not improve following day.

After examination of the speech therapist it was recommended to initiate stimulation to improve the sucking reflex. It was also very important to train mother in breastfeeding techniques and opportunities to improve lactation. The child was transferred to the mother's room as soon as possible. Mother was in near contact to her baby, she attached him to her breasts regularly. She used a mechanical suction and she tried to stimulate the breasts for greater lactation. She put milk into the special bottle- Supplemental Nursing System (SNS). When the baby started suck, milk flowed from the tube to the nipple. Sucking wasn't so heavy for child and during this process, baby stimulated lactation.

Because the child had weak sucking reflex, speech therapist performed the stimulation of sensorimotor zones on the face and in the mouth. Simulating contractions on the crown of the head, by rhythmically applying and re-applying pressure was very helping. The boy had problem with coordination sucking, swallowing and breathing so mother had to do regularly pauses during feeding. It was necessary to change child's position during feeding because the baby began to aspire and vomit. The optimal position of the baby was between 120 and 140. After two days of these stimulation activities and feeding with SNS baby was fully breastfed. Fifth day after birth the baby was breastfed without SNS. The baby was

released from hospital 7th day after birth. Three weeks after the birth, the mother discovered health complications that led to the termination of breastfeeding. The transition to a bottle feeding was very complicated and child vomited often. For this reason child remained in the care of speech therapist into 5 months of age when he began eat food with a spoon. There was no another problem with feeding.

Case 2

The hypotrophic girl was born to the 28 years old mother and 30 years old father as a first child. Both parents were healthy, they had no diseases. During pregnancy mother underwent ultrasound examination and other routine examinations. There was no need to conduct further tests.

In the 34th week of pregnancy, the mother began to have great pain and was taken to hospital. After arrival at hospital amniotic fluid drained and because the child was small, doctors performed a C-section. After birth the baby cried, Apgar score was 7-9-10. Baby's weight was 2384 g and length was 44 cm. After washing the child was wrapped in blankets and carried away to the nursery. The child's mother was taken to the surgery department.

The first try of breastfeeding was 4 hours after birth. Baby was in longer contact with mother than in first case. Lactation was good but the baby had problem with sucking from the breast. Mother sucked off milk and fed daughter with a syringe. After next 3 hours they tried it again but there was same problem. They tried it four times but baby's sucking reflex was very weak.

After examination of the speech therapist it was recommended to initiate stimulation to improve the sucking reflex. The mother's techniques of breastfeeding were good and lactation was sufficient. The girl had hypotonic facials muscles, activity of tongue was inadequate and suckling reflex was almost absent.

Speech therapist began to massage the orofacial muscles by pressure and slightly vibration. With little finger speech therapist stimulated sensorimotor zone in mouth and performed massage of tongue. Simulating contractions on the crown of the head, by rhythmically applying and re-applying pressure was ineffective at first day of life, because the baby was after this simulation very restless. After three day sucking reflex was better but still not so strong for breastfeeding. Because girl was generally hypotonic doctors made neurological examinations. After eight days from birth mother started with breastfeeding but it was still necessary to feed the baby with syringe. From 22th day from birth the baby was fully breastfed. At this time the girl is 6 months old. She is still in the neurological care for hypotonic syndrome and she is in speech therapist care too.

In the table 1 we compered basic information of the Case 1 and Case 2 to the better comparison.

Table 1 **Basic information of the Case 1 and Case 2**

	Case 1	Case 2
Week of pregnancy	42 th	34 th
Weight	4736g	2384g
Height	52cm	44cm
Apgar score	10-10-10	7-9-10
1st try of breastfeeding	16 hours after birth	4 hours after birth
Sucking reflex	Very weak	Very weak
Lactation	Very weak	good
2nd try of breastfeeding	21 hours after birth	7 hours after birth
Sucking reflex	Very weak	Very weak
Lactation	Very weak	good
1st visit of Speech therapist	2 nd day of life	1 st day of life
1st day of full breastfeeding	5 th day of life	22 th day of life
Motor development	normal	Delayed 3-4 weeks
Pre- verbal vocalization	Normal	The girl is quitter, slightly recognizable sounds production
Complication	Impossibility of breastfeeding→ bottle feeding	Hypotonic syndrome

In both cases it was necessary to teach mothers how to do these techniques because they had to stimulate their babies many times per day. Speech therapist controlled both babies two times per day and evaluated other procedures. In the table 2 we can see summary of stimulation techniques using in the both cases.

Table 2 **Summary of stimulation techniques**

	Case 1	Case 2
Massage of orofacial muscles	Yes	Yes
Stimulation of lip seal	No	Yes
Stimulation of sensorimotor zone in the mouth	Yes	Yes
Massage of the tongue	No	Yes
Changing position during feeding	Yes	No
Using SNS bottle	Yes	No
Simulating contractions on the crown of the head	Yes	No- at the first day Yes- from second day
Pressure to the palm during feeding	Yes	Yes

Conclusions

The first aim of this research study was to determine the ability of sucking by babies born by C-section. In these cases we describe two babies born by unplanned C-section. Both infants had problems with sucking. In the Case 1 there was complication with mother's lactation too. Speech therapist helped mother to improve her lactation (stimulation, SNS bottle) and helped the baby to improve his sucking reflex. So the baby was fully breastfed fifth day of life. In the Case 2 mother had good lactation but baby had very weak sucking reflex. In the first days of life they diagnosed her hypotonic syndrome. Speech therapist helped to detect this problem and improved sucking and feeding skills of the baby.

Second aim of this article was to identify stimulations techniques to improve suction of these individual. We can see in the table 2, that these stimulations techniques were similar in both cases: massage of orofacial muscles, stimulation of sensorimotor zone in the mouth, simulating contractions on the crown of the head and pressure to the palm during feeding. In the case 1 it was necessary to change position during feeding and at the first days boy's life to use SNS bottle. In the case 2 it was necessary to stimulate lip seal and to make massage of the tongue.

The last aim of this paper was to highlight the importance of speech therapy already in the neonatal period. In the Czech Republic all hospitals don't have availability of their own speech therapists. If a speech therapist works in a hospital, he often works at neurological or ENT departments. It is necessary to have speech therapist at neonatology department. When the baby is born, we couldn't now if he will have any problems with primary reflexes like sucking and swallowing. If there is baby with these problems, we will find out that we have lack the trained staff, which could help the baby and the mother. It is necessary to have somebody who will teach mother how to breastfeed her baby and if there is a problem with sucking or swallowing how to feed them. It is necessary to teach mothers how to stimulate their babies because only they are with babies most time of the day. We described two cases of children with sucking problems. Early intervention improve sucking and breastfeeding. We will continue to monitor children's development.

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IEKĻAUJOŠĀ IZGLĪTĪBA ITĀLIJĀ

Inclusive Education in Italy

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Abstract. *European member States implement Inclusive Education policies thus contributing to a sustainable, inclusive society, although each country is at a different stage in this process. Italy, one of the first countries to launch integrative learning, has set an example since the 1970s, although the quality of inclusive education is unpredictable due to many issues. Authors Cantoni and Panetta (2006) emphasize that, although the culture of integration in Italy exists, much needs to be done to improve the quality of inclusive education and at present new, innovative projects are exploring strategies to this effect, the results of which will lead to a national reform on Special Needs Education.*

The aim of this study is to learn about Italian solutions to inclusive education, the obstacles presented, results achieved and people's attitudes to inclusivity, by carrying out theoretical and empirical research using Action as Research method. A survey was carried out on pupils' parents and educational staff, the results of which reveal a variety of existing issues around quality assurance in inclusive education. Consequently people's thoughts and attitudes towards inclusive education are divided, however the majority of people are in agreement that Inclusive education is the best solution for everyone concerned, pupils, parents and teachers. This research is in agreement with the the Salamanca Declaration (1994, IX) which states that inclusive education is an evolving process - not the end result.

Keywords: *attitude; obstacles; pupils with special educational needs; quality of inclusive education; solutions; special educational needs teacher.*

Ievads

Introduction

1994. gadā UNESCO Spānijā organizētajā Salamankas konferencē pieņemtā, 92 valstu parakstītā, Salamankas deklarācija (1994, IX) apliecina iekļaujošās izglītības nozīmīgumu: „Vispārīzglītojošās skolas ar iekļaujošu raksturu ir visefektīvākais veids, kā izvairīties no diskriminējošas attieksmes, kā veidot draudzīgu vidi, iekļaujošu sabiedrību, vienlaicīgi paaugstinot visas izglītības sistēmas efektivitāti”. Šis vēstījums dažos vārdos skaidri parāda, kāds virziens būtu jāizvēlas skolām un kāpēc tas būtu jādara. Bet neskatoties uz

skaidrajām norādēm, Eiropas valstīs ir tomēr vērojamas dažādas izglītības vides un pakalpojumu veidi. Itālija ir viena no nedaudzajām Eiropas valstīm, kas ir izvēlējusies vienvirziena pieeju, kur pēc pielietotās politikas un prakses vispārīglītojošajās skolās iekļauj visus skolēnus. Tomēr neskatoties uz aptuveni 40 gadus bagāto Itālijas pieredzi šajā jomā vēl joprojām nav atrisinātas daudzas problēmas, kas kavē kvalitatīvu pakalpojumu nodrošināšanu.

Pētījuma autore ar šīm problēmām saskaras ikdienā, strādājot Romas skolā ar skolēniem ar speciālām izglītības vajadzībām. Tādēļ rodas doma dziļāk izziņāt iekļaujošās izglītības jomu un pedagoģiskos risinājumus darbā ar dažādību. Tā top maģistra darbs “Pedagoģiskie risinājumi saistībā ar autisma dažādām vajadzībām Itālijas pamatskolā iekļaujošās izglītības sistēmas ietvaros”, pirmais publicētais raksts “Iekļaujošās izglītības sistēmas kvalitāte darbā ar skolēniem ar autisma dažādām vajadzībām Itālijā” un šis pētījums. Tā mērķis ir izziņāt Itālijas iekļaujošās izglītības sistēmas kontekstu, tur izmantotos pedagoģiskos risinājumus, sastaptos šķēršļus, ar speciālo pedagoģiju saistīto cilvēku (vecāku, skolas darbinieku, skolotāju, psihologu, rehabilitācijas terapeita) domas un attieksmi par skolēnu ar speciālās izglītības vajadzībām iekļaušanu vispārīglītojošajās skolās. Pētījums balstās uz darbības pētīšanu un tajā tiek izmantotas gan teorētiskās, gan empīriskās metodes, tādas kā zinātniskās literatūras izpēte, analīze un aptauja, kurā tiek iesaistīta 31 persona. No aptaujas izrietošie kvantitatīvie dati tiek apstrādāti SPSS Descriptive statistic programmā. Empīriskais pētījums top 2012. gadā Romā, bet teorētiskā pētījuma aizsākums ir 2010. gads un laika gaitā tas tiek papildināts.

Pētījuma teorētiskā bāze *The research theoretical base*

Itālijā sākot no septiņdesmitajiem gadiem pakāpeniski tiek radīta avangarda likumdošana saistībā ar skolēnu ar speciālām izglītības vajadzībām integrāciju un iekļaušanu izglītības sistēmā. Autori Guido un Stellacci (1995) un Cantoni un Panetta (2006) šo ilgo pieredzi iedala 4 svarīgākajos posmos:

- Egalitārās utopijas vai cerību laiks (60 gadu beigas – 70 gadi). 1977. gadā paredz pilnīgu diferenciālo klašu atcelšanu, apstiprinot elastīgas didaktikas modeļus ar specializēta skolotāja atbalstu.
- Restaurācijas laiks (80 gadi). Iepriekš pieņemto normu īstenošanā rodas nopietni šķēršļi saistībā ar finansiālajām grūtībām pašvaldībās un nenoteiktību sadarbībā starp skolām, pašvaldībām un vietējās veselības aprūpes centriem.

- Drosmes laiks (90 gadi). Tiek nodrošinātas tiesības uz integrāciju visos skolas līmeņos. Skolēnu integrācijai tiek gatavots individuālais mācību plāns, funkcionālā diagnoze un dinamiski - funkcionālais profils.
- Darba laiks jeb ceļš uz kvalitatīvu integrāciju, kas bieži vien tiek minēts tikai teorētiski, bet līdz praksei nenonāk (sākot no 2000 gadiem).

Visos šajos posmos pakāpeniski tiek arvien vairāk apzinātas daudzās grūtības saistībā ar skolēnu ar speciālām izglītības vajadzībām integrāciju un iekļaušanu "parastajās" skolās, kas izrādās nopietns izaicinājums. Itālijas Palātas vadītājs Sbarbati, 1998. gada debatēs par integrācijas situāciju Itālijā, uzskaita dažus kritiskos jautājumus, kas joprojām nav atrisināti, vai tiek risināti ar lielu efektivitātes atšķirību dažādos Itālijas reģionos: grūtas attiecības ar veselības aprūpes pakalpojumiem; grūtības noteikt un respektēt programmu līgumus ar pašvaldību un veselības iestādēm; parasto klases skolotāju vāja sagatavotība un tieksme visu uzticēt speciālās izglītības vajadzību skolotājiem jeb, kā tos sauc Itālijā, atbalsta skolotājiem; liela atšķirība integrācijas kvalitātē starp Ziemeļitālijas un Dienviditālijas skolām.

Canevaro un Ianes (2003) sarunā ar Iosa apspriež jautājumu par skolēnu ar smagiem traucējumiem skolā iekļaušanu un norāda, ka „...skolā integrācijas reālā problēma nav skola, bet gan nepilnības „integrācijas integrācijā”, tas nozīmē labas mijiedarbības trūkums starp skolu, sociālajiem, klīniskajiem pakalpojumiem, asociācijām, ģimeni. Tieši tas ir svarīgi, nevis skolēna traucējumu smaguma pakāpe. Skaidrs, ka, jo smagāki ir skolēna traucējumi, jo vairāk visiem ir savstarpēji jāapvienojas kā profesionāļiem, lai sniegtu viņam labāku atbalstu. Es ticu, ka, jo skolēna grūtības ir lielākas, jo vairāk jāpaplašina dažādu pakalpojumu integrācija un elastīga didaktika. Tas ir arī viss” (Canevaro & Ianes, 2003, 79).

Ianes (2007) raksta, ka skolēniem ar mazāk smagiem traucējumiem bieži vien tiek radītas labākas integrācijas iespējas nekā nopietnāku traucējumu gadījumos, jo var gadīties dzirdēt apgalvojumus par to, ka nav vērts "izdot" lielus materiālos un cilvēku resursus, ja sasniegtie rezultāti ir ļoti trūcīgi. Ģimenes, paši skolēni ar speciālām vajadzībām un viņu skolotāji dzīvo pārāk lielās neskaidrībās: pietiekama integrācijas kvalitāte nevar būt uzticēta veiksmei un laba likteņa laimei sastapt motivētus skolotājus, jūtīgus skolu direktorus, rūpīgus pašvaldību administratorus, utt.

Dažos Itālijas ziemeļu reģionos darbojas teritoriālie integrācijas centri, bet līdzekļu trūkuma dēļ to sadarbība ar skolām ir minimāla. Tādēļ daži aktīvistu nolemj organizēt funkcionējošas atbalsta struktūras skolām, izmantojot "Peer to Peer" sistēmu. Šo organizāciju izveide tiek aprakstīta autoru Munaro un Cervellin (2016) grāmatā un tā tiek pamatota ar skolēnu ar speciālām izglītības vajadzībām negaidītu pieaugumu un skolu nesagatavotību šai situācijai. Piemēram, Vičencas provinces skolās 2001. gadā ar autisma diagnozi mācās un atbalsta skolotāju pakalpojumus saņēma 26 skolēni, bet ar katru nākamo gadu šo skolēnu skaits

pieaug, 2016. gadā sasniedzot 267 skolēnus. Jaunizveidotajos atbalsta centros darbojas īpaši atlasīti un speciāli sagatavoti skolotāji, kas sniedz palīdzību grūtībās nonākušajām skolām un skolotājiem, nododot iegūtās kompetences tālāk un veidojot starp skolām sadarbības tīklu. Šo centru darbība ir labs risinājums, bet nav pietiekošs, tādēļ briest jaunas idejas.

Ianes (2015) piesaka inovatīvas radikālas izmaiņas iekļaujošas izglītības veicināšanai, jo skaidrs, ka tradicionālās metodes un pieejas ir pierādījušas savu neefektivitāti. Viņš iesaka radikāli mainīt speciālās izglītības jeb atbalsta skolotāja lomu, kā tas ir pieņemts šodien, un to dziļi transformēt. Iekļaujošai skolai, pēc viņa domām, ir vajadzīgi labi funkcionējoši, kompetenti “parastie klases skolotāji”, kas strādā pāri un “peer tutor”, specializēti skolotāji eksperti, kas apmeklē klases, sniedzot konkrētu palīdzību saviem kolēģiem klases skolotājiem. Šis autors kādā intervijā (2014) stāsta par atbalsta skolotāja svarīgo nozīmi integrācijas procesā pagātnē, bet šī sistēma iesala un tagad, viņaprāt, ir moments evolūcijai jeb izmaiņām. Atbalsta skolotāja loma ir tik stratēģiska iekļaujošā skolā, ka tā ir jāmaina, lai šis pedagogs kļūtu galvenais atbalsts klases skolotājam, kurš ļoti bieži neuzņemas atbildību un aizmirst par klases skolēniem ar speciālām izglītības vajadzībām. Aptuveni 80 % no tagadējiem atbalsta skolotājiem strādās kopā ar klases skolotājiem un 20 % ar vislielāko pieredzi kļūs par “peer” konsultantiem. Itālijas 2 ziemeļu reģionos 2014. gadā ir uzsākta šī projekta eksperimentēšana, bet ideja rodas 2011. gadā, jo ir vērojamas lielas problēmas, piemēram, tas, ka klases skolotāji neliekas ne zinīs par skolēniem ar speciālām vajadzībām un visu atbildību novel uz atbalsta skolotājiem un savukārt atbalsta skolotāji vairāk nekā 50 % gadījumu šos bērnus ved ārā no klases, šādā veidā pārkāpjot integrācijas un iekļaušanas principus. Eksperiments ilgst 2 gadus un tiek izvērtēts, salīdzinot dažādus parametrus (mācību programmas apguve, socializācija, ģimeņu apmierinātības pakāpe).

Ianes (2016) savā jaunākajā grāmatā iepazīstina ar veiktā pētījuma rezultātiem, kas pierāda, ka atbalsta skolotāja lomas evolūcija divos virzienos ir devusi pozitīvus rezultātus. Šis autors uzsver, ka beidzot ir jānonāk līdz tiešām iekļaujošai didaktikai nevis specializētai, kas skolēnus izslēdz no klases. Tātad ir nepieciešama iekļaujoša gaisotne, kas atbalsta visu klases skolēnu vajadzības, nevis nošķir, strādājot ārpus klases ar kādu vienu skolēnu.

Šis nav viegls uzdevums, tā realizēšanai ir vajadzīgi ļoti kompetenti pedagogi, kas saprot kā plānot un organizēt darbu, kādus materiālus un metodes izmantot darbā, kā un kāpēc tos izmantot. Ir jāsaprot iekļaujošās izglītības būtība, jāmacās strādāt komandā, izmantojot “peer teaching” un “peer tutoring” metodes, jāpazīst kvalitātes indikatori. Šī tēma ir ļoti plaša un būs ļoti interesanti sekot līdzi Itālijas jaunajai izglītības reformai, tās ieviešanai praksē un sasniegumiem. Bet pagaidām autore, veicot empīrisko pētījumu, izzina cilvēku domas un attieksmi,

kas izriet no šajos gados piedāvātajiem iekļaujošās izglītības pakalpojumiem Itālijā.

Empīriskā pētījuma rezultāti *The results of empirical research*

Empīriskais pētījums aptaujas formā tiek organizēts Romā, 2012.gada decembrī un tajā piedalās 31 persona (19 bērnu vecāki, 5 skolotāji no kuriem viens ir atbalsta skolotājs, 2 audzināšanas darba asistenti, 2 skolas darbinieki, 2 psihologi un 1 rehabilitācijas terapeits). Autore sniedz īsu ieskatu tās rezultātos, izceļot, viņasprāt, svarīgākos šķēršļus, kas varētu traucēt kvalitatīvas iekļaujošās izglītības realizēšanos.

Šeit svarīgi ir atzīmēt, ka aptaujāto personu attieksme pret iekļaujošo izglītību lielākoties ir pozitīva ar dažiem izņēmumiem:

- Jautājumā par to vai iekļaujoša izglītība bagātina visus skolēnus, pozitīvi izsakās 26 respondenti, 4 domā, ka tas notiek daļēji, bet 1 atbild noliedzoši. Respondentu atbildes lielākoties ir pozitīvas, bet aizdomāties liek fakts, ka 1 skolotājs nav pilnībā pārliecināts par to, vai skolēnu ar īpašām vajadzībām iekļaušana bagātina visus klases skolēnus. Šai pedagoģei pietrūkst pozitīvas attieksmes un ticības.
- Jautājumā par to vai skolēnu ar speciālām izglītības vajadzībām iekļaušana stimulē skolotāju profesionalitāti, 23 respondenti atbild pozitīvi, 7 uzskata, ka tas ir jūtams daļēji, bet 1 izsakās negatīvi. Arī šeit respondentu atbildes lielākoties ir pozitīvas, bet aizdomāties liek fakts, ka 1 skolotājs nav pilnībā pārliecināts par to, vai skolēnu ar speciālām vajadzībām iekļaušana stimulē viņa profesionalitāti. Šis fakts liecina par to, ka skolotājs vēl nav apzinājies, cik nozīmīga savas profesionalitātes pilnveidošanai ir iespēja strādāt heterogenā vidē, kur būtu jāakcentē savstarpējais atbalsts un sadarbība, tolerance, kooperatīvā mācīšanās, individuāla pieeja bērnu vajadzībām un, lai to veiktu, ir jābūt labi sagatavotiem, kompetentiem pedagogiem, kas nepārtraukti pilnveido savas zināšanas, kritiski izvērtē savu darbību, meklē uzlabojumus.
- Jautājumā par to, kādas pieejas skolā ir vislabākās, 26 respondenti izvēlas bērncentrētu pieeju, 3 dod priekšroku skolotājcentrētai pieejai, bet 2 respondenti neatbild. Šeit jāatzīmē, ka 1 skolotājs kā vislabāko atzīst skolotājcentrētu pieeju. Tātad, šajā gadījumā nevar būt runa par skolotāja sagatavotību darbam mūsdienu izglītības sistēmā, ne par iekļaujošās izglītības kvalitāti, jo skolotājcentrēta pieeja balstās uz

skolēnu individuālo darbu un tā jau ir novecojusi pieeja un ir pretrunā ar iekļaujošās izglītības principiem.

- Jautājumā par to, kādas ir labākās iekļaušanas modalitātes izglītības sistēmā skolēniem ar smagiem traucējumiem, 21 respondents izvēlas iekļaujošo izglītības modeli, 1 skolotājs un 3 vecāki atzīst nošķirtu speciālo izglītību, kas tikai reizēm ir savienota ar parasto skolu, bet par speciālo klašu nepieciešamību vispārizglītojošo skolu ietvaros izsakās 2 vecāki un 1 skolas darbinieks. Skolēnu ar speciālām izglītības vajadzībām iekļaušana ir apgrūtināta, jo tai dažreiz nav ticības kā vispiemērotākajai gan no vecāku, gan skolotāju puses. Tas varētu liecināt par pozitīvas pieredzes trūkumu. Lai tāda pozitīva pieredze rastos, pirmkārt ir jānodrošina pilnvērtīga visu skolotāju sagatavotība darbam iekļaujošā vidē un jāveicina savstarpējā sadarbība.

1.tab. **Kādas ir labākās iekļaušanas modalitātes izglītības sistēmā skolēniem ar smagiem traucējumiem?**

Table 1 What are the best methods for inclusion in the education system for students with severe disabilities?

Kādas ir labākās iekļaušanas modalitātes izglītības sistēmā skolēniem ar smagiem traucējumiem?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Parastās klases vispārizglītojošajās skolās	21	67,7	67,7	67,7
	Speciālās klases vispārizglītojošajās skolās	3	9,7	9,7	77,4
	Nošķirta speciālā izglītība, bet reizēm savienota ar vispārizglītojošām skolām	4	12,9	12,9	90,3
	Cits	2	6,5	6,5	96,8
	Nav atbildes	1	3,2	3,2	100,0
	Total	31	100,0	100,0	

- Jautājumā par šķēršļiem skolēnu ar speciālām izglītības vajadzībām kvalitatīvai iekļaušanai skolā, autore dod iespēju izvēlēties starp 6 jau definētiem šķēršļiem un pievienot arī citus, pēc respondentu domām, svarīgus šķēršļus. Visvairāk pieminētie šķēršļi ir finansiālo resursu nepietiekamība (28 respondenti), strukturālo resursu nepietiekamība (24 respondenti), visi pārējie šķēršļi (skolotāju un skolas atbalsta personāla nesagatavotība; sadarbības un atbalsta tīkla nepietiekamība; aizspriedumi) tiek minēti 16 reizes. 1 respondents ir atzīmējis, ka pastāv arī cits šķērslis (skolotājiem trūkst praktisko iemaņu un vēlēšanās strādāt), bet vēl viens respondents atzīmē, ka ir arī citi šķēršļi, bet tos

nespecificē. Skolās un ārpus tām bieži vien tiek uzsvērts akūts finansiālo resursu trūkums, lai nodrošinātu skolotāju labāku apmācību, inovatīvu metodoloģisko materiālu un ierīču ieguvu, lai veicinātu dažādu atbalsta pakalpojumu darbību skolās. Tādēļ lielākā daļa respondentu arī liek uzsvaru tieši uz šo šķērslī. Arī strukturālie resursi ir atkarīgi no finansiālajiem resursiem. Visi šie aspekti ir cieši savstarpēji saistīti.

- Pētot cilvēku domas par to vai skolēnu ar speciālām izglītības vajadzībām iekļaušana vienmēr izdodas labi, viņu pieredze dalās: 12 respondenti atbild, ka iekļaušana bieži izdodas labi; 5 atzīst, ka tā gandrīz vienmēr izdodas labi, bet 13 personas domā, ka laba iekļaušana izdodas reti un 1 ir pārliecināts, ka nekad tā neizdodas labi. Šīs atbildes liecina par pastāvošām problēmām.

Aptaujas rezultātu analīzē tiek izmantoti Chi-Square Tests un Directional Measures (Lambda, Goodman and Kruskal testi) un no tiem izrietošās statistiski nozīmīgākās atšķirības starp dažādiem mainīgajiem ir sekojošas:

- Nepietiekami finansiālie resursi ir viens no galvenajiem šķēršļiem skolēnu ar speciālām izglītības vajadzībām kvalitatīvai iekļaušanai skolā un šo skolēnu iekļaušana bagātina visus klases skolēnus - Chi-Square testā $p = 0,004$;
- Nepietiekami finansiālie resursi ir viens no galvenajiem šķēršļiem skolēnu ar speciālām izglītības vajadzībām kvalitatīvai iekļaušanai skolā un šo skolēnu iekļaušana stimulē skolotāju profesionalitāti - Chi-Square testā $p = 0,005$;
- Skolotāju zema profesionālā sagatavotība ir viens no galvenajiem šķēršļiem skolēnu ar speciālām izglītības vajadzībām kvalitatīvai iekļaušanai skolā un vislabākā ir bērncentrētas pieejas īstenošana skolā - Chi-Square testā $p = 0,050$.

2.tab. Chi-Square Tests

Table 2 Chi-Square Test

Kādas metodoloģijas jeb pieejas skolā ir vislabākās?		Value	df	Asymp. Sig. (2-sided)
Skolotājcentrēta pieeja	Pearson Chi-Square	. ^a		
	N of Valid Cases		3	
Bērncentrēta pieeja	Pearson Chi-Square	11,088 ^b	5	,050
	Likelihood Ratio	14,049	5	,015
	N of Valid Cases		26	
Nav atbildes	Pearson Chi-Square	. ^c		
	N of Valid Cases		2	

Secinājumi *Conclusion*

Itālijā iekļaujošā izglītība izrādās nopietns izaicinājums. Ianes (2008) atklāj, ka neskatoties uz normatīvajiem noteikumiem, kam būtu jāregulē integrācijas procesi, kvalitāte ir patiešām neprognozējama. Tādēļ nobriest ideja par jaunu radikālu reformu nepieciešamību skolā ar mērķi nonākt līdz tiešām iekļaujošai nevis specializētai didaktikai.

Aptaujas rezultāti, kas izzina cilvēku domas un attieksmi, ir sekojošie:

Lielākā daļa respondentu domā, ka iekļaujošā izglītība bagātina visus skolēnus un stimulē skolotāju profesionalitāti. Lielākā daļa respondentu izvēlas bērncentrētu pieeju kā vislabāko darbā iekļaujošā izglītībā. Lielākais skaits respondentu, kā labāko iekļaušanas modalitāti izglītības sistēmā skolēniem ar smagiem traucējumiem, izvēlas iekļaujošo izglītības modeli, bet domas tomēr dalās. Respondenti kā galvenos šķēršļus skolēnu ar speciālām izglītības vajadzībām kvalitatīvai iekļaušanai skolā min: finansiālo un strukturālo resursu nepietiekamība; skolotāju un skolas atbalsta personāla nesagatavotība; sadarbības un atbalsta tīkla nepietiekamība; skolotājiem trūkst praktisko iemaņu un vēlēšanās strādāt; aizspriedumi. Respondentu domas dalās jautājumā par to, vai skolēnu ar speciālām izglītības vajadzībām iekļaušana izdodas labi.

No aptaujas rezultātiem, vērojot statistiski nozīmīgākās mainīgo atšķirības, var secināt ka, ja skolotāji būtu labi profesionāli sagatavojušies darbam iekļaujošā vidē, tad būtu lielāka iespēja realizēt bērncentrētu pieeju, kur tiek ņemtas vērā katra skolēna individuālās vajadzības un uzsvars tiek likts uz sadarbību un atbildību. Ja būtu lielāki finansiālie resursi, kas pietiekami atbalstītu iekļaujošo izglītību (lielāka skolotāju profesionālā sagatavotība, inovatīvu metodoloģisko materiālu un ierīču pieejamība, telpu iekārtošana, strukturālo barjeru noņemšana, sadarbības tīkla ciešāka izveide starp skolu un citām atbalsta struktūrām), tad tā izdotos labāk. Līdz ar to būtu iespējams vairāk izjust tās sniegtos labumus, piemēram, tādus kā skolotāju profesionālo kompetenču pieaugumu, visu iesaistīto skolēnu personīgo bagātināšanos, visas skolas efektivitātes pieaugumu.

Šai sakarā ir jāpiemin itāļu autora Cottini (2004) teiktais: viņš uzsver, ka dažādības integrācijas un iekļaušanas kvalitāte ir cieši saistīta ar visas skolas kvalitāti, jo tas nozīmē strādāt pie tā, lai uzlabotu visu izglītības struktūru kopumā. Nozīmīga dažādības iekļaušanas pieredze var realizēties tikai tādā vidē, kur ir kompetence, organizācija, fleksibilitāte, prasme strādāt kopā, kas ir tipiskas kvalitatīvas skolas iezīmes. Cottini (2009) daudz runā arī par klasesbiedru nozīmību, izceļot to kā unikālu sociālās integrācijas resursu. Šī resursa aktivizēšana prasa nopietnu gatavošanos, kur ir jāņem vērā gan klases konteksts, gan skolēnu sociālās prasmes, un nepietiek tikai ar skolotāju aicinājumu ievērot morāles principus. Ir nepieciešama vesela virkne gan tiešu, gan netiešu aktivitāšu,

kas veicinātu klasē iekļaujošu gaisotni, pateicoties kurai var realizēties cieņa, pozitīvi uzskati un savstarpēja palīdzība. Cottini iesaka lietot stratēģijas, kas uzsver palīdzību un sadarbību, piemēram, tādas kā konsultēšana un palīdzības sniegšana starp vienaudžiem jeb “tutoring” un kooperatīvā mācīšanās. “Tutoring” efektivitāte ir pierādīta daudzos pētījumos un no tās labumu gūst gan skolēni ar speciālām izglītības vajadzībām, gan citi viņu klasesbiedri.

Summary

This Paper is action research, and its purpose is to study the context of the Italian inclusive education program and the resulting position and attitude of the involved persons, identifying the obstacles and pedagogical solutions for the assurance of quality. The theoretical part of the study is based on the analysis of literature, while the empirical part contains a quantitative research, conducted in a form of survey, and the data obtained are then processed using SPSS Descriptive statistic program.

Theoretical research of the subject demonstrates a clear position of Italian people in regard to human rights and the desire that had emerged in the 1970s to create an inclusive society by initiating reorganization of the education system among other things. Over the time this task turned out to be very complex, because there are various obstacles: difficult relations with health care services; problems to determine and respect program agreements with municipalities and health care institutions; a big difference in the quality of integration between the schools in Northern Italy and Southern Italy; lack of positive interaction among the school, social, clinical services, associations and family; poor background of regular class teachers and an inclination to entrust everything to supporting teachers, who, in turn, take children outside the class, thus violating the integration and inclusion principles. Munaro and Cervellin (2016) believe that the rapid increase in the number of students with special needs in recent years has had a further destabilizing effect on the quality of inclusion, because the schools are unable to guarantee presence of competent supporting teachers. Radical changes are required, as traditional methods and approaches have proved to be inefficient; therefore an innovative educational reform is under way in Italy with the purpose of transforming the role of a supporting teacher. However, for now, the traditional approach to integration and the inclusion of students with special educational needs is still applied in schools.

A survey was conducted in Rome in December 2012 for the purpose of implementing the empirical research and it involved 31 individuals (19 parents, 5 teachers, one of whom is a supporting teacher, 2 instructing assistants, 2 school employees, 2 psychologists and 2 rehabilitation therapists). A mixed type of questionnaires with closed and open questions were prepared for the survey.

Results of the survey confirm that the majority of respondents have a positive attitude towards the inclusive education, acknowledging that it enriches all students and encourages professionalism of teachers, that child-oriented approach is the best one in the inclusive education and that the inclusive education model is the best one in

particular for the students with even severe disabilities. These results represent the position of the majority of respondents, although there are some exceptions as well, and among these is a teacher who is either not certain or has an opposite opinion. Most frequently mentioned obstacles to qualitative inclusion of students with special needs in school are insufficient financial and structural resources, low professional level of teachers and supporting personnel of the school, insufficient cooperation and support networks and prejudice.

The statistically significant differences between various variables resulting from the outcome of the Survey, analysed using the Chi-Square Tests, are the following:

- Insufficient financial resources is one of the main obstacles preventing qualitative inclusion of students with special educational needs at the school and inclusion of these students enriches all students of the class – in the Chi-Square test $p = 0,004$, and inclusion of these students encourages professionalism of the teachers – in the Chi-Square test $p = 0,005$;
- Poor professional level of the teachers is one of the main obstacles preventing qualitative inclusion of students with special educational needs at the school and implementation of the child-oriented approach at school is the best solution – in the Chi-Square test $p = 0,050$.

It may be concluded that if the teachers would be competent professionals experienced in work in an inclusive environment, then implementation of the child-oriented approach, which takes into account individual needs of every student and puts emphasis on the cooperation, responsibility and inclusive environment, would be more likely. If the financial resources were increased to sufficiently support the inclusive education (better professional level of the teachers, availability of innovative instructional materials and equipment, improved facilities, removal of structural barriers, creating a closer cooperation network between the school and other supporting units), then it would have better success at succeeding. Therefore it would be possible to better experience its benefits, for example, such as the improvement of professional competence of the teachers, personal enrichment of all involved students and improved efficiency of the entire school. This means that investing in the improvement of the education system is required, putting more emphasis on preparation of competent, responsible teachers, capable of implementing inclusive didactics rather than isolating.

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SOCIĀLĀ PEDAGOĢIJA
SOCIAL PEDAGOGY

ANIMALS IN RESOCIALIZATION

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Abstract. *The benefits of relations between humans and animals have encouraged both scientists and members of other communities to popularize the knowledge in the field of animal-assisted therapy. Currently, animal-assisted therapy has been used not only in therapy, but also in resocialization. The increasing popularity of this form of supporting maladjusted people who are isolated from society or people with disabilities encouraged both practitioners and researchers to organize knowledge, thus reducing the scepticism about the usefulness of animal-assisted therapy.*

In Poland, the particular focus of the animal-assisted therapy is on the use of dogs to enhance the resocialization process. However, various experimental resocialization programs have also used horses and even lamas. This paper is intended to familiarize the reader with the aspects of the assistance of animals in resocialization. Furthermore, it emphasizes the difficulties and advantages that can be expected from integration of this type of therapy into resocialization programs.

Keywords: *animals, animal-assisted therapy, resocialization.*

Introduction

The positive effects of animals on humans were already known in antiquity. Nowadays, the interest in these correlations has been also increasing in the scientific community in many fields of research. The use of animals in therapy has been widely explored by psychologists, sociologists, anthropologists and even medical and veterinary researchers. This led to the development of a new interdisciplinary science termed anthrozoology. The name stems from *anthropos*, meaning "human", and *zoon* ("animal"), and is understood to mean the investigations of the relationships between people and animals (<http://www.anthrozoology.org/>).

Most pet owners assure that animal have a positive effect on people. The look in their eyes, warm coat and happiness they express when they see their owners make people feel very comfortable with animals. Therefore, the awareness of the benefits of good relations between people and animals has led to the development of animal-assisted therapy. Components of this therapy are often integrated into resocialization programs for prisoners or used to help disabled people. *Animal-assisted therapy (zootherapy)* means the therapy that involves

animals as a method to treat people. The goal of this form is to support the conventional forms of rehabilitation and treatment. Animal-assisted therapy is a natural method. The basic assumption of the method is that animals have a positive and mobilizing effect on humans (Kokocińska, 2016).

Nowadays, the most popular animal-assisted therapeutic interventions include: (1) dog-assisted therapy; (2) hippotherapy, with therapeutic effects achieved by the use of horses; (3) felinotherapy, which uses cats, and (4) dolphin-assisted therapy. These forms are merely a few examples of the use of animals in therapies.

The greatest popularity in Poland is observed for dog-assisted therapy and hippotherapy. The focus of the present paper is on these two forms of animal-assisted therapy. The therapeutic sessions are attended by both adults and children. There are a variety of indications for participation in such sessions. Among others, the most frequent are various types of disability, social maladjustment (as mentioned above) and problems with cognitive functions. The sessions are organized to suit all the abilities and psychophysical needs of participants.

The outline of the concepts concerning the relations between humans and animals

The growing popularity of animal-assisted therapy (AAT) is largely attributable to the benefits of this form of therapeutic intervention. The following advantages of the AAT are mainly emphasized by researchers: (1) increased motivation for activity, which should be viewed as helping reduce human inactivity; encouraging to being more active; the presence of an animal makes responsible people care for the pet, (2) emotional benefits (animals ensure the sense of security, satisfy the need for emotional contact, help coping with difficult emotions); (3) cognitive benefits that can be observed in the way of seeing the world and enhanced self-assessment; (4) social benefits, such as openness to other people or encouraging to coming into contacts; (5) health benefits such as reduced stress, increased capacity of the immunological system, smaller doses of medicines that have to be taken, and (6) instrumental benefits, such as helping the disabled, therapies based on the use of animals, and using animals in the military service and police (Ustjan, 2008).

The important role in the development of the therapeutic and resocialization effects both in Poland and abroad was played by the theories that explained the relations between humans and animals. The first attempts to research this area and organize the animal-based therapeutic interventions were made by Delta Foundation, a non-governmental organization established in 1977. The organization was founded in 1977 by Michael McCulloch. In 1981, the

organization transformed into Delta Society and finally, in 2012, was renamed Pet Partners. Its aim is to continue the research that demonstrates the positive effect of animals on humans in the therapeutic process. Furthermore, the organization was one of the first to implement the uniform and comprehensive training program for volunteers who wanted to help others with their pets (www.deltasociety.org; <https://petpartners.org/>).

The multifaceted initiatives of Pet Partners have contributed to the formulation of theoretical fundamentals that explain the relations between humans and animals. As emphasized by M. Włodarczyk-Dudka, the below presented concepts are the most often explored theories in the literature. Among them are those that emphasize the role of the relations between humans and animals. These include: biophilia, attachment theory and the thesis by S. and E. Corson.

In the biophilia theory, the key focus is on the biophilic ties which are felt by people with respect to other species. Biophilia points to the natural human tendency for coexisting with the world of nature. The characteristic feature of these ties is sympathy. The fundamentals of biophilia were developed by the British researcher E.O. Wilson. The concept assumes that people and their willingness to care for living organisms are determined genetically. This author emphasized that at the stage of a single cell, all living bodies are equal and identical. This represented the starting point for his concept (Wilson, 1984). Coexistence of human with nature offers many benefits to humans. It helps improve mood and feel quiet and relaxed. It should be noted that these benefits contributed to what is broadly understood as aesthetic therapy, which uses e.g. the contact with nature (Konieczna, 2007).

Apart from the biophilia theory, a number of therapeutic or resocialization programs that used animal-assisted therapy refer to the attachment theory. This theory is based on the assumption that all people have an inbuilt system of attachment to others. The system is determined biologically. This explains human tendencies for development of strong ties, not only with other people but also with animals. In this respect, the animal represents a component of a specific stage towards the development of more complex ties with other people.

Another important thesis was proposed by S. and E. Corson (Ohio State University), who argued that people perceive relationships between humans and animals positively for two major reasons. These include: (a) they believe that animals accept them as they are and love them unconditionally and faithfully, and, (b) people tend to see childish behaviours in animals, including the dependency on the owner. In this context, care for an animal seems to be similar to parental care for an infant.

The scope of the concepts indicates that one of the benefits of animal-assisted therapy is the specific type of ties between a person and animal. Other interesting

examinations were conducted by Holly McLean Ryan in schools in California. This author emphasized the importance of human-animal ties. She explained that animals motivate people for building such ties. They are not only companions but their presence also helps support therapeutic effects. It provides motivation for changes in attitudes and behaviours. The benefit of the animal-assisted therapy sessions (with dogs used in this case) is also the willingness to be involved in performing simple and repeated activities (which is important in e.g. autistic people) (Ryan, 2002).

Ties are an integral part of the therapeutic effects of the animal-assisted therapy (AAT). AAT is a form of therapy that uses animals, separated from animal-assisted interventions. It represents a purposive activity and requires careful documentation and evaluation. AAT sessions are conducted by experts in a specific area. Other forms include animal-assisted education (AAE), which requires cooperation with teachers and its goal is to enhance cognitive functions, and animal-assisted activities (AAA), with formulation of the goals and documentation being not necessary. The sessions can be conducted by volunteers. They are a kind of spontaneous meetings adjusted to the needs of the recipients (Włodarczyk-Dudka, 2012).

The importance of these ties between humans and animals is often emphasized by the entities isolated from society. For prisoners, the animal often plays a role of the true friend, a companion who accepts them as they are. It motivates the prisoner for changing behaviours and attitudes, and improves mood and self-esteem. It also supports the rehabilitation process.

Hippotherapy and dog-assisted therapy in resocialization

The increased interest of researchers to the above theories has contributed to the systematization of knowledge in this field. Consequently, based on the knowledge derived from the research and the adopted theoretical concepts, the fundamentals of dog-assisted therapy or hippotherapy were developed and described in this paper. It is worth noting that the therapeutic interventions based on animal-based therapy in Poland are often inspired by *The Pet Partner Therapy Animal Program* (developed by Pet Partners).

In the area of resocialization in Poland, dog-assisted therapy and hippotherapy are beginning to gain on popularity. For organizational reasons, hippotherapy sessions in Poland are little frequent. The organizational problems are often caused by unavailability of stables or means of transport for horses and the related costs.

It is remarkable that the term hippotherapy in Poland is understood in a broader sense than in other countries. In Germany, the UK, the USA, Canada or Australia, hippotherapy is linked to physiotherapy and corrective exercises

performed on a horse (Heipertz-Hengst, 1997; Strumińska, 2003). In Poland, hippotherapy is viewed as all therapeutic measures used by a qualified hippotherapist using a horse. The goal of these measures is to improve patient's cognitive, emotional, social, or physical functioning (Strumińska, 2007; Czerw, 2010).

The hippotherapy sessions have been performed for several years in e.g. the youth detention centre in Studzieniec, Poland. for several years. Substantial problems with therapeutic programs started after changes in legal regulations. At the end of 2010, auxiliary enterprises that operated within budgetary economy entities were liquidated. The young people from the youth detention centre continue to do horse riding, but not in their own stable. They also do not perform work in their own agricultural farm where they grew and harvested fodder for their horses. These changes led to minimization of contacts of young people with animals. The resocialization and therapeutic effects became less effective. Contact with horses had helped people learn responsibility for animals and other people, patience and persistence. Young people from the detention centre also learnt tolerance while group sessions contributed to the development of abilities to cooperate with others. Furthermore, presence in the stable and contact with horses required subordination to specific rules. Currently, young people have contact with horses only twice a week during horse-riding sessions. Therefore, the achievement of the expected benefits of participation in hippotherapy is much more difficult. Furthermore, before the law was amended, the stable had performed the function of a vocational training centre, with the young people learning the vocation of a horseman who can care for horses in a stable (Dzięciołowski, <http://hejnakon.pl/?p=10989>, 2017). In this case, participation in hippotherapeutic sessions also offered opportunities for training professional skills.

Changes in the above legal regulations are one of the factors that can indirectly limit effective implementation of the therapeutic measures of animal-assisted therapy in various centres. The most important problem is financial limitations and poor conditions in the centres, which is also directly related to physical resources. Consequently, the animal-assisted therapies and resocialization were abandoned in the biggest External Department of the Penal Institutions in Poznań, Poland. Due to insufficient conditions, animals had to be moved from this department. The prisoners cared not only for birds (peacocks and parrots) but also iguanas and a pony (Ibidem).

This suggests that animal-assisted therapy remains to be underestimated and treated as less important. The limitations that were imposed on the youth detention centre in Studzieniec or the External Department of the Penal Institution in Poznań point to the neglected potential of such therapies. It should also be emphasized that among canons developed by the Polish Hippotherapeutic

Association, the indications for such therapeutic sessions include, apart from various disabilities, also psychiatric disturbances, addictions, or social pathologies (Izdebski et al., 2008).

The hippotherapeutic programs were also used in the Orionine Fathers Youth Education Centre in Warsaw. The hippotherapy sessions are organized in the Klucz stable in Skrzyszew. Unfortunately, the young people have to commute to the stable, which makes their contact with animals limited. Young people living in the centre are aged 13 years and older. The participants of the therapeutic programs in 2009 were people aged 14 to 18 years. Two forms of hippotherapeutic effects were used: therapy with horses (a form of hippotherapy where the point is to ensure the emotional contact between the patient and a horse, to establish proper relations with the animal and hippotherapist, and, finally, to extend these relations to further environments. Participants do not have to ride a horse) and a psychopedagogical horse riding, which consists in individual sessions with a qualified therapist. This form of hippotherapy requires specific physical fitness from participants such that the person is able to sit in the saddle and control the horse's movement. The therapy also includes the basics of horse grooming and performing works in the stable (Strumińska, 2003). The participants were usually young people with behavioural disturbances while the main objective of hippotherapy was to modify the attitudes, behaviours and misconceptions i.e. established and unknowing imaginations about themselves and the world. The participants were divided into three groups of 5 to 6 people. The last group was involved in the therapy in 2010. The therapeutic sessions were divided into theoretical, practical and conclusion parts. Furthermore, art therapy classes were also implemented (Fiejdasz, 2010).

The positive modifications observed during the hippotherapy included e.g. higher self-esteem. The young people were encouraged to help people with disabilities who also participated in hippotherapy sessions. The participants prepared horses, assisted people with disability to ensure their safety and helped organize Paralympics. Their activity made them feel competent and responsible. They could also share the knowledge, strengths and skills in a constructive manner. The tendencies for withdrawal from social contacts were also reduced. The therapy also helped decrease the level of fear of being rejected and fear of failure. Furthermore, one of the objectives adopted for hippotherapeutic programs was the change in the attitudes towards learning such that it was not treated as an unpleasant duty. Knowledge was transferred through games, playing and contests. This stimulated cognitive interest of the young people. New skills and knowledge also made them proud of themselves. They were also considered as an element that distinguished the young people from others in the group.

Properly organized hippotherapeutic classes can provide preventive, caring and educational measures. Therefore, they support school in fulfilling these

functions. The necessity of this extension of activities seems to be obvious, especially in light of the increasing and extensive deprivation, violence and unhealthy competition. Therefore, one of the objectives of the corrective work should be to provide conditions which are conducive to even the smallest successes in sports and other extra-curricular activities (Marzec et al., 2001). This can be effectively achieved by hippotherapy.

Other benefits of hippotherapy include opportunities for modification of e.g. lack of trust to adults and peers, difficulties in adaptation, difficulties in starting relations, withdrawal from problem situations, emotional disturbances, and aggressive or auto-aggressive behaviours (Fjedasz, 2010). As demonstrated in a study by E. Karpuszenko, "in the hierarchy of needs of the imprisoned women, the need for the emotional contact, caring for someone and the need of playing were dominant" (Karpuszenko, 2012). This suggests that even a several-hour contact of the person with an animal has a great potential that should not be neglected. Therefore, it is worth analysing the benefits that can be derived from the increased frequency of hippotherapeutic sessions.

A more popular method of working using animals that can be employed in penal institutions and youth detention centres is dog-assisted therapy. Dog-assisted therapy means a therapy that uses close contact with dogs. Therapy dogs can play the roles of both friends and therapists. These animals do not assess people, do not specify rules and limits, do not expect anything while giving a lot, do not prohibit and set conditions (Kulisiewicz, 2007). Most importantly, they forgive human mistakes. The benefits of long-term effects have been appreciated in penal institutions in Kraków, Jastrzebie-Zdrój, Hajnówka, Olsztyn, Rzeszów, Przytuły Stare, Starogard Gdański or Lubliniec. The sessions with the dogs in Hajnówka or Przytuły Stare have been organized since 2013. It should also be emphasized that dog-assisted therapy involves fewer organizational difficulties compared to hippotherapy.

The Dogs Behind project has a substantial effect on the dog-assisted therapy programs in Poland. The program started to be implemented in the USA in 1987. The benefits of participation in the program were multiple. The trained dogs had greater opportunities to find new homes, whereas people learnt responsibility and patience (Kokocińska, 2016). The dogs also positively influenced prisoners and motivated them for starting positive relationships.

An interesting initiative that is worth promoting in Poland is Puppies Behind Bars (PPB). The programme assumes training puppies in the prison settings. The dogs are trained to be guides. The program was developed in 1997 by Gloria G. Stoga, inspired by similar programs implemented in Florida and Ohio (<http://myhero.com/hero.asp?hero=puppiesbb>).

Trainings and conferences in this field have been more and more popular. In 2016, the Community Centre in Lubliniec, Poland, was the venue of the first

conference in Poland devoted exclusively to the work of therapy dogs under conditions of isolation in penal institutions. The conference participants included dog therapists, directors of penal institutions, lecturers and inspectors from OTOZ Animals. The initiative helped exchange knowledge and experiences while extending the conference with the practical part (conducted by the female prisoner from the Penal Institution in Lubliniec with the dog) allowed for demonstration of the benefits of dog-assisted therapy.

The model centre in Poland in the area of dog-assisted therapy used for resocialization is the Penal Institution in Hajnówka. The therapeutic work is possible through collaboration of the institution with the Ciapiek kennel located in the same town. The therapeutic sessions are based on the program composed of the theoretical and practical sessions. The first program in this area, named "Przyjaciele, czyli pies w celi" ("Friend: the dog in the cage"), was prepared in 2011. It is worth emphasizing that the Hajnówka Remand Prison has collaborated with the kennel since 2007. The prisoners were employed for voluntary work in the kennel. The works included care for dogs, building cages or kennels. The positive changes in the behaviour of the prisoners were the inspiration for starting further investigations in this field.

Consequently, a dog-assisted therapy program was developed. It was divided into two stages: the theoretical and practical. The theoretical part discusses the following problems: origin of the domestic dogs and history of dog domestication, specification of individual breeds and crossbreeds, dog ethogram, dominance theory, function of canine senses, social behaviours of dogs, problems concerning calming signals, prey drive and hunting chain, aggression and fear of canids, training methods, forms of resocialization, dog desensitization and flooding, psychological mechanisms of learning, care and feeding dogs, methods to play with the dog and reward the dog, basic psychological problems of dogs and their consequences, including learnt helplessness, dog box effect, environmental deficiencies, hunger, illness and other problems.

After familiarization with the problems contained in the theoretical part, the prisoner is allowed to participate in the practical part. The practical part is conducted in the Penal Institution in Hajnówka. This part includes the classes in socialization with people and other dogs, obedience, working using different training methods, learning to play with the dog, learning to read dog's body language and calming signals, familiarizing with social and alternative behaviours of dogs, training dogs to perform tricks (<http://psy-pies.com/arttykul/dogoterapia-jako-nowatorska-forma-oddzialywan-penitencjarnych,1330.html>). The contact with the animal was viewed by prisoners as e.g. the time of happiness. It helped them feel that they did something good and useful. The prisoners also identified themselves with the difficult situation of the dog. They also learned physical

contact (different when stroking compared to the contact during playing or caring activities) and developed patience.

Furthermore, the dog-assisted therapy in the Rzeszów Penal Institution is based on the "Pomóż mi wyjść" program ("Let me get out"). With this program, prisoners work as dog trainers in the Kundelek kennel located in the same town. Working with dogs, prisoners can forget about the everyday hardship of living in isolation. However, the benefits of the therapy are mutual. Trained dogs have opportunities to find a new home, whereas prisoners learn patience, responsibility, and expressing and controlling their emotions. The program is supervised by qualified coaches who explain and show how to work with dogs with different past (the material broadcast in TVP Rzeszów, also available at <http://rzeszow.tvp.pl/16300767/pomoz-mi-wyjsc-dogoterapia-w-rzeszowskim-zakladzie-karnym>). The important factor is ties between dog carer and the animal. In this case, both humans and dogs had difficult past. Awareness of this fact helps prisoners to identify themselves with the dog and experience selfless friendship. The progress in dog training and the fact that the opportunities are opened up for the dog for finding a new home can be rewarding for the prisoner and improve his or her self-esteem. Therefore, dog socialization occurs simultaneously with the prisoner's resocialization. The idea of this program is similar to the assumptions of the effects discussed in the Dogs Behind program.

The dog-assisted therapy is also used in the youth educational centres. One of the examples is the youth educational centre in Włocławek, which collaborates with the city's kennel. The resocialization and compensation programs were organized in the area of this centre. In this case, however, instead of the visits to the kennel, young people were involved in Rally-O.

Rally-O is a specific form of obedience training for dogs (a form of sport activity). The idea of Rally-O emerged in the USA and its originator was Charles L. Kramer. The author presented his assumptions in 2010. In Rally-O, the person and the dog have to cover a special route at their own pace. In order to encourage the pet, guide can use any commands and praising. The aim of Rally-O is to raise a happy dog. This form of activity is addressed to everyone, regardless of the age, level of physical fitness or disability. The dog's breed is also of meaningless (Sjosten, 2005).

The Rally-O activities in the above mentioned centre attracted much interest. Consequently, the Rally-O club was established in the Youth Educational Centre in Włocławek in 2015. The club was named Świat4Łap. The classes concentrated on three groups of objectives: resocialization, rehabilitation and objectives based on the kennel's needs (<http://kynoterapeuta.wloclawek.pl/index.php/kynoterapia-w-resocjalizacji2>). The benefits of participation in the program include learning patience, quiet, persistence, and building relation of humans with animals based on mutual trust and close ties. This is of much

importance to resocialization and successful return to society. Furthermore, the successes brought satisfaction and improved self-esteem of participants. They also increased chances to find a home for the dog.

In conclusion, two forms of dog-assisted therapy are used in Poland. One of them focuses on theoretical and practical sessions performed exclusively under conditions of penal isolation, whereas the second one concerns theoretical classes in the location of the penal institution combined with practical activities in the area of a kennel for stray dogs. In the case of classes taught in prison isolation, the dogs are transported from the nearby kennel.

An interesting initiative in terms of examinations of the effectiveness of dog-assisted therapy in Poland in resocialization was started in the Penal Institution in Przytuły Stare. The study participants were 36 prisoners with the dogs from Canis kennel in Kruszewo. The project was implemented in close collaboration of the Institute for Psychology of the Polish Academy of Sciences in Warsaw with the director of the penal institution. The dog-assisted therapy program was comprised of 24 hours of theoretical classes and 60 hours of practical exercises. The data collected during the examinations demonstrated that the ties established through contact of humans with dogs have a substantial effect on interpersonal relations. Furthermore, they contribute to a reduction in the level of stress, fear and aggression. Dog-assisted therapy is conducive to socialization of prisoners (www.archiwum.moja-ostroleka.pl/dogoterapia-w-zakladzie-karnym,1474631475,2.html). The animals motivate prisoners for being active. Changes in the animal behaviour encourage modifications of persons' own behaviour.

It should also be emphasized that, contrary to dog-assisted therapy or hippotherapy dedicated to people who are not remaining in a youth detention centre or a penal institution, no uniform guidelines have been developed concerning the methodologies used in such therapeutic programs. Furthermore, there are no indications or contraindication with respect to individual situations of the imprisoned people. In addition to technical, organizational and financial problems, individual limitations of the people in such institutions should be also taken into consideration. Not all the prisoners express their willingness to participate in such programs and not all of them can be qualified for the participation. A substantial limitation is fear or unwillingness to work with animals, or allergies to animal's hair and sweat. Another barrier is the scepticism of society who approach dog-assisted therapies as a form of entertainment for prisoners. Such views are reflected by unpleasant messages posted in various Internet forums or chat rooms.

Conclusions

It should be emphasized that both hippotherapy and dog-assisted therapy integrated into resocialization programs represent only an alternative form that can be used to improve work in this area. Animal-assisted therapy for prisoners is used to support conventional resocialization methods. The goal of this therapy is to extend the scope of resocialization effects. There is still much to do by researchers in Poland to popularize this type of therapy. The starting point for the development of concise studies that might provide the guidelines for working in this area should be the examinations based on the methodological background. Slightly different problems are connected with the social scepticism about these forms of therapy.

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CONSULTING AND INVOLVING PARENTS IN PROVISION OF EDUCATIONAL SERVICES PROCESS FOR FAMILIES IN EDUCATIONAL INSTITUTIONS

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Abstract. *The paper focuses on the issues of parents consulting and their involvement in an educational service process for families at schools. The quality of education and the effectiveness of provision of educational services are considered as an integral part of successful learning. To analyze parental opinion (N=530) towards their consulting and involvement in provision of educational service process quantitative and qualitative method of data collection have been chosen. According to the parental opinion, the content of consulting should be linked with learning achievements and motivation. Parental involvement is considered through the processes of professional orientation, prevention and organizing social events at school. Though, the fields of self-support groups, organizing teaching-learning programs for families, parental involvement in a formal educational process is considered as a challenging issue.*

Keywords: *educational services for families, parental consulting, parental involvement in provision of educational services.*

Introduction

As the current Lithuanian economical and social situation emerges new challenges for children and parents on improving the welfare system, the education system of Lithuania requires the guarantees to each child and adult have an opportunity to use the state-providing services, to create diverse, based on persons needs educational and social service forms. This insight is a significant educational and political statement, declared in the new documents of the state (the State Education Strategy for 2013-2022, the National Progress Program for 2014-2020, the Progress Strategy of State by the Name of "Lithuania 2030" etc.). The aim is to raise the educational culture of families and strengthen the collaboration between the family and the educational institutions.

It is highlighted that an educational institution creates a child's educational space together with children and their parents, and the aim is that a school and parents become partners, who collaborate, communicate and seek for the same objectives together.

The researches by Leliūgienė and Simavičiūtė (2010) and others prove that the communication and collaboration between school and parents and their mutual interaction is a process of *consulting* on important issues and questions about child's education. Thus, it means that a bigger attention must be focused on collaboration, which is based on consulting, because the meeting between parents and specialists usually starts from a process of *consulting*, which, later on, grows into collaboration, parental involvement and team collaboration.

Parental involvement in a child's educational process has been evaluated as one of the most significant and positive features of a child's socialization. The importance of parental involvement and participation in a child's education process, the forms of involvement and the methods had been investigated by national and international scientists in their works (Epstein, 2007; Ruškus & Mažeikis, 2007; Gerulaitis, 2007; Trakšelys, 2010; Valantinas & Čiuladienė, 2012 etc.).

Parental involvement in an educational process is related to *an activeness in an educational process; to the knowledge building while all the members, related with a child, are involved together; to problem solving and practise as such; to an engagement to investigate; to different educational opportunities and acceptance of the diversity; to being able to share the resources and to apply changes on critical issues etc.* (Gerulaitis, 2007).

The investigations of Valantinas and Čiuladienė (2012) demonstrated that Lithuanian educational institutions had a feature of parental involvement, *based on school activities*, as the individual communication method appeared to be dominating because the one channel communication had been realised from the top to the bottom.

Problematic research issues: How the content of consulting about educational services has been valued? How the consulting content meets the parental needs? What is the mechanism of the parental involvement process like? What are the strengths and goals of parents, involved in the educational service providing process?

Object of the research – the parental consulting and involvement in the educational services for families in an educational institution.

Aim of the research – to reveal the content and the importance of parental consulting and involvement in educational services for families process in educational institutions, according to the aspects of the parental evaluations.

Samples and methodology of the research. Totally, 532 parents/carers, whose children attend Siauliai Town educational institutions, have participated

in the research. Quantitative and qualitative method of data collection have been chosen. The questionnaire was applied to get the results of the research. The closed type questioning data was processed by methods of statistical analysis. The data was analyzed by SPSS 19.0. (Statistical Package for the Social Sciences). The descriptive statistical methods were applied: percentage frequency tables, calculated average rates (M), standard deviation (SD) and standard error (SE). The open type questioning data was processed by content analysis method: the frequent data reading and text comprehension, the determination of data, related to investigational issues, the main categories and subcategories settings, the determination of relations amongst groups, the determination of differences.

The research results and discussion

Parental consulting about the educational services for families: needs and the evaluation of the consulting importance. The evaluation of the providing consulting and its' importance is given below in the table number 1; the diagnostical field consists of 18 dynamic units, fixing the current situation.

All consulting fields were evaluated by parents as medium (M=3,76 – 4,13). The highest evaluation was pointed out to a *child's self-confidence motivation* (M=4,13), *providing help to prepare for a formal examination or test* (M=4,04) and to an *ability to evaluate skills and knowledge by a child himself*. The survey for parents may lead to a conclusion that the provision of parents is related to their children's learning results and motivation engagement.

The lowest evaluation about consulting issues was evidently demonstrated as *Support for a child to do his homework and other activities at home* (M=3,76), *finding methods to be applied in learning process* (M= 3,77), *support for a child with special needs at home* (M=3,79), and *creating appropriate learning space conditions at home* (M=3,79).

The importance of teaching and learning strategies and a good educational space creation was updated. The lack of helping methods for children with special needs was revealed.

The importance and usefulness of consulting about children teaching and learning was evaluated as medium (M=1,42 – 1,89). According to parents, the most important consulting is about a child's motivation in learning (M=1,45) and self-confidence engagement (M=1,42) issues. The less important consulting, based on the evaluation by parents about consulting for families, was a specific consulting about helping a child with special needs in teaching and learning. (M=1,89).

Table 1 Parental consulting services and its' importance to a child's education (N=532)

Consulting about:	Provided consulting: evaluation of the situation ¹			Provided consulting: evaluation of the importance ²		
	M	SE	SD	M	SE	SD
Support for a child in learning regarding his age	3,87	0,04	0,91	1,57	0,05	0,98
Support for a child to do tasks and activities at home	3,76	0,04	0,87	1,75	0,05	1,06
Support for a child with special needs to learn at home	3,79	0,04	0,88	1,89	0,06	1,21
Creating appropriate learning conditions for a child at home (e.g., personal working space, etc.)	3,79	0,04	0,89	1,88	0,06	1,23
Helping a child with special skills to learn more and extend his knowledge at home (e.g., additional tasks and activities etc.)	3,97	0,04	0,91	1,56	0,05	1,04
Engaging a child in learning	4,06	0,04	0,94	1,45	0,04	0,93
Engaging a child to be more confident	4,13	0,04	0,97	1,42	0,04	0,89
Support for child to plan and make a schedule	3,99	0,04	0,96	1,58	0,05	1,01
Support for a child to evaluate his knowledge and skills	4,05	0,04	0,87	1,59	0,05	0,99
Support for a child to prepare for a formal examination/test (e.g., exams, skill and knowledge testing, etc.), while passing from one educational level to another	4,04	0,04	0,88	1,63	0,05	1,08
Support for a child to find methods that could be applied in his learning process (informational, memorising, choice, analysing, etc.)	3,77	0,05	0,95	1,79	0,06	1,17
Using child's skills and his experience in learning	3,86	0,04	1,90	1,64	0,05	1,04
Using child's interests in learning	3,97	0,04	0,93	1,60	0,05	1,02
Applying gained theoretical skills	3,99	0,04	0,92	1,59	0,05	1,02
Support for a child according to his individual opportunities	4,01	0,04	0,93	1,55	0,05	0,98
Improving relationships with a group	3,93	0,04	0,93	1,69	0,05	1,08
Improving relationships with teachers	3,96	0,04	0,9	1,68	0,05	1,10
Solving the issues of bullying	4,00	0,04	0,94	1,60	0,05	1,04

¹ Scale from 1 to 5 as follows: 1 – very bad; 2- bad; 3 – neither bad nor good; 4 – good; 4 – very good.

² Scale from 1 to 4: 1- Agree; 2 – Partly agree; 3 – Disagree; 4 – No opinion.

Qualitative data analysis. The parents were asked to express their opinion about what kind of consulting they would mostly prefer at the time. After the open type questioning analysis has been finished, two most needed categories of consulting contents were concluded: a child's learning skills and opportunities; and bullying prevention and positive relationship creation and engagement. (see table nr. 2)

Table 2 The most needed consulting contents for parents

Category	Subcategory	State-ment nr.	Proving statements
Children learning skills and opportunities (D=9)	The usage of children's interests, individual opportunities	4	<i>Use the children's interests in learning; for the individual opportunities; how to use child's interests in learning.</i>
	Learning methods, motivation	3	<i>How to teach a child since an early age; What kind of methods could be applied in a learning process; Help to find learning, engagement and motivation methods.</i>
	Subject learning	2	<i>Lithuanian language; history.</i>
Bullying prevention and positive relationship creation / engagement (D=9)	Bullying prevention	5	<i>About bullying, bullying and how to stop and prevent; The issues about children's questions on bullying, <...>; <...>, How to prevent bullying and solve bullying issues?</i>
	Relationships amongst children, and children-parents relationships	4	<i>To improve relationships with children/ group, Children's <...> friendliness, educational; how to improve relationships, <...>; Any, unless about a relationship with a teenager; How to explain to a child that friends are not always friends and etc.</i>

Receiving a consulting service about children's learning skills and opportunities was evidently highlighted³ by parents. (N=9). The content of the category permits to make a detailed consulting content. Parents would like to get a consulting on how to use the interests of children in their learning process. Also, they would prefer to receive a consulting on more specific subjects' learning (e.g. language, history). Parents state that it is very important to help a

³ The categories of *child's learning skills and opportunities content* are based on three subcategories: The categories of *bullying prevention and positive relationship engagement/creation* are based on two subcategories.

child to find individual methods of learning, thus, they would like to get consultings about learning methods since an early age, engagement and motivation issues. The conclusion might be mentioned that the qualitative research data represents parental preferences to be involved into a child's educational process, help a child to learn, get learning skills.

The category about bullying prevention and positive relationship creation/engagement (N=9) reveals that parents find the importance not only in the learning process itself, but the child's emotional status and feelings. The participants of the research would prefer to receive a consulting about the issues on bullying prevention, children and children-parents relationship improvement.

The cases, that do not appear in the content of the categories, should be mentioned either, as they represent parental preferences about the consulting content as well. Though, there are parents who would prefer to receive *consultings about a healthy lifestyle (healthy eating habits, a healthy living, sport, hygiene, schedule planning issues etc.) and about the indications how to leave an educational institution (what formularities must be done to be able to leave the educational institution correctly). The need of consulting about the profession choosing issues was also mentioned (Help children to choose future opportunities and professions).*

Parental involvement in educational services for families process and the evaluation of the importance of the parental involvement. This research field focuses on 6 types of parental involvement in children learning (based on Epstein, 2007): *parenting, communicating, volunteering, learning at home, decision making, collaborating with the community.* Parental involvement diagnostical field consists of 14 dynamic units, fixing the current situation (the evaluation of parental involvement status), and the evaluation of the parental involvement importance (see table nr. 3).

Parental involvement in teaching and learning process, based on the evaluation by parents, has been concluded as positive. The scope of all the mentioned above diagnostical field dynamic units was not evaluated conditionally: the majority of respondents in this field *valued from "neither good/ nor bad" to "good"*. The evaluating homogeneity could be disputed, as the standard deviation on some parental involvement aspects demonstrates that the evaluation obviously do not coincidence. The opinions of parents mostly differentiated in evaluating the parental involvement in applying innovation (SD=2,08).

Table 3 Parental involvement in a child's educational process in an educational institution: evaluation of the situation and importance (N=532)

Variables	Parental involvement: evaluation of situation ⁴			Parental involvement: evaluation of importance ⁵		
	M	SE	SD	M	SE	SD
Parents involve in orientational activities about professional choises	3,899	0,04	0,92	1,64	0,04	0,92
Parents willingly involve in to events organisation activities in educational institutions	3,78	0,04	0,91	1,71	0,04	0,87
Various activities about prevention issues are being organised for parents	3,72	0,05	0,98	1,78	0,05	0,94
Parents together with their children participate in social activities	3,71	0,05	0,97	1,71	0,04	0,88
Parents encourage innovations	3,70	0,10	2,079	1,86	0,05	0,93
Various activities about prevention issues are being organised for parents and children	3,68	0,05	1,05	1,77	0,05	0,96
Parents willingly involve into the prevention activities	3,67	0,04	0,895	1,76	0,05	0,92
Parents willingly involve into the project activities	3,61	0,05	0,95	1,83	0,04	0,92
Activities for parents are being organised (e.g. lectures, seminars etc.) about how to be a good parent	3,61	0,05	1,01	1,82	0,05	0,93
Parents are involved in a project activity	3,60	0,04	0,93	1,85	0,04	0,92
Parents participate in creative activities	3,59	0,05	0,95	1,91	0,05	0,93
Parental clubs are held in educational institutions	3,47	0,05	1,01	2,01	0,05	0,98
Seminars for families (for children together with parents) are being organised in educational institutions	3,397	0,05	1,04	2,01	0,05	0,97
Parents willingly involve in the daily activities and lessons at schools	3,31	0,05	0,99	2,04	0,05	0,96
Parental s groups are being organised in educational institutions	3,27	0,05	0,99	2,10	0,05	0,996

During the analysis of the evaluation of a current situation of parental involvement in children teaching and learning process, it was noticed that the respondents valued most these fields as follows: *parental involvement and*

⁴ Scale from 1 to 5 as follows: 1 – very bad; 2 – bad; 3 – neither bad nor good; 4 – good; 4 – very good.

⁵ Scale from 1 to 4as follows: 1 – Agree; 2 – Partly agree; 3 – Disagree; 4 – No opinion.

participation in profession orientation activities, event organisation activities and prevention activities. 24,5 percent of the respondents valued *an involvement in professional orientation activities* (M=3,89) as a very good activity, and 38,6 percent of respondents valued it as a well provided activity (see table nr. 3). The second place under the rates of evaluation, according to respondents, highlighted the voluntary parental involvement in *event organisation activities in educational institutions* (M=3,78), 19,3 percent of participants value that as very good, 41,3 percent – good. The half of the respondents value the provided *activities for parents about prevention issues* as very good (17,8 percent) and good (35,0). Paradoxically, 18,2 percent of respondents state that the mentioned activity is not performed/provided at all.

The lowest evaluation by parents about the parental involvement in children teaching and learning process forms belongs to such fields as *activities of self-support parental groups* (M=3,28); a *voluntary parental involvement in daily activities or lessons in educational institutions* (M=3,30); *seminars for families (children together with parents)* (M=3,38). Only 30 percent of participants value *parental self-support group activities* as a positive phenomenon. 25,9 percent of respondents have never faced with such a parental participation form in a child's educational process. (see table nr. 3)

The most needed parental involvement activities in children teaching and learning educational processes were determined as the most positively valued by parents. However, the less necessary activities were those poorly valued by parents and, in general, not provided at educational institutions at all. It is obvious that unknown activities for parents does not give any opportunity for parents to understand the usefulness and importance of such activities in an educational process. The research (Valantinas & Čiuladienė, 2013) reveals that the parental attitude, depicting parental involvement in the educational life, is often related to children's achievements: less involving parents are often dissatisfied with their child's educational institution and manifest that their child do not like studying in this educational institution and they tend to accuse specialists and teachers of unsuccessful child's achievements without any objectivity and of poor support when having difficulties in learning.

Parental involvement in the educational process: the aspect of service realisation. The empiric data analysis created an opportunity to update the spectrum of the non-provided services. It is obvious that *activities, related to parental self-support groups, clubs for parents, voluntary parental involvement in a formal educational process (during lessons and activities), seminars for parents together with children* are not extended in educational institutions. Even 25,9 percent of respondents declared that there are not any parental self-support groups at schools, nor seminars for families (for parents together with children). The parental participation in activities together with their children (e.g.

seminars, various school events, etc.) creates opportunities for parents to know their children better, identify their social, educational needs, also, to approach to a context of an education as such, to what motivates their engagement and participation in school life. Teachers sometimes objectively express their anxiety and needs about a bigger parental involvement in a child's formal educational process. It is believed that having established the appropriate conditions for parents and children to participate in activities together and special tasks, related to child's cognitive skills in different social, educational activities (outside the educational institution boundaries), would motivate parents to involve more and participate in a formal education process, help teachers and specialists, support the dialogue and, also, participate in the educational field.

Parental involvement and voluntary participation in activities: qualitative data analysis. The aim was to reveal how parents get involved into the voluntary activities, as it is one of the forms to participate in an educational process. The participants were asked to indicate the voluntary activities they remembered most during the latest years. After analysing the open type questioning qualitative content, two thematic categories were determined: *the variety of forms to involve parents into the voluntary activities and non-participation in voluntary activities* (see table nr. 4).

The content about the variety of *forms of parental involvement in the voluntary activities* reveals that parents get involved in the professional orientational activities such as the presentation of a profession or a working place (N=7), they participate less in activities of organising traditional events or performances (N=4), also, they accompany children to school trips and excursions (N=3), they do participate in sports events (N=3) and creative activities (N=2), or social activities (N=2) in educational institutions. What concerns the parental non-participation in voluntary activities, parents argument their answers with factors of a lack of an interest or information and time. The particular case of a parental non-participation in voluntary activities must be mentioned where the case is related to parental attitude towards educational institution responsibilities and that it is only for children and the activities must be orientated only to the children ("*In my opinion, school - is for children!*").

The semantic sense of subcategories and the frequency of repeated statements may define that parents are traditionally active in participating in diverse types of events, they are active in professional orientational activities (N=9/12), and less involving/being involved in social activities.

Table 4 Parental involvement in voluntary activities

Category	Subcategory	Statement nr.	Proving statements
A variety of parental involvement in voluntary activities (D=21)	Professions, presentation of a working place	7	<i>The presentation of a profession, the presentation of a working place; <...>. To present a profession, college fairs. Parents present their professions; tell about professions.</i>
	Involvement in the festive /traditional events organisation activities	4	<i>During Christmas celebration event, I was presenting the children Christmas performance; Christmas welfare event, when the money, received from sold children created works, were given to charity and poor people; Organising Christmas evening, Easter talks, <...>.</i>
	Accompanying children to excursions, school trips and events	3	<i>Accompanying to a school trip. <...>; go on a school trip with the group; <...>, accompanying children to special events.</i>
	Participation in sports events	3	<i><...>, participating in a sport event to support a child's school; assisting an event "My sport group".</i>
	Participation in creative activities	2	<i>Making photo albums in an early age school children group (family members, animals, etc.); Participation in a creative activity (A event in a pre-school).</i>
	Involvement in social activities	2	<i>Cleaning environment, <...>; Scouts campings, <...>.</i>
Non-participation in voluntary activities (D=5)	Non-participation in voluntary activities	2	<i>I haven't participated.</i>
	The reasons of a non-participation in voluntary activities	3	<i>Maybe there are such activities but I know nothing about them; No, because we don't have time for such activities, we are working people; In my opinion, school is for children!</i>

Conclusions

1. The research revealed that the consulting content, according to the evaluations by respondents, has to be related mostly to learning results or achievements and motivation engagement. The evaluation of the consulting importance and usefulness is related to a consolidation of a child's engagement and self-confidence.

2. Analysing the evaluation about the current situation of a parental involvement in teaching and learning processes, it has been noticed that respondents mostly valued the field, related to parental involvement in professional orientation activities, activities of organising events and prevention issues. A parental non-participation in voluntary activities was argued by parents as a lack of time or information and a lack of interests.
3. The lowest rates of evaluation were related to such fields as parental self-support groups, organisation of seminars for families (parents together with children) and parental involvement in a formal educational process at school. The most important and useful activities of parental involvement in an educational process were most positively valued by parents. Less useful activities were valued poorly or as not provided in the educational institutions at all.

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DEVIANCE LATGALIEŠU PASAKĀS: DZIMUMSOCIALITĀTES ASPEKTS

Deviance in Latgalian Folk-Tales: Gender Aspect

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Abstract. *The aim of the paper is to identify deviant patterns of behavior between wife and husband in Latgalian household folk-tales by rising those characteristic and action strategies, which in accordance with the public assessment are recognized as non-compliant for traditional gender roles. The empirical source of the research is Latgalian household folk-tails, which thematically cover a variety of relationship models peculiar for a family (husband and wife). For the analysis of a deviant feature developed in a story the author applied theory of social action established by the sociologist Talcott Parsons. In the context of a fairy-tale, the actors (a husband and a wife) should not be regarded as individuals in a sense of a separate person, but instead as representatives of the given gender. Therefore, the nature of their actions is not individual as well, but instead more culturally-historically determined, which in accordance with the folk theory proposed by Richard Dorson is “real situation and local environment”. Deviant behavior scenarios in fairy-tales allow to evaluate developmental tendencies of a family as an institute for a period starting with 20th century, when folk-tales chosen for the empirical source were written, up to nowadays, when in the form of strategic documents are raised such problems of family institutes as significant decline in the amount of registered marriages and increase of divorced marriages.*

Keywords: *deviant behavior, household folk-tales, gender roles.*

Ievads

Introduction

Ar devianci (lat. deviatio novirze) tradicionāli saprot atkāpes no sabiedrības pieņemtajiem uzvedības standartiem (Korpa & Paula, 2010). Folklorā deviances psiholoģiskā izpratne iegūst plašāku – kultūrantropoloģisku – interpretāciju un aptver kompleksas uzvedības stratēģijas, kas vēsturiski un sociāli veidojušās kā citādību apliecinošas novirzes no tradicionālajām vērtībām. Dzimumsocialitātes aspektā šīs novirzes atklājas pretstatā kultūrvēsturiski un teritoriāli determinētiem priekšstatiem par sievietes un vīrieša lomu sabiedrībā, kas tipisku scenāriju veidā saglabājušies tautas tradicionālās kultūras naratīvos – pasakās. Katram tautas pasaku žanram ir sava valence tipisko dzimumu lomu atveidē:

dzīvnieku pasakas tās parādās alegoriskā veidā, brīnumu pasakas – ar mītiskās ambivalences starpniecību. Savukārt sadzīves pasakas, būdamas visciešāk saistītas ar sava veida kultūrvēsturisko kontekstu, sniedz tipiskus dzimumu uzvedības modeļus un scenārijus, prezentējot gan sabiedrības akceptētas, gan arī nosodītas dzimumu lomā reprezentācijas, kas balstītas mītiskajos arhetipos un izteiktas ar pasakas mākslinieciskajiem līdzekļiem.

Dzimumsocialitātes aspekti sadzīves pasakās vispilgtāk redzami ģimenes attiecību kontekstā, kas ļauj pasakas skatīt par vienu avotiem ģimenes antropoloģijā, aktualizējot vēsturiskos, tautas pieredzē izveidojušos tipiskos priekšstatus par ģimeni kā sociālu institūtu un tā veiksmīgai pastāvēšanai nepieciešamajām komponentēm – dzīvesbiedru sociālajām lomām, kas vērstas uz ģimenes būtiskāko funkciju nodrošināšanu. Savukārt deviantās uzvedības scenāriji pasakās ļauj izvērtēt ģimenes institūta attīstības tendences, sākot no 20. gadsimta robežas, kad pierakstītas par izpētes avotu izvēlētas pasakas, līdz pat mūsdienām, kad stratēģisku dokumentu formā tiek aktualizētas tādas ģimenes institūta problēmas kā noslēgto laulību skaita būtiska samazināšanās un šķirto laulību īpatsvara palielināšanās (GVPP, 2011).

Mērķis, avoti, metodika un teorētiskais pamatojums
Aim, sources, methodology and theoretical justification

Raksta mērķis – identificēt būtiskākos sievas un vīra deviantās uzvedības modeļus latgaliešu sadzīves pasakās, aktualizējot īpašības un rīcības stratēģijas, kas sabiedrības vērtējumā tiek atzītas kā neatbilstošas tradicionālajām dzimumu lomām. Par izpētes avotu izvēlētas P. Šmita krājumā “Latviešu pasakas un teikas” (Šmits, 1925-1937) ievietotās latgaliešu sadzīves pasakas, kas tematiski aptver dažādus ģimenes attiecību modeļus.

Padziļinātai analīzei izvēlēti tie pasaku tipi, kas satur sižetiski izvērstus sievas un vīra lomas ģimenē raksturojumus, sevišķu uzmanību vēršot uz tiem pasaku tiem, kas satur konceptuālas norādes uz sabiedrībā nosodāmu īpašību piedēvēšanu laulātajiem. Šādi pasaku tipi ir, piemēram: “Blēdīgā sieva”, “Kā slinkā sieva izārstēta”, “Ļaunā sieva bedrē”, “Slinkā sieva”, “Neuzticamā sieva”, “Sieva nepazīst vairs sevis”, “Vīrs meklē muļķa cilvēkus” u.c. Savukārt potenciāli nosodāmas vīru īpašības koncentrējas tādos pasaku tipos kā “Muļķa vīrs”, “Sieva bēg no muļķa vīra”, “Vīrs sievas darbos”. Pasaku tipu statistikas līmenī redzams, ka vīra devianci apliecinošo pasaku tipu latgaliešu pasaku krājumā ir mazāk (5 pasaku tipi) nekā sievas (10 pasaku tipi); ievērojami izteiktāka šī disproporcija ir pasaku līmenī – sievas deviantās uzvedības dažādām izpausmēm veltītas 34 pasakas, vīra devianci – tikai 6 pasakas.

Par deviantu uzvedību sociologi Frenks Hagans (*Frank E. Hagan*) un Mervins Sūzmens (*Marvin B. Sussman*) uzskata tādu, kas sabiedrības acīs tiek

uztverta kā ekscentriskā, bīstama, kaitinoša, dīvaina, ērmota, rupja, pretīga vai krimināla (Hagan & Sussman, 1988). Savukārt psiholoģe Nadežda Maisaka (*Надежда Майсак*) izstrādājusi sociālo deviāciju matricu (Майсак, 2010), kur trīs galvenie deviances tipi - konstruktīvās, autodestruktīvās un ārēji destruktīvās – tiek klasificēti atkarībā no sabiedrības attieksmes pret šīm deviācijām (skat 1. tabulu).

1.tab. Deviances klasifikācija pasakās
Tabele 1 *Classification of deviance on folk-tales*

	Prosociāla; adaptēta sabiedrības sociālajām normām	Neitrāla; nerada draudus sabiedrībai	Nosodāma	
			<i>Asociāla (pārkāpj morāles normas)</i>	<i>Antisociāla (pārkāpj tiesiskās normas)</i>
Sieva	Plāpīgums Muļķība	Slinkums Mantkārība	Stūrgalvība, Niknums, Neuzticība Emocionāla vardarbība pret vīru	Fiziska vardarbība pret vīru Vīra slepkavība
Vīrs	Muļķība	Slinkums Dzeršana	Emocionāla vardarbība pret sievu	Fiziska vardarbība pret sievu Sievas slepkavība

1. tabulā apkopotās tipiskās īpašības, kas ietilpst deviantas uzvedības stratēģijā, vairumā ir piedēvētas gan vīriem, gan sievietēm. Nianse vērojama šo īpašību statistiskajā lietojumā un sižetiskajā izvērsumā, kur nereti atklājas atšķirīgas reakcijas uz sievas un vīra deviantās uzvedības situācijām. Deviances sižetiskā izvērsuma analīzei pielietota sociologa Talkota Pārsona (*Talcott Parsons*) sociālās rīcības teorija. Arī attiecināta uz pasaku, tā paredz četrus galvenos deviantas uzvedības elementus: t.s. darbības veicējus (*actors*), darbības mērķi (*end*), darbības kontekstu un apstākļus, darbības normatīvo orientāciju (Парсонс, 2000). Pasaku kontekstā darbības veicēji – vīrs un sieva – nav uzskatāmi par indivīdiem atsevišķas personas izpratnē, bet gan par attiecīgās dzimumu lomas reprezentantiem. Līdz ar to arī viņu darbībai nav individuāls, bet kultūrvēsturiski determinēts raksturs, ko, saskaņā ar Ričarda Dorsona teoriju nosaka “reālā situācija un lokālā vide” (Dorson, 1982).

Latgaliešu pasakas ataino 20. gadsimta robežsituācijai tradicionālās dzimumu lomas, kas Latgalē veidojušās katoļticības un patriarhālās ģimenes tradīciju ietekmē. Dzimumu lomu priekšrakstus spilgti raksturo hrestomātiski Bībeles citāti, piemēram: “Sievai viņš sacīja: “Sāpēs Tev būs bērnu dzemdēt, un

tava iegriba būs pēc tava vīra, bet viņam būs valdīt pār tevi” (1 Moz. 3: 16). Arī citi Bībeles citāti, kas paredz tādas sievas īpašības cieņa, padevība, paklausība vīram (skat, piemēram, Ef. 5: 22-24). Bībele regulē arī vīru attieksmi pret sievietēm, piemēram: ”Jūs, vīri, mīliet savas sievas, tāpat kā Kristus ir mīlējis savu draudzi” (Ef. 5: 25-26). Tādējādi deviantas uzvedības scenāriji pasakās prezentē novirzes no šī etalona, vienlaikus atklājot visai komplicētu deviances prevencijas un nosodījuma normatīvo bāzi, kur saplūst reliģiskie, kultūrvēsturiskie un sadzīviskie faktori.

Sievas deviantās uzvedības tipiskie modeļi *Models of wife's deviant behavior*

Kā bija redzams no analīzei atlasīto pasaku tipu nosaukumiem un 1. tabulā apkopotās informācijas, tipiskākās sievas deviantās uzvedības izpausmes ir pļāpīgums, slinkums, stūrgalvība, muļķība, neuzticība, emocionāla vardarbība pret vīru, fiziska vardarbība pret vīru un pat vīra slepkavība. Pasakās iezīmējas arī tendence deviantās uzvedības konstantēm papildināt vienai otru, kas attiecīgi padara komplicētāku deviances novēršanas un sankciju procedūru. Tā pasakās var biedroties tādas sievas īpašības kā slinkums un muļķība, pļāpīgums un atriebīgums, stūrgalvība un vīra emocionāla vai fiziska iespaidošana u.c. variācijas, par kurām skat turpmāk.

Pļāpīgums latgaliešu sadzīves pasakās attiecināms uz t.s. prosociālajām deviancēm. Lai gan pļāpīgums tiek pieteikts kā ģimenes dzīves nelaime (*Obeji lauluotī draugi dzeivuoja mīrīgi un sadarīgi; vīna tik beja nalaipe, ka Jākuba poša beja ļūti ziņkuorīga un lela mēļņica* (Šmits, 1935: XI), tas pārsvarā tiek adaptēts sabiedrības sociālajām normām un pieņemts kā pašsaprotama patiesība, kas nemainās pat fiziskas iespaidošanas gadījumā: *Muižas kungs sasaskaits nūpēra sīvu, nūturēja par glupu i aizbrauce* (Šmits, 1935: XI). Sievieteļi piemītošā ziņkārība un nespēja saglabāt noslēpumus iegūst pat precedentālu raksturu, kas izteikts ar etioloģisku pasakas nobeigumu: *Nikod navajag sīvai saceit taisneibu!* (Šmits, 1935: XI). Dominējoši sievas pļāpīgums, mēļņība atklājas pasaku tipā “Gāganu kari”, kur sieva izpļāpā vīra noslēpumus, tomēr būtiskas sankcijas par šo nodarījumu viņai netiek piemērotas. Tikai vienā pasakā, kur pļāpīgums saistīts ar sievas vēlmi atriebties vīram sadzīviska strīda dēļ, sieva tiek aizvesta uz “*nagudrū muoju*”, bet arī vīrs “izbauda” dzīvi bez sievas, nodzērdams visu no kunga nosargāto zeltu (Šmits, 1935: XI).

Sievas **muļķība** pasakās visbiežāk izpaužas kā neadekvāta attieksme pret realitāti, nespēja nošķirt to no iedomu pasaules, racionālam prātam neprognozējama rīcība, kas rada kaitējumu saimniecībai un ģimenei. Sievas muļķības iemesli pasakās netiek skaidroti, lielāka uzmanība tiek pievērsta muļķības izpausmēm un iespējamajām sankcijām. Vīrs un citi ģimenes locekļi

pasakās apzinās muļķības graujošo ietekmi uz ģimeni, tāpēc mēģina vai nu pāraudzināt sievu ar fiziskiem līdzekļiem (*Pajāmja, izpjēra jū labi, a vys da pruota nadavjedja juos* (Šmits, 1935: XI)) vai izolēt viņu no ģimenes, atstājot mežā (*Dēdeņš beja smagi sirdeigs iz sovys buobeņis i nu siržu jēme jū aizvede dziļā mežā i jū pamete* (Šmits, 1935: XI)). Ja muļķa sievas rīcība bijusi īpaši neadekvāta, vīram var rasties vēlme tādu sievu nogalēt, tomēr šāda pasakas situācija visbiežāk tiek atrisināta ar salīdzinājuma palīdzību – kāds no ģimenes (vīrs vai dēls) dodas meklēt vēl lielākus muļķus un, izrādās, tādu nav mazums. Tādējādi sievas muļķība pieder pie tām deviantās uzvedības izpausmēm, ar ko sabiedrība samierinās, ko apliecina arī pasaku nobeigumi: *Jeī kai bjeja glupa, tai i vysu myužu glupa palyka* (Šmits, 1935: XI).

Mantkārība deviācijas izpratnē parādās kā papildus deviācijas konstante pasaku tipos, kur jau vērojama kāda novirze no sociālās normas. Piemēram, stūrgalvīga vai neuzticīga sieva var būt arī mantkārīga. Apvienojumā ar stūrgalvību mantkārība atklāj tādu ģimenes dzīves modeli, kurā sieva, nereti sievasmātes mudināta, izsaka vīram nepamatotas pretenzijas par ģimenes mantisko rocību, pieprasa jaunas greznumlietas, nerēķinoties ar reālajām iespējām. Kontaminējoties ar prosociālām vai neitrālām deviancēm, arī mantkārība iegūst tādas sociālas novirzes statusu, kuru iespējams novērst ar pedagoģiskām metodēm bez krasām galējībām. Piemēram, kādā pasakā, lai izdabātu sievas un sievasmātes pretenzijām, vīrs pārdod zirgu un nopērk sievieti kažokādas apkakli, bet, kad ziemā jābrauc uz mežu pēc malkas, vīrs zirga vietā iejūdz sievu un sievasmāti. Paraugmācība ir pietiekama: *Nu tuo laika vairuok ni sīva, ni sīvas muote naprasīja, lai veirs puordūtu lūpus un pierktu jīm kaidu duorgu drēbi, bet struoduoja un nosuoja, kas pi jūs beja* (Šmits, 1935: XI).

Savukārt kontaminācijā ar tādām devināces izpausmēm kā neuzticība un nodevība arī mantkārība iegūst papildu emocionālo ekspresiju un iekļaujas to deviāciju kopā, kam sabiedrības apziņā nav iespējams mierizlīgums, un kas atrisināmas tikai radikāliem līdzekļiem. Šāds scenārijs īstenojas pasakā par blēdīgo sievu, kas mantkārības dēļ nodod sava vīra noslēpumus un tāpēc vīrs tiek nogalināts. Sievu šai gadījumā sagaida bēdīgs gals: *Tai veirs pajēmja un nūsyta sīvu* (Šmits, 1932: XI).

Tradicionālajiem priekšstatiem par sievas pienākumiem ģimenē neatbilstošs ir arī **slinkās sievas** tēls. Tas pieder pie neitrālajiem deviantās uzvedības modeļiem, jo nerada būtiskus draudus sabiedrībai un visbiežāk ir novēršams ar ģimenes locekļu iejaukšanos. Slinkās sievas motīvs dominē sešās pasakās, iezīmējot slinkuma iemeslus, sievas pāraudzināšanas procedūru un rezultātu. Visbiežāk jaunās sievas slinkumā vainojami sievas vecāki, kas dažādu iemeslu dēļ viņu pārlieku lutinājuši, un, arī meklējot savai meitai vīru, izvirza noteiktas prasības: *Kab dorba nadūtib jau anikaida [..], i kab tu jū nasistib i nalomuotib!* (Šmits, 1934: X). Pamata slodze jaunās sievas pāraudzināšanā

pasakās jāuzņemas vīra ģimenes locekļiem (piemēram, vīratēvam) vai pašam vīram. Populārākais pāraudzināšanas paņēmieni ir analogija: noskatoties, kā par slinkumu tiek pārmācīts, piemēram, kaķis, zirgs, gailis vai kāds cits dzīvnieks, jaunā sieva maina uzvedības stratēģiju un kļūst čakla: *Nā, nasyta mani i namūcjēja, es jau poša pazynu, ka vajaga maizi pelnīt* (Šmits, 1934: X). Vīra īpašo lomu sievas pāraudzināšanā apliecina arī pasaka, kur vīrs, veiksmīgi ticis galā ne tikai ar savas sievas, bet arī kaimiņa sievas pāraudzināšanu, savas dzīves noslēgumā tie uzņemts debesīs: *Tai [...] lečija daudz buobu i par tū pjec smiertis patyka dabasūs* (Šmits, 1935: XI).

Pāraudzināšanas rezultāts nav tik veiksmīgs, ja sievas slinkumam pievienojas vēl kāda no deviantās uzvedības konstantēm, piemēram, mulķība. Tad attiecīgi komplicētāka kļūst arī pāraudzināšanas procedūra, kur ierasto analogiju mēdz papildināt arī emocionāli ekspresīvākas akcijas, piemēram, vīrs slinko sievu apsmērē ar ratu smēri un izvārta spalvās, bet, kad arī tas nelīdz, pasakas beigās viņš sievu padzen no mājām: [...] *pajem sīvu, Anniņu, sasyt un padzan nu muojom un leidz šai dīnai Juons vīns pats dzeivoj* (Šmits, 1935: XI). Vai cits piemērs: vīrs savu slinko un pārgudro sievu ievīsta salmu kūlī, atstāj ziemas laikā aizdurvē, kur viesi nokārto savas dabiskās vajadzības, viņa pārsalst, bet pasakas noslēgumā tomēr tiek panākts iecerētais mērķis – sieva kļūst strādīga: *jei [...] suoka struoduot vysu dorbu un [...] suoka dzeivuot labi un boguoti* (Šmits, 1935: XI).

Stūrgalvība, nīkums ir komplicēta deviantās uzvedības izpausme, jo satur gan mītiskus, gan reliģiskus, gan kultūrvēsturiskus un sadzīviskus stūrgalvības izpratnes faktoros. Pasakās stūrgalvīgā sieva parādās daudzveidīgās sinonīmās variācijās: *ītīpeiga, uparta, špetna, sirdīga, slyktoka par valnu* u.tml. Tieši stūrgalvība un nepakļāvība ir tās īpašības, kas visizteiktāk runā pretī Bībeles proponētajiem ideālās sievas priekšrakstiem. Nereti stūrgalvība korelē ar bābas (*buoba*) tēlu latgaliešu folklorā, kam paralēli tradicionālajai vecas sievietes/ sievas nozīmei, iezīmējas bagātīgs mītisko un reliģisko konceptu slānis (par to skat. Juško-Štekele, 2006). Tomēr deviācijas izpratnes kontekstā pasakas aktualizē tradicionālo T. Pārsona definēto sociālās akcijas struktūru, kas atklājas caur sižetiski izvērstu stūrgalvīgās sievas rīcības normatīvo kontekstu.

Pasakās netiek meklēti vai skaidroti stūrgalvības iemesli, lielāku uzmanību veltot daudzveidīgām deviācijas izpausmēm, kas aptver sievas nevēlēšanos pakļauties vīram, izrunāšanās, rīkošanos pretēji vīra teiktajam. Stūrgalvības komplicēto dabu apliecina arī tās korelācija ar tādām deviantās uzvedības konstantēm kā pret vīru vērsta emocionālā un fiziskā vardarbība. Stūrgalvīgā sieva lamā un sit savu vīru: *Veceļs beja lobs cylvāks, bet juo buoba beja slyktuoka par valnu: syta veceļi, lomuoja, tai ka veceļam nabeja dzeives nu buobas* (Šmits, 1935: XI).

Sankciju līmenī pasakas neizskata iespēju mainīt vai labot stūrgalvīgās sievas raksturu. Vienīgais veids, kā pasakas sižetiski mēģina risināt šādus sarežģījumus, ir vai nu vīra pašnāvība ([..] *kaut ej uz upi sleiktu* (Šmits, 1935: XI)), vai arī sievas nonāvēšana. Vīra pašnāvības motīvam pasakās nepiemīt dramatisks spriedze, tas drīzāk skaidrojams kā vārdu spēle, frazeoloģisms, lai uzsvērtu, cik ārkārtīgi grūti klājas vīram, ja viņam ir stūrgalvīga, nikna un agresīva sieva. Vienā no pasakām iniciālā formula satur izvērstāku vēstījumu par pāragri mirušiem vīriem, kas labprātīgi dodas uz elli – [..] *vysi deļ tuo, ka špetna sīva* (Šmits, 1935: XI). Velns, gribēdams pārbaudīt, kā laulātie dzīvo, cilvēka izskatā ierodas uz zemes, apprecas un piedzīvo *špetnās* sievas izpausmes: sieva viņu nostrādina smagā fiziskā darbā, pati sēž ar draudzenēm, tērē, izdāļā velna naudu, sūdzas par naudas trūkumu, sit velnu ar krāsns kruķi, met viņam pa pakausi ar egles sakārni (Šmits, 1935: XI). Tādējādi *buoba* kļūst par vienīgo būtni zemes virsū, no kā velns patiesi baidās un bēg, atpakaļ neatskatīdamies.

Šāda sakāpināta sievas deviance neiekļaujas sadzīviskās uzvedības novirzēs. Pasakās koncentrētā tautas pieredze neatrod citu risinājumu, kā izolēt tradicionālajām vērtībām pilnīgi neatbilstošo, zināmā mērā dēmonisko sievu no sabiedrības, tāpēc populārākais dramatiskā kāpinājuma paņēmieni pasakās ir vīra mēģinājumi tikt vaļā no stūrgalvīgās, niknās sievas, izrokot bedri, kurā viņai jāiekrīt. Tomēr arī šis risinājums lieku reizi apstiprina stūrgalvīgās, niknās sievas dēmonisko dabu, jo, arī iekritusi ellē, viņa tur jūtas labi un turpina terorizēt elles iemītniekus: *valns [..] klīdz ar osorim: "Veceļs, pajem tu sovu buobu nu myusu elnes! Jei jau myusus vysus izdzonuoia un appleisja vysas ausis"* (Šmits, 1935: XI).

Neuzticība deviances izpratnē pasakās parādās kā sievas saistību nepildīšana, laulāto uzticības zvēresta laušana. Neuzticības fakts parādās septiņās pasakās un iezīmē divus atšķirīgus scenārijus neuzticības situācijas atrisināšanai.

Pirmajā gadījumā pasaku tipā "Neuzticamā sieva" vīrs (vai viņa intereses pārstāvoša persona, piemēram, kalps), samanījis sievas neuzticību, pats safabricē turpmāko rīcības scenāriju. Tā rezultātā sievas mīļākais vai nu tiek, nogalināts, vai arī piedzīvo smagas fiziskas kroplības, bet vīrs sievai piedod nodarīto un dzīvo ar viņu laimīgi tālāk. Sievai šai scenārijā iziet no situācijas ar viegliem emocionāliem pārdzīvojumiem vai ar vidēji smagiem miesas bojājumiem. Tā pasakā, kur tiesneša un soģa funkciju veic kalps, saimnieces mīļākais tiek kastrēts, viņa dzimumorgānus saimniece nezinādama iecep pīrāgā, ar kuru dodas pacienāt savu sasirgušo mīļāko, bet tas saimniecei no dusmām nogriež mēli. Arī šai gadījumā saimnieks paliek dzīvot ar savu krāpnieci sievu: *Tai saiminīks palyka ar sovu saimineicu, kurai bej atgrizta mjāļa* (Šmits, 1935: XI).

Otrs neuzticības scenārijs īstenojas pasaku tipā “Blēdīgā sieva”, kur novirze no sociālās normas tiek uzskatīta par tik būtisku, ka pieļauj augstāko nosodījumu – dzīvības atņemšanu. Atšķirīgo neuzticības situācijas normatīvo regulējumu abos scenārijos nosaka trīs faktori. Pirmkārt, iecietīgā attieksme pret sievas neuzticību iespējama t.s. sociāli zemo varoņu (saimnieka, zemnieka sieva) attiecībās, savukārt pasaku tipā “Blēdīgā sieva” galvenā varone pārstāv t.s. augstos personāžus – visbiežāk tā ir ķēniņa meita. Kontekstuāli šādi pasakās īstenojas tautas sociālie ideāli, imanenta vērtēšanas pret kultūrvēsturiskajai situācijai atbilstošiem šķiriskajiem oponentiem. Otrkārt, sankciju smagumu iespaido vīram reāli nodarītais kaitējums. Pasaku tipā “Neuzticamā sieva” neuzticības fakts aizvaluētā veidā tiek tikai pieminēts, turklāt sievas mēģinājums nogalināt savu vīru ir paša vīra inscenēts, tad pasakas noslēgums, pēc nevēlamā sāncenša likvidēšanas, uzskatāms par miermīlīgu situācijas atrisinājumu, kas dod cerības uz turpmāku labklājību ģimenē: *Veirs pīdevja jai vysu. Tad jī paglobuoja bryutgonu un dzeivuoja laimīgi* (Šmits, 1935: XI). Savukārt pasaku tipā “Blēdīgā sieva” sievas neuzticības faktu papildina arī citas deviantās uzvedības konstantes, piemēram, mantkārtība, nodevība, zagšana u.tml., neuzticīgā sieva veicina vīra nonāvēšanu, tāpēc šādas deviācijas vienīgais iznākums ir nāves sods, ko īsteno pats vīrs: *viņš nūcierta ari sovu agruokū sīvu* (Šmits, 1935: XI) vai *Sovu sīvu pīsēja divim zyrgim pi astem un viņu zyrgi saraustīja gobolu gobolūs* (Šmits, 1932: VIII). Treškārt, pasaku tips “Blēdīgā sieva”, atšķirībā no pasaku tipa “Neuzticīgā sieva”, satur brīnumu pasakām tipiskus elementus, kas pasakas darbību pārceļ pārsadzīvīskā realitātē un arī uz pasaku nobeigumiem liek skatīties kā uz tipisku brīnumu pasaku beigu formulu, kuras uzdevums ir ne tikai nodrošināt sociālo taisnīgumu, bet demonstrēt bezkompromisa labo spēku uzvaru pār ļaunajiem.

Vīra deviantās uzvedības tipiskie modeļi *Models of husband's deviant behavior*

Vīra deviantās uzvedības scenāriji sadzīves pasakās salīdzinājumā ar sievu uzvedības normatīvo regulējumu atklājas ievērojami mazākā skaitā – tikai sešas pasakās, kas apvieno tādas novirzes no sociālās normas kā muļķība, slinkums, pārmērīga alkohola lietošana, emocionāla un fiziska vardarbība pret sievu un sievas slepkavība. Par vīriem specifisku deviāciju uzskatāma pārmērīga alkohola lietošana, pārējos gadījumos tās ir arī sievu uzvedībā fiksētas atkāpes no sociālās normas, kam gan vērojami niansēs atšķirīgi normatīvi regulējumi, par ko skat turpmāk.

Vīra **muļķība** deviantās uzvedības izpratnē sadzīves pasakās nav vērtējama viennozīmīgi. Sadzīves pasakas piedāvā divus muļķu ģimenes dzīves scenārijus – kategorisku muļķu nepiemērotību ģimenes dzīvei vai

samierināšanos ar vīru muļķi, ja tomēr tāds ir apprecēts. Iespējams, iecietīgo attieksmi pret muļķiem iespaidojusi kristietības atziņa “Svētīgi garā nabagi, jo tiem pieder debesu valstība” (Mt. 5: 2-3) un muļķīšu jeb *duraceņu* īpašā vieta Latgales kultūrvēsturē (par to skat Juško-Štekele, 2012), tomēr attiecībā uz ģimenes dzīvi muļķa iespējas ir ierobežotas. Tas redzams pasakā, kur vecāki savam dēlam muļķim ilgi nevar atrast sievu, bet, kad tādu atrod, viņa kāzu naktī tomēr aizbēg, savā vietā atstādama kazu, un jaunais vīrs nemaz nemana atšķirību. Pasakas spriedums ir galīgs: *Jis gribēja apprecēt cytu, bet vairs navarēja atrast taidas meitas, kura ītu pi duraciņa par sīvu, tai šū boltu dīnu dzeivoj duraciņš bez sīvas* (Šmits, 1935: XII). Vīra, līdzīgi kā sievas, muļķību sabiedrība ir izvērtējusi un pieņēmusi kā pašsaprotamu. Pasakas rāda, ka bez kontroles atstāts muļķa vīrs var nodarīt lielāku ļaunumu. Pēc vairākkārtīgiem mēģinājumiem iesaistīt muļķi vīru ģimenes ikdienas dzīvē un, kad tas neizdodas, arī pēc mēģinājuma viņu nogalināt, pasaka piedāvā vienīgo iespējamo atrisinājumu: *Tai jī navarēja nūbeigt muļķa veiru, ar kuru beja juodzeivoj vyss myužs sīvai* (Šmits, 1935: XI).

Otra latgaliešu folklorā kopumā daudzveidīgi atainota vīra deviācija ir **pārmērīga alkohola lietošana**, kas šķirama no alkohola lietošanas kā tādas. Dzērāja tipam latgaliešu folklorā piemīt atšķirīgas konotācijas – brīnumu pasakās dzeršana krogā parādās kā trešā tēvadēla diferenci apliecināošs rādītājs atšķirībā no gudrajiem brāļiem, pasaku nobeiguma formulās dzeršana mēdz būt viena no iegūtās laimīgās dzīves konstantēm, tomēr sadzīves pasakās ar ģimenes tematiku pārmērīga dzeršana parādās kā viena no tipiskākajām deviācijām, kas vairāk vai mazāk negatīvi ietekmē ģimenes labklājību un mājiniokus (par dzērāja konceptu Latgales kultūrā skat Ūdre, 2012).

Vīra alkoholiskās atkarības pakāpe parasti tiek fiksēta jau pasakas ievadā: *Dzāruojs vysu nūdzēra un saimei vajadzēja cīst bodu* (Šmits, 1927: IV). Sadzīves pasakās iespējams izsekot vismaz trim alkoholiskās atkarības normatīvā regulējuma mehānismiem: pirmkārt, samiernieciska (pat aizgādnieciska) attieksme pret dzērājiem, otrkārt, dzeršanas adaptācija kultūrvidē, treškārt, nosodījums ar dažādu sankciju (piemēram, izolācijas) pielietojumu. Attieksmes normatīvo orientāciju nosaka deviances intensitāte, jo sevišķi nodarījuma smagums attieksmē pret sievu un citiem ģimenes locekļiem.

Samiernieciska attieksme parādās pasakās, kur dzērāja nodarītais kaitējums paliek vispārīga dzeršanas fakta konstatācijas līmenī un neparedz dzērāja agresīvu attieksmi pret ģimeni. Piemēram, ja deviance izpaužas, kā dzērumā izteikta bravūrīga attieksme pret sievas veicamajiem darbiem, pasaka ar situācijas “pārbaude” palīdzību atrisina šo domstarpību: vīrs, mēģinot darīt sievas darbus, pārliecinās, ka sievas darbi nebūt nav tik vienkārši. Pasakas beigumā [...] *veirs ar sīvu suocja dzeivuot sadarīgi* (Šmits, 1935: XI). Vai cits piemērs: pasaka par dzērāju vīru, kurš Dieva dotās dāvanas izmanto, lai

izmānītu no velna naudu, ko atkal pārdzert krogā. Pasakas noslēgumā mirušā dzērāja dvēseli negrib pieņemt ne ellē, ne paradīzē, bet dzērāja dvēsele, izmantojot dzērājam piemītošo atjautību, pa šķirbiņu iemūk paradīzē pie savas ģimenes [...] *un šudiņ tur dzeivoj* (Šmits, 1927: IV).

Dzeršanas adaptācija kultūrvidei atklājas pasakās, kur dzeršana tiek pārmantota no paaudzes paaudzē. Piemēram, kādā pasakā [...] *tāvs beja ļūti lels dzāruojs, kurs nūdzēra vysu naudu, cik jam vīn beja* (Šmits, 1931: VII). Lai iegūtu naudu, viņš pārdod trīs savas meitas. Dēls atbrīvo meitas un par balvu iegūst no velna [...] *desmit buteļu brandveina*. Arī pasakas nobeiguma formula, kam jāapliecina varoņa izaugsme, akceptē tēva dzīves stratēģiju: dēls [...] *dzeivoj prīceigs un dzer valna dzērīnus* (Šmits, 1931: VII).

Radikālākas sankcijas pret pārmērīgu alkohola lietošanu parādās pasakās, kur alkoholisma faktu papildina arī tādas deviances konstantes kā **emocionāla un fiziska vardarbība** pret sievu. Piemēram, kādā pasakā zemnieks Skrabs ne tikai [...] *cīši daudz dzēra brandīņa un kotru godu puordzēra vysu labību*, bet arī [...] *kad uz juo sīva pasacīja vuordu, kab jis nadzartu, jū tyuleņ syta* (Šmits, 1935: XI). Šādas deviances normatīvais aspekts ir atkarīgs, pirmkārt, no sievas, otrkārt, no apkārtējo attieksmes. Pasaka piedāvā scenāriju, kur sieva, nebūdam gatava samierināties ar vīra vardarbību, inscenē viņa neadekvātu uzvedību. Tas rada bažas apkārtējos ne tikai par dzērāja sievas un bērnu, bet arī par kaimiņu dzīvības drošību, tāpēc kaimiņi [...] *lyka Skrabu rotūs, pīsēja ar viervi un nūvedja uz nagudrū muoju* (Šmits, 1935: XI).

Sievas nogalināšana attiecināma uz antisociālajām deviancēm, kas saistītas ar tiesisko normu pārkāpšanu. Sadzīves pasakās sastopami divi sievas nogalināšanas scenāriji – tādi, kas balstīti uz mantkārību, un tādi, kas balstīti uz emocionālas un fiziskas vardarbības radītiem afektiem. Mantkārības nolūkā pasaku tipā “Bagātais un nabagais brālis” sievas nogalina gudrie brāļi, noticēdami jaunākā – negudrā brāļa – teiktajam, ka viņš tirgū pārdevis savu mirušo māti. Sankcijas par tiesisko normu pārkāpumu pasakās īstenojas gan juridiskā, gan morālā taisnīguma līmenī: gudrie brāļi tiek apcietināti un vienlaikus apliecina savu prāta mazspēju, kas atbilst tautas ētiskajiem un sociālā taisnīguma ideāliem: *Vot sajem jūs cīši, tūs div bruoļeiši, i aizdzan uz Sibjeri, a tys duraks palyka sātā; apsažeņājās i šudiņ dzjeivoj* (Šmits, 1935: XII).

Slepkavība afekta stāvoklī ir sekas laulāto nesaderībai: *Jī dzeivuoja cīši slikti: kovuos un lomuojuos. Vīnu reizi zemnīks cīši sasadusmuoja uz sovu sīvu, satvēra ciervi un nūsyta jū* (Šmits, 1935: XI). Sabiedrības viedoklis par sankcijām nav viendabīgs: slepkavam jāuzņemas morālā atbildība, un viņa dvēsele par šādu nodarījumu pienākas velnam, tomēr no juridiskās atbildības zemnieks izvairās, apprecēdamies vēlreiz un nu jau ar atjautīgās sievas palīdzību izvairīdamies no pelnītā soda. Abu dvēseles beigās nonāk debesīs.

Secinājumi **Conclusions**

- Sadzīves pasakas sniedz tipiskus dzimumu uzvedības modeļus un scenārijus, prezentējot gan sabiedrības akceptētas, gan arī nosodītas dzimumu lomu reprezentācijas.
- Laulāto deviantās uzvedības modeļi pasakās atklāj būtiskākos laulāto nesaderības iemeslus un piedāvā tautas pieredzē akceptētus scenārijus šo deviāciju prevencijai un sankcijām.
- Sievas uzvedība kristietības tradīciju un patriarhālās ģimenes ieražu ietekmē latgaliešu pasakās tiek reglamentēta stingrāk un daudzveidīgāk, vīram piedēvēto noviržu no sociālās normas ir mazāk, un sankcijas pret tām ir pielaidīgākas.
- Folklorā atklātie laulāto nesaderības piemēri korelē ar 20. gadsimta pirmajā pusē tiesu praksē fiksētajiem biežākajiem laulību šķiršanas iemesliem.
- Sadzīves pasakās atklātie vīra un sievas deviantas uzvedības modeļi latgaliešu pasakās ļauj dziļāk izprast ģimenes dzīves psiholoģiju un veidot kultūrtradīcijā balstītas vērtības ģimenes institūta stiprināšanai un iespējamo laulības iziršanas problēmu novēršanai.

Summary

One of the topical issues the family-related anthropology scientists are trying to determine are reasons and tendencies of divorce. Based on the statistical data of Latvian Central Statistical Bureau (CSP), in 2015 civil registries in Latgalian region executed the biggest amount of divorces if compared to other historical regions of Latvia (Latgale – 747, Kurzeme – 676, Zemgale – 618, Vidzeme – 443) (CSP, 2015). In 1938 the same statistics were cardinally different and the amount of divorced marriages in Latgale was the smallest among other regions (Latgale – 122, Kurzeme – 209, Vidzeme – 235, Zemgale – 216). This fact rises concerns about the developed tendencies characteristic for a family as a social institution and urge to seek the causes of the marriage breakdown by searching more sophisticated correlations in such areas as mythology, religion, economy etc. One of the sources for such invariant structure search are the nation`s traditionally cultural narratives – tales that contain gender-typical behavioural models and scenarios formed within the experience of the nation, where are presented both socially accepted and condemned representations of a gender role. In folk-tales these values appear in the form of a social action, covering persons, conditions and regulatory frameworks involved in an activity. Latgalian household folk-tales in their story models contain relationship risk factors sustained by the family life subjects – husband and wife, i.e., behavioural deviations from generally accepted social norms, and reveal their causes, explain the context of this deviation, and offer the regulatory solution for such deviation. The deviant behavioural models of husband and wife depicted in Latgalian folk-tales in their essence coincides with the divorce

reasons fixed in as far as 1930s (CSP, 1938): adultery (unfaithful wife, wily wife in fairy-tales), life or health threat (emotional or physical violence against husband or wife), difficultly curable mental weakness (stupidity), criminal, dishonest or depraved lifestyle (stubborn wife, husband drunkard), etc. The deviant behavioural models of husband and wife depicted in Latgalian folk-tales as described in the paper allow a deeper understanding of the psychology of a family life and to form cultural-based and tradition-based values in order to strengthen family institutes and to avoid possible marriage breakdown problems.



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ХАРАКТЕРИСТИКА ЖЕНЩИН, СОВЕРШИВШИХ УБИЙСТВО В ПОЛЬШЕ

Characteristics of Female Murderers in Poland

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Abstract. *The problems analysed in the study were inspired by the increasing number of reports on violent criminal acts committed by women as perpetrators. Therefore, it is worth analysing the motivations for committing the most serious crimes by women. Furthermore, the study took into consideration the determinants of committing the crimes that were connected with family and non-family environments of the criminals. The analysed factors included personality, experiences from the childhood, school and professional situation. The analyses discussed in the study attempted to determine a female murderer profile.*

Keywords: *homicide, female murderer.*

Введение

Introduction

Статистические данные показывают, что в третьем квартале 2016 года в польских тюрьмах пребывало 58,791 заключенных, из которых 1,922 составляют женщины. К пожизненному заключению в Польше приговорено 370 заключенных, в том числе всего 17 женщин. К 25 годам лишения свободы приговорено 1705 заключенных, в том числе 57 женщин. За убийство в тюремном заключении пребывает 5117 человек, в том числе 454 женщины (Kwartalna informacja statystyczna, 2016, 4, 7). Как показывают статистические данные, гораздо чаще убийство совершают мужчины. Именно поэтому следует присмотреться к характеристике женщин-убийц. Ответить на вопрос, почему они убивают, какое у них образование, сколько им лет, какие у них черты личности. Зная о судьбе женщин, совершающих радикальные преступления, можно способствовать предупреждению преступности и предотвращению неправильной социализации молодежи. Целью исследований была характеристика женщин убийц. Цель будет осуществлена при помощи анализа документов и метода интервью. Ниже будет представлен анализ ранее проведенных исследований по вопросу

женщин-убийц, в качестве примера приведены два случая (case study) убийства по наиболее редкой мотивировке.

**Социально-демографические и психологические характеристики,
modus operandi**
Sociodemographic and psychological characterization, modus operandi

Вначале следует описать женщин-убийц, принимая во внимание их социально-демографические характеристики, такие как возраст, семейное положение, образование, место работы, наличие детей, имевшие место конфликты с законом. Исследования, проведенные М. Łosińska (2013, 52-57) на группе, состоящей из 50 человек, показывают, что средний возраст убийц составляет 39 лет, 36 % женщин состояло в браке, а 28 % живёт в незарегистрированном браке. Только 10 из принимавших участие в исследовании женщин ранее подвергались судебному наказанию. Что касается пострадавших, то в 70 % (38 человек) случаев жертвой были мужчины (муж или партнёр), только в 6 случаях жертвами были чужие для виновного лица люди. Преступления, как правило, совершены были в общей квартире, орудием убийства в 57 % случаев был кухонный нож, а в 15 % смерть наступила в результате удушья. Женщины чаще всего совершают преступления по эмоциональным причинам: из чувства страха и чувства опасения за свою жизнь или из-за обиды (большинство из них одновременно были жертвами внутрисемейного насилия со стороны мужа или партнёра). Только в трех случаях мотивом для убийства было получение материальной выгоды.

Исследования, проведенные Екатериной Мирослав (2014), связаны были с социальной компетентностью женщин-убийц. В ходе исследования во внимание были приняты три группы, а именно: женщины, осужденные за убийство, и две контрольные группы: осуждённые за преступления неагрессивные (как правило, против собственности), а также женщины, которые никогда не совершали преступления. Каждая группа состояла из 100 человек. Исследование было проведено с помощью Теста Социальных Компетенций А. Matczak, который состоит из трёх шкал: компетенции, обуславливающие эффективность в интимных ситуациях; компетенции, обуславливающие эффективность в ситуациях социального воздействия; компетенции, обуславливающие эффективность в ситуациях, требующих уверенности в себе. Исследование показало, что женщины из группы осуждённых за убийство демонстрируют самый низкий уровень рассматриваемых общественных компетенций, причём особенно низко оценили свои способности в ситуациях, требующих уверенности в себе. Это может означать, что женщины-убийцы замкнуты в себе, они не стремятся к

компромиссу, чтобы достичь своей цели, но они также могут быть более восприимчивы к внешнему воздействию. Результаты исследований также показали, что убийцы в основном женщины в возрасте 41-50 лет (в группе эта категория составила 30 %), в большинстве случаев разведенные. Более одной трети респондентов имело начальное образование. Большинство респондентов проживало в крупных городах, до совершения убийства не имели конфликтов с законом, и часто имели работу (Miroślaw, 2014).

Одним из наиболее интересных исследований по мотивации убийц были исследования Z. Majchrzyk (1995), который изучил 60 женщин-убийц. Из его исследований вытекает то, что польская убийца это женщина в возрасте 31-40 лет (38 % от всех опрошенных), а средний возраст всех респондентов составляет 36,5 лет. 73 % опрошенных воспитывалась в рабочих семьях. 71 % опрошенных женщин во время совершения преступления не работали или были в процессе смены рабочего места. Среди женщин доминирует базовое образование, с высшим образованием были только две участницы исследования. 43 % из них состояло в браке. Что касается семейного окружения респондентов, то всего лишь 15 % воспитывались в благоприятных для развития условиях, а в случае 21,7 % семей преобладали крайне неблагоприятные условия, способствующие негативной социализации. 55 % респондентов подчеркнули негативное отношение их родителей к своим детям, в 85 % опрошенных в семьях наблюдалось межсемейное насилие. Требования родителей по отношению к исследуемым женщинам были низкие, преобладал неблагоприятный стиль воспитания с доминированием физического наказания. У 40 % респондентов имелись проблемы с обучением и с поведением.

Анализируемое выше исследование показывает также, что 20 % участниц исследований имеют неагрессивную личность, около 55 % - это женщины-убийцы с агрессивной личностью, а 25 % - с крайне агрессивной личностью. Кроме того респондентов характеризует эмоциональная незрелость, преимущество эмоциональной и импульсивной регуляции, эгоцентризм, подозрительность и недоверие, занижена самооценка, низкий уровень самоконтроля и потребности в стимуляции, а также высокая склонность к накоплению эмоционального напряжения, и низкая устойчивость к стрессу. Переходя к анализу мотивации преступления, следует отметить, что наиболее распространенным стимулом, причиной прямой агрессии преступника является испытание сильной физической боли или восприятие ситуации как угрожающей жизни - 38 респондентов. Именно из мотивации страха и опасения 50 % женщин совершило убийство. Это означает, что женщины в этой группе совершили убийство в ситуации, которую мы воспринимаем как угрозу, как правило, убийство произошло во время драки, в ходе которой муж или партнер избивал женщину (следует

отметить, что во многих случаях, женщины-убийцы в течение длительного времени страдали от насилия со стороны сексуального партнера). Что касается остальных мотивов, то в 21,7 % случаев действия были мотивированы чувством несправедливости (следует отметить, что не всегда объективным); 11,7 % случаев – это убийства с сексуально-эротической мотивацией (ревность и измена); в 8,3 % убийство было совершено по экономической мотивации, и столько же с патологической мотивацией (Majchrzyk, 1995, 87-160).

Продолжая свои исследования Z. Majchrzyk (2008) изучал группу из 100 женщин и 100 мужчин, обвиняемых в убийстве и находящихся на судебно-психиатрическом наблюдении. Как показывают результаты, как среди женщин, так и мужчин самую большую группу составляли респонденты в возрасте 22-30 лет, эту группу составили 35 женщин и 31 мужчина, а в возрасте 31-40 лет было соответственно 33 и 25 человек. Более 60 % респондентов воспитывались в рабочих семьях, 39 % участников исследования получили начальное образование, а 28 % профессиональное. 50 % женщин и 43 % мужчин происходили из семей с отрицательной образовательной средой, в которой преобладает авторитарный стиль воспитания детей. В 65 % случаев агрессивное поведение имело место в семье, а в 68 % случаев также в ближайшем окружении.

У 20 женщин и у половины опрошенных мужчин обнаружена алкогольная зависимость, у 17 женщин и 27 мужчин обнаружены другие расстройства личности, у 12 женщин и 29 мужчин – социопатия, незрелая личность – у 24 женщин и 6 мужчин. Результаты исследования позволили охарактеризовать респондентов как преступников с психопатическими чертами характера, такими как настороженность, подозрительность, враждебность, эмоциональная неуравновешенность, склонность ко лжи, эгоцентричность и сверхчувствительность по отношению к собственной личности. Доминирующей мотивацией преступления была мотивация страха и опасения – 50 преступников (в подавляющем большинстве женщины), мотивация мести доминировала у 42 человек, мотив грабежа – у 40 человек, сексуально-эротическая мотивация – в 32 преступлениях, патологическая мотивация – у 26 пациентов (Majchrzyk, 2008).

Следующее исследование касалось анализа типа личной тождественности (идентичности), приобретённой в период полового созревания у женщин, осужденных за убийство. Анализ проведён на примере восьми участниц исследования, женщин в возрасте от 28 до 39 лет. Респонденты были приговорены на сроки от восьми лет до пожизненного заключения. Две из них были осуждены за убийство своих собственных детей, две за убийство своего отца и брата мужа, две - за убийство партнёра, и две – за заказное убийство своего мужа. Большинство респондентов имеет

начальное образование, только у одной из убийц обнаружена умственная отсталость. Женщины воспитывались в семьях с алкогольными проблемами, были свидетелями, а также и жертвами насилия со стороны родственников. Жили с асоциальными сексуальными партнёрами. Анализируя пути решения пятого кризиса - кризиса идентичности согласно с теорией Э. Х. Эриксона - у шести респондентов сформировалась негативная идентичность, у одной из женщин диффузия идентичности и спутанность ролей также у одной из участниц (Badora & Karpuszenko, 2011).

Характеристика случаев *Case study*

В конце размышлений о характеристике лиц, совершивших убийства в Польше, чтобы проиллюстрировать эти характеристики, далее приведены два случая: случай Марты, приговорённой к 25 годам заключения за убийство незнакомца, и случай Анны, приговорённой к 15 годам лишения свободы за убийство своего мужа. Оба случая были основаны на многих часах интервью с заключёнными и документации исправительного учреждения: данные судебного дела, судебно-психиатрической и психологической экспертизы.

Анна, 60 лет, на момент совершения преступления ей было 52 года; приговорена к 15 годам лишения свободы, после отбытия восьми лет наказания готовится к условному досрочному освобождению за хорошее поведение. Анна является единственным ребенком в семье, воспитывалась в полной семье. Жила в одном из городов в Силезии, в многоквартирном доме, имеет двух взрослых сыновей, причём одного инвалида. Во время разговора Анна немногословна.

Вначале, чтобы определить, в каких условиях росла Анна, во время интервью были заданы вопросы о происхождении семьи, о школе, о сверстниках и отношении к психотропным веществам. Что касается семьи, респондент заявила, что она чувствовала себя любимой своими родителями, и дома было всё в порядке. По словам Анны родители не были строгими, но и не баловали её. Анна не могла сказать, нравилось ли ей ходить в школу, это зависело от желания и настроения. В результате, женщина окончила профессионально-техническое училище и стала швеей, дополнительно она закончила курс по набору текста. Анна считает себя не влюбчивой, она имела несколько подруг и предпочитала остаться дома. Она также сказала, что в подростковом возрасте не пила алкоголь, и тем более не употребляла наркотиков.

Будучи взрослой, она работала швеей, а затем в качестве секретаря в школе, где познакомилась со своим мужем, и в последние годы до своего

ареста в качестве няни. Когда дело доходит до брака оценивает его как удачный, в их семье стало хуже, когда её муж получил инвалидную степень и начал злоупотреблять алкоголем. Затем он начал, по словам Анны, применять физическое и психологическое насилие по отношению к Анне, но она об этом никому не рассказывала, потому что ей было стыдно.

Еще менее охотно Анна рассказывает о преступлении и представляет его как результат насилия со стороны мужа. В уголовном деле, однако, написано, что это Анна была виновником насилия в отношении к мужу, была агрессивной, конфликтной, допускалось также избивание мужа и сына-инвалида. В день убийства супруг пришел домой под влиянием алкоголя, начал суетиться и беспокоить Анну, мешал ей смотреть телевизор. Так как женщина не смогла успокоить своего мужа, она взяла полотенце, забросила его на шею мужа и начала душить, когда муж перестал двигаться, спокойно продолжала смотреть телевизор. Утром, когда обнаружила, что супруг умер, положила его в диван. Спустя несколько часов она отправилась искать мужа у своих соседей и друзей, потом сообщила об исчезновении в полицию. Только после нескольких месяцев поисков полиция в процессе следственной деятельности, находясь в доме у Анны, почувствовала странный запах и в шкафу обнаружила пропавшего супруга. На протяжении всего этого времени Анна жила на пенсию мужа.

Из заключения судебно-психиатрической экспертизы следует, что она мало критична к себе, о совершённом преступлении говорит равнодушно, хотя словами пытается выразить сожаление. Анна старается представить себя в лучшем свете, не видит своих недостатков. Исследования личности выявили черты патологической личности, незрелой эмоционально и социально. Её поведение не соответствует общественным нормам, она не способна планировать и организовывать свою жизнь, не в состоянии предусмотреть последствия собственного поведения. Анна не чувствует связи с окружающей средой, у неё сильное стремление, чтобы удовлетворить свои собственные потребности. Она мало устойчива к стрессу, склонна к импульсивному поведению, истерична и театральна, эгоцентрична. Анна женщина несамостоятельная и готовая винить других за свои ошибки и неудачи. Кроме того можно сказать, что интеллект Анны находится в норме, но имеется расстройство личности и органические изменения в центральной нервной системе (что может быть связано с возрастом).

Интервью показали, что Анна на самом деле избегает разговоров о том, что сделала неправильно, и очень охотно говорит о своих успехах и функционировании в тюрьме. Во время отбывания наказания приняла участие в терапевтическом театре, благодаря чему имела возможность поехать за границу (конечно же под наблюдением, под конвоем), работает

также в огороде, убирает и готовит священнику, берется за всю возможную в тюрьме работу. Анна утверждает, что она верующий человек, она любит читать книги, после освобождения будет по-прежнему работать и хочет познакомиться с мужчиной, с которым проведёт остаток своей жизни.

Марта, 36 лет (на момент убийства ей было 22 года); приговорена к 25 годам лишения свободы за убийство незнакомца. Биография Марты с самого начала показывает, что она с детства находилась в группе риска, когда речь идет о преступлении. Марта воспитывалась в неполной семье, отец с самого начала не был заинтересован в ребенке, а её мать умерла, когда девочке было 7 лет. После смерти матери ребенка на воспитание взяли тетя и бабушка. Марта говорит, что она была любима как матерью, так и тётей, которую в настоящее время называет мамой. Марта воспитывалась без наказаний, в доме был средний достаток.

Женщина признается, что ей не нравилось учиться. После окончания начальной школы (школа тогда длилась восемь лет), пошла в ПТУ учиться на швею, но не закончила обучение. Потом начала обучение в средней школе (так как решила, что она имеет большие амбиции), но и здесь слишком быстро отказалась от науки. Профессионально-техническое училище закончила уже в тюрьме.

Девушка уже в подростковом возрасте вела интенсивную личную жизнь. В возрасте 14 лет она начала пить алкоголь, а принимать наркотики чуть позже. Марта говорит, что она стала принимать наркотики, потому что встречалась с мужчиной, который ими торговал. Сначала она принимала амфитамин, а затем героин. В это время она забеременела и родила дочь, которая теперь находится у тётки, у Марты ограничены родительские права. Следующий друг Марты был преступником, он научил ее воровать, он не вернулся в тюрьму с домашней побывки. Девушка была весьма впечатлена этим, и если вместе крали, она пыталась его оберегать.

Одной из главных проблем Марты была наркомания. Женщина утверждает, что она пыталась справиться с наркотической зависимостью, и что в какой-то момент ей это удалось и она принимала наркотики только время от времени (но кажется это не правда). Этот тезис подтверждается также тем фактом, что бабушка и тетя не пускали её домой, если Марта возвращалась после 22 (она признает, что кто-то посоветовал это её бабушке, чтоб таким образом контролировать употребление наркотиков). В день преступления Марту также не пустили в дом. Не желая ночевать на улице, она подговорила знакомую проститутку соблазнить пожилого человека – чтобы иметь ночлег и вдобавок возможность его обокрасть. Вскоре нашелся 74-летний мужчина, который привёл их к себе домой, где они употребляли алкоголь. Чтобы не тратить время, подруга Марты начала обыскивать комнату в доме мужчины, что разозлило хозяина и он стал требовать

обещанный секс. По словам Марты, он стукнул её по ягодицам, что стало решающим фактором и привело к убийству. Девушка сказала, что её регулярно избивали и заставляли заниматься сексом все её партнёры, и в этой ситуации у неё возникло чувство ненависти. В то время, когда мужчина раздевал подругу, Марта схватила кабель от радиоприемника и стала душить мужчину. После того, как он перестал двигаться, девушки тщательно обыскали дом в надежде найти что-то ценное. Через некоторое время мужчина очнулся и Марта снова начала его душить. Уходя из дома девушки подожгли его.

Марта была поймана через две недели, её выдали подруга и её партнёр. Девушка сказала, что в течение этих двух недель не думала о том, что сделала. О преступлении рассказывает без каких-либо эмоций. К сожалению, не было возможности проанализировать документацию, потому что Марта была переведена в другую тюрьму и документация уже отправлена. Из беседы с воспитателем и психологом, выяснилось, что Марта характеризуется слабым осознанием вины, эмоциональной незрелостью, эгоистичностью, склонностью преуменьшать свои собственные недостатки и распределять вину на других. Марта имеет интеллект в норме, но с расстройствами личности, является инфантильной. Кроме того, у Марты диагноз наркомания, и поэтому она находилась в психиатрическом отделении с принудительным лечением. По словам воспитателей Марта хорошо себя чувствует в тюрьме, но не делает ничего, чтобы улучшить свою жизнь.

Выше описаны два случая убийства, совершённые по наиболее редко статистически встречающейся у женщин мотивировке – мотив убийства патологического и убийства с экономическими стимулами. Следует также заметить, что в этих случаях, преступления совершены менее обычным для женщин способом – при помощи удушения. Как правило, женщины используют нож или другие острые или тупые инструменты, а удушение требует силы, особенно если жертвой является мужчина.

В заключение, подытоживая демографическую характеристику и анализ личности, а также рассмотренные случаи, следует сказать, что большинство респондентов в детстве и юности росло в образовательно неблагоприятных условиях, они были свидетелями и (или) испытали насилие в семье. У обеих сформировалась негативная идентичность. Будучи детьми, женщины, отбывающие наказание за убийство, подвергались риску социальной изоляции, и с течением времени это состояние углублялось. «Отверженные имеют ограниченный доступ к социальным ресурсам (сетям и взаимодействиям с другими людьми)» (Marzec, 2016, 82). Результаты показывают, что женщины убийцы эмоционально незрелые, а "источники эмоциональной инвалидности могут быть результатом опыта людей и

воздействия окружающей среды" (Czerw, 2016, 109). Исследование характеристик женщин-убийц, может послужить лучшему пониманию этого явления и тем самым предотвращению на ранних стадиях развития нарушений в процессе социализации личности. Знание сигналов на стадии школы должны привести к тому, что принимая дополнительные меры, а также инновационный и творческий подход к ребёнку будем способствовать улучшению положения молодых людей и изменим их отношение к окружающему миру (Marzec, 2008).

Вывод ***Conclusions***

Подводя итог проведенного анализа, следует отметить, что статистическая польская убийца это женщина в возрасте 31-40 лет, более половины случаев состоит в браке или сожительстве. Как правило, женщины имеют только базовое или профессиональное образование. В более чем половине случаев воспитывались в неполных семьях, с нарушенными межличностными отношениями. В школе были средними или плохим учениками.

В более чем 85 % случаев жертвами являются люди, близкие и знакомые. Чаще всего это муж или партнёр, вторая группа состоит из родителей, братьев и сестер, потом друзей, с которыми преступник проводит вместе время, и дети. В польской реальности незнакомец редко становится жертвой женщин. Такой высокий процент жертв-близких ассоциируется с основным мотивом убийства, а именно страх и угроза, потому что в большинстве случаев убийства супруга или сожителя правонарушитель испытывал длительное насилие с их стороны. Менее значимой, является мотивировка мести и сексуально-эротическая мотивировка. Польские женщины-убийцы в подавляющем большинстве случаев совершают преступление под влиянием эмоций, без планирования.

Summary

In conclusion of the analyses presented in the study, the average Polish female murderer is aged from 31 to 40 and, in almost half of the cases, they are married or living in cohabitation. They mostly have primary or vocational education level. In almost half of the cases, the murderers come from one-parent families with disturbed relations. At schools, they were average or poor students.

In over 85 %, the victims are relatives or friends. The most frequent victim is their husband or cohabitant, followed by parents, siblings and friends the murderer spent time with, and children. In Polish reality, the strangers are rarely the female murderers'

victims. This high percentage of close relatives and friends being victims is related with the leading motives for murders, i.e. fear and danger, since in the most of cases of killing a husband or a cohabitant, the perpetrator had been previously subjected to long-term domestic violence. The second and much smaller group of motives was maltreatment and sexual/erotic motives. Polish murderers use the murder weapons found in the crime scene, with this weapon being mostly knife and the criminal acts committed because of a sudden rage, without planning.

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ADOLESCENTS' SENSE OF COHERENCE VS COPING IN STRESSFUL SITUATIONS. PILOT STUDY¹

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Abstract. *The objective of the article is the answer to the question if the level of the sense of coherence is linked with stress-coping styles in the group of subjects. It was assumed that in the group of youth the sense of coherence would positively correlate with stress-coping strategies based on problem-solving and looking for social contacts, whereas negatively with strategies based on emotion display (Placzekiewicz & Tucholska, 2009). The study was conducted on a group of 149 teenagers of both sexes, aged 14-18 years. The research employed the Life Orientation Questionnaire (SOC-29) by A. Antonovsky and the Coping Inventory for Stressful Situations (CISS) Questionnaire by N. S. Endler and J. D. A Parker. In the group of youth, correlation coefficients indicate a moderate, positive relationship of the sense of coherence and a sense of comprehensibility with a task-focused style. There was also a positive correlation between the general sense of coherence (and three components: a sense of comprehensibility, a sense of manageability and a sense of meaningfulness) and looking for social contacts. Statistically significant correlation coefficients were also obtained between the emotion-focused style and the general sense of coherence and its two components. The results of this study have important implications. They allow for a better understanding of the sense of coherence that contribute to the stress-coping styles among youth. Future interventions could be based on the strengthening of sense of coherence in analyzed group.*

Keywords: *sense of coherence, youth, adolescents, stress, coping.*

Introduction

The concept of salutogenesis by A. Antonovsky (1995), in which the key necessary factor for effective coping with stressors is the high sense of coherence, plays an important role in coping with stress. Strong sense of coherence makes us

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activate resources appropriate in the situation we face and enables us to use them to the full. Salutogenetic orientation suggests approaching health and disease as a continuum, with the present position of a person depending on the strength of their sense of coherence (Dolińska-Zygmunt, 2001). The sense of coherence is "a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement" (Antonovsky, 1995, p. 34). It is made up of three components: Comprehensibility: the extent to which a person perceives the incoming information as coherent and orderly, connected with the feeling that events are predictable and understandable. It is the ability to understand and evaluate the reality from the cognitive point of view. Manageability: the extent to which a person perceives the available resources (e.g., the network of support, faith in God) as sufficient to meet the requirements he or she faces. This component refers to the person's capabilities when confronted with stress. Meaningfulness: it is connected with the feeling that life is meaningful and life requirements are worth the effort and energy. It is the emotional-motivational component of the sense of coherence (Zadworna-Cieślak & Ogińska-Bulik, 2011).

This is an approach to health which – unlike the popular pathogenic model – emphasizes the maintenance of well-being, not the treatment of a disease. The basic problem underlying this model is the question of how individuals stay healthy despite the ubiquitous stressors (Antonovsky, 1995; Zboralski et al., 2010). People with a high sense of coherence are able to correctly and accurately assess the surrounding world. The occurring events are not surprising for them, they do not give up, and in difficult situations they are able to cope or they know where to look for help or support. They do care about something in life, there is something they find worthwhile and want to put their effort in. Such people respond to stressors in an active way, believing that the resources they have are valuable, effective, and useful in overcoming the difficult situation. Therefore, their emotions are not extreme and controllable, because tension does not automatically lead to distress and does not block the mechanism of coping in difficult situations. Hence, such people less often apply irrational defense mechanisms, and they try to rationally concentrate on the task instead (Antonovsky, 1995).

A. Antonovsky (1995) argued that a person's sense of coherence was the main factor to determine their ways of coping with stress. The higher the sense of coherence, the better coping in stressful situations. With this theoretical

background, it was assumed in the study that adolescents' sense of coherence would be related to the ways of coping with stress they choose (Antonovsky, 1995). Coping styles were operationalized on the basis of classification by N. S. Endler and J. D. A. Parker (1992, 1994). The theory is based on the interactive model of understanding stressful situations by R. Lazarus (Lazarus, 1986). The way humans behave in specific situations is the result of conscious interaction of the situation and the person's coping style. R. Lazarus (1993) identifies two ways of coping with stress. The first is task-oriented (the person aims to solve the problem), and the other is emotion-oriented (the person aims to reduce the emotional tension). N. S. Parker and J. D. A. Endler (1992) added one more type of behavior in a stressful situation: avoidance.

It seems, then, that the selected research problem meets the public demand and refers to current research in the area of education and psychology of health. The work also fills the gap in the area of determinants of behavior in stressful situations, mainly occurring due to the scarce data connected with individual context. Moreover, most psychosocial studies on the sense of coherence focus on adults (Kasperek-Zimowska & Chądzyńska, 2011; Rynkiewicz-Andryśkiewicz et al., 2014). Therefore, the present work deals with adolescents. The period of adolescence is regarded as very stressful because of many changes the young person faces. New challenges appear during to the transition into adulthood, such as gradual achievement of independence and self-identity. The major areas of stress for adolescents are school, family, and peer relationships. In problem and conflict situations, youths often display volatility and uncertainty of which course of action to choose. Coping with various tasks of the period of adolescence requires psychosocial maturity, i.e. the ability to tackle and solve problems, but also emotional maturity, expressed in resistance to stress or the ability to autonomously face life dilemmas (Kielar-Turska, 2000; Oleszkowicz, 1993).

Aim of the research

The aim of the work is to find out the relationship between the sense of coherence and the styles of coping with stress in the studied sample, and to identify the differences in the sense of coherence and styles of coping with stressful situations between girls and boys. The results of a study carried out by Płaczekiewicz & Tucholska (2009) among adolescents lead to the following research hypotheses: the sense of coherence correlates positively with problem-focused coping strategies and the pursuit of social contacts, and negatively with emotion-oriented coping.

Participants

The participants were 149 adolescents of both sexes, aged 14-17 (M=14.45). The study was carried out in junior high schools in Białystok. Most of the respondents (59.7 %) were girls (N=89), compared to 40.3 % boys (N=60). The data obtained in the study shows that the respondents' age ranged from 13 to 17 years. The biggest group was people aged 14 (55 %) and 15 (33.5 %), followed by 13-year-olds (5.4 %). The least numerous groups were respondents aged 16 (4 %) and 17 (2.1 %). The presented research is a pilot study.

Statistical analyses

Analysis of correlations demonstrated a directly proportional relationship (for indices >0) and a reversely proportional relationship (for indices <0) between the variables. The strength of relations was interpreted as follows: $R > 0.5$ – strong correlation, R between 0.3 and 0.5 – moderate correlation, R between 0.2 and 0.3 – weak correlation, and $R < 0.2$ – no or negligible correlation.

Research tools

1. The sense of coherence (SOC) was tested using the Life Orientation Questionnaire (SOC-29). It comprises 29 statements divided into three subscales – comprehensibility (COM), manageability (MAN) and meaningfulness (MEA). The first subscale includes 11 statements, the second, 10, and the third, 8. The respondent chooses the responses using a 7-point Likert scale (1 means “always”, 7 means “never”). The global score (SOC-29) shows the level of the respondent's sense of coherence (the score may range from 29 to 203).
2. Coping Inventory for Stressful Situations (CISS) comprises 48 statements used to find out what coping strategies the person chooses in stressful situations. It identifies three basic styles of coping in a stressful situation: 1) task-oriented coping (TOC) assumes intentional and resolute focus on solving the problem and an attempt to make changes in a situation perceived as stressful; 2) emotion-oriented coping (EOC) involves emotional responses, such as being self-absorbed, daydreaming, or blaming oneself; 3) avoidance-oriented coping (AOC) assumes activities aimed at avoiding the problem, escape from the problem without attempting to solve it. It may take two forms: attempts to forget about the stressful situation by engaging in another activity – distraction (DIS), or looking for contacts with other people – social diversion (SOD). The respondent uses a 5-point scale to

decide how often he or she takes up the activity in difficult and stressful situations.

Differences in the sense of coherence and coping styles between girls and boys

The results of maladjusted adolescents in the SOC-29 ranged from 70 to 180 points, with the mean of 121.92 in the sense of coherence scale, 43.69 in the comprehensibility scale, 43.21 in the manageability scale, and 35.01 in the meaningfulness scale. In the Coping Inventory for Stressful Situations, the mean score for task-oriented coping was 56.66 points, for emotional-oriented coping, 51.74, avoidance-oriented coping, 56.01, distraction, 27.22, and social diversion, 18.40.

Table 1 The results of Sense of Coherence Scale (SOC-29) and Coping Inventory for Stressful Situations (CISS)

	Youths N=149				Girls		Boys		Significance of differences	
	Min	Max	M	SD	M	SD	M	SD	t	p
TOC	16	80	56.66	12.76	56.82	12.62	56.43	13.07	0.180	n.i.
EOC	16	80	51.74	14.68	51.86	14.91	51.56	14.45	0.122	n.i.
AVC	20	80	56.01	13.01	56.62	13.12	55.10	12.91	0.702	n.i.
DIS	8	40	27.22	7.18	27.51	7.25	26.80	7.10	0.599	n.i.
SOD	5	25	18.40	4.86	18.58	4.99	18.13	4.69	0.554	n.i.
SOC	70	180	121.92	18.21	119.94	17.74	124.86	18.66	-1.611	n.i.
COM	18	65	43.69	8.47	41.87	8.31	46.40	8.03	-3.300	0.001
MAN	19	64	43.21	7.74	42.67	7.59	44.01	7.96	-1.038	n.i.
MEA	17	56	35.01	8.15	35.39	8.05	34.45	8.33	0.691	n.i.

Bold: statistically significant differences $p < 0.05$

Analysis using the t-Student test for independent samples showed that boys (M=46.40; SD=8.03) differed significantly from girls (M=41.87; SD=8.41) in terms of comprehensibility (COM); $t(149)=-3.30$; $p < 0.05$. The mean for boys is statistically significantly higher than for girls. This means that in the studied sample boys perceive the received information as more coherent and orderly, they have a higher sense of comprehensibility (COM). There are no statistically significant differences in the compared groups in terms of the sense of coherence (SOC) and its other components, manageability (MAN) and meaningfulness (MEA). There are no statistically significant differences, either, in the scores achieved in scales of task-oriented coping (TOC), emotion-oriented coping

(EOC), avoidance-oriented coping (AVC), distraction (DIS) or social diversion (SOD).

Analysis of relationships between the sense of coherence and styles of coping with stress

The aim of correlation analysis is to answer the question whether the level of the sense of coherence is related to the styles of coping with stress in the studied sample. Table 2 presents paired correlations between global sense of coherence and its components and the strategies of coping with stress.

Table 2 Correlation coefficients (Pearson's r) of the sense of coherence and styles of coping with stress among adolescents

	SOC Sense of coherence	COM Comprehensibility	MAN Manageability	MEA Meaningfulness
TOC Task-oriented coping	0.22**	0.26**	0.12	0.09
EOC Emotion-oriented coping	-0.32**	-0.01	-0.35**	-0.36**
AVC Avoidance-oriented coping	0.13	0.19*	0.05	0.03
DIS Distraction	-0.00	0.13	-0.05	-0.10
SOD Social diversion	0.30**	0.24**	0.22**	0.22**

*. Correlation significant at the level of 0.05 (bilaterally)

** . Correlation significant at the level of 0.01 (bilaterally)

In adolescents the global sense of coherence (SOC) and comprehensibility (COM) were significantly positively correlated with task-oriented coping (TOC). In other words, as the index of task-oriented coping with stress grows, the global sense of coherence and comprehensibility also grow, i.e., the person perceives the incoming information as coherent and orderly. He or she feels that events can be predicted and understood and has the ability to understand and evaluate the reality from the cognitive point of view. A person with a high sense of coherence and comprehensibility more often copes with stress by doing tasks and aims to solve the problem by means of cognitive transformations or attempts to change the situation.

Emotion-oriented coping (EOC) was negatively correlated with the global sense of coherence (SOC), meaningfulness (MEA) and manageableness (MAN). It means that as the global sense of coherence and its two components grow, the index of using emotion-oriented coping lowers. In other words, in a stressful situation the person does not concentrate on their own emotions such as irritation, anger, or tension.

There was a positive correlation between global sense of coherence (SOC) and its three components and social diversion (SOD) as a coping strategy. This means that global sense of coherence and its components are related with the tendency to avoid stressful situations by social diversion. The analysis of relationships between the variables showed that avoidance-oriented coping was positively correlated with comprehensibility. This means that as this component grows, the index of avoidance-oriented coping also grows.

The analysis of relationships between global sense of coherence including its components and distraction as the style of coping did not show any statistical significance between the variables. Analyzing the value of coefficients, it is worth stressing that none of them exceeded 0.40, which proves moderate or weak strength of correlations between the analyzed variables.

Discussion

The objective of the presented study was to demonstrate relationships between styles of coping with stress and the sense of coherence in adolescents. Statistical data analysis showed the existence of covariance between styles of coping with stress measured by CISS and the global sense of coherence and its components measured by SOC-29. The results of the study confirmed the hypothesis that global sense of coherence is positively correlated with task-oriented coping and social diversion, and negatively with emotion-oriented coping. Comprehensibility is positively correlated with task-oriented coping, avoidance-oriented coping, and social diversion. Manageability and meaningfulness correlate positively with social diversity and negatively with emotion-oriented coping. Similar results were obtained in a study on adolescents by B. Płaczkiwicz and S. Tucholska (2009).

Hence, it seems that a person with a high sense of coherence more often assesses the stressor as more positive, less conflictogenic or less threatening than does a person with a low sense of coherence. Such a person has the underlying belief that everything will be all right, that he or she has the needed resources, that whatever is incomprehensible will become comprehensible, and that he or she has the right potential to reduce the tension. This belief itself is a great resource (Antonovsky, 1995).

The results of the research indicate that the sense of coherence has a positive impact on positive coping with stress. According to Woynarowska (2013), the higher sense of coherence, the higher chance of moving toward “health” along the continuum, as the easier it is to avoid threats and dangers. The results of the research show that adolescents with a higher sense of coherence more often choose task-oriented coping, and less often, emotion-oriented coping. As the sense of coherence grows, the index of emotion-oriented coping lowers. We may

attempt to conclude that the sense of coherence can be treated as the “potential” which makes it possible to activate the appropriate strategies of coping in stressful situations in adolescents.

The analysis of data presented in the tables shows that the comparison of groups with the t-Student test did not demonstrate any statistically significant differences between girls and boys in terms of coping with stress and the level of sense of coherence and its two components. The obtained results lead to a conservative conclusion that although during adolescence boys and girls face different tasks, the analyzed variables do not differ.

In the face of the obtained study results, it seems that it is important to develop the sense of coherence among adolescents, which may promote constructive strategies of solving stressful situations. According to Antonovsky (1995), the process of socialization is very important in this regard. Personal experience is formed in the course of interactions with the environment. The development of the sense of coherence can begin even in early childhood and it settles at a level specific for the person in early adulthood (around 30 years of age), once the person has achieved some stabilization in life, when experiences from childhood and adolescence are consolidated or reversed. The development is promoted by life experiences, particularly including three properties: coherence of experiences, balance between overloading and underloading, and participation in decision-making (Woynarowska, 2013). Coherence refers to the extent to which the new experience fits the previous or current experiences of the individual. The more they make a logical entirety, the less often the occurring events are perceived as unexpected and surprising. The balance between overloading and underloading is kept if the requirements of life are adjusted to the person's abilities, age, strength, and health status. Participation in decision-making forms the sense of meaningfulness. It is important that the person takes an active part in creating the reality, takes the responsibility for the tasks received, and agrees to carry them out. This way, the individual forms the sense of participation, involvement and autonomy (Antonovsky, 1995; Worsztynowicz, 2013). Well-developed sense of coherence motivates the person to act. During the activity, resources or cognitive schemes and competencies are activated that may help reduce the activity of stressors, evaluate them as positive stimuli, or as stimuli that activate the regulatory mechanism. A person with high sense of coherence is more likely to respond to a stressor in an active way and with the conviction that the resources he or she has are valuable and effective in the situation. Therefore, his or her emotions are not extreme and still controllable, because tension does not automatically lead to distress and does not block the mechanism of coping in difficult situations. Hence, such people less often apply irrational defense mechanisms, and they try to rationally concentrate on the task instead (Terelak, 1999; Antonovsky, 1995).

Clearly, education and support activities are needed that would be appropriate for adolescents and aimed at building the sense of coherence. They could lead to a higher level of the sense of coherence, and as a result, to increased application of task-oriented coping or social diversion and less emotion-oriented coping.

Conclusions

1. The sense of coherence and its two components (manageability and meaningfulness) did not significantly differ between the compared groups.
2. Boys significantly differ from girls in terms of comprehensibility. Comprehensibility is higher among boys than among girls.
3. There were no statistically significant differences between girls and boys in terms of scores in task-oriented coping, emotion-oriented coping, avoidance-oriented coping, distraction and social diversion scales.
4. The sense of coherence and styles of coping with stress correlate in the studied sample as follows:
 - a. Among adolescents the sense of coherence and its components (comprehensibility, meaningfulness) are positively correlated with task-oriented coping.
 - b. The sense of coherence, manageability and meaningfulness correlate negatively with emotion-oriented coping.
 - c. Comprehensibility is positively correlated with avoidance-oriented coping.
 - d. The sense of coherence and its components (comprehensibility, manageability, meaningfulness) are positively correlated with social diversion.

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ИДЕНТИЧНОСТЬ КАК ОБЪЕКТ ИССЛЕДОВАНИЯ СОЦИАЛЬНЫХ НАУК: ФЕНОМЕНОЛОГИЧЕСКИЙ ПОДХОД

Identity as an Object of Study Social Sciences: a Phenomenological Approach

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Abstract. *The transformation of Russian society provoked a new round of interest in the social sciences, including the growth of defined research on the formation of social identity, an important place in the structure which occupies a civic identity. The scientific article is devoted to research of problems of identity in terms of "existential crisis". The authors define the specifics of social and civic identity based on a phenomenological approach.*

Keywords: *identity, identification, consciousness, social identity, civil identity, existential phenomenology.*

Введение Introduction

Всемирная глобализация сопровождается отказом или игнорированием многих традиционных ценностей, что оказывает значительное воздействие на идентичность современных граждан. Сегодня перед исследователями встает вопрос о выработке технологий и моделей формирования новой идентичности молодежи, что имеет стратегическое значение для будущего любой страны. Но прежде всего необходимо определиться с пониманием сущности идентичности, формирующейся в период общественных трансформаций.

Цель исследования: на основе концептуальных идей экзистенциальной феноменологии осмыслить проблему идентичности молодежи в контексте российской действительности.

Поскольку современная общественная ситуация определяется неустойчивостью традиционно сложившейся системы ценностей, стереотипов мышления и поведения, утратой мировоззренческих ориентиров, то идеалом в обществе становится самостоятельная, активная и конкурентоспособная личность, которая вынуждена самоопределяться в условиях «кризиса идентификации». Особенно сложным процесс самоопределения и социализации представляется для молодой, становящейся личности. Наука призвана в этом помочь.

Категория идентичности оформилась в качестве важнейшей в рамках осмысления современных социокультурных процессов. Однако, несмотря на обилие теоретических и эмпирических исследований, она до сих пор является одной из самых сложных и теоретически многозначных. В зависимости от того, в какой области человеческого знания используется термин «идентичность», он приобретает свое значение и смысл.

Американский социальный философ А. Этциони справедливо утверждает, что если XX век – это борьба идеологий, то социальные процессы XXI века будут определяться вызовами идентичности (Этциони, 2004).

Безусловно, что проблему «экзистенциального кризиса» и вызов идентичности мы рассматриваем сквозь призму трансформационных процессов России. Но подобная ситуация сегодня складывается во многих странах мира.

Для России, как и для всего мирового сообщества, характерен кризис как индивидуальных, так и коллективных идентичностей, наблюдаются проявления полиидентичности и «размытой идентичности». Но особенность современного российского государства - его все основные системы находятся в стадии развития или трансформации.

Мы понимаем, что кризис идентичности связан с распадом СССР, разрушением советской ценностно-нормативной системы, идет формирование аномии. Все это разрушило историческую преемственность, усилило в молодежной среде абсентеистские, сепаратистские и даже экстремистские тенденции. Становится ясно, что в условиях нестабильности и безверия все сложнее соотносить себя не только с определенным социальным слоем или профессиональной группой, но и с такими социальными общностями, как государство и нация. Указанные тенденции настоятельно требуют философского осмысления сущности человеческого бытия и специфики его существования в эпоху постиндустриального информационного общества.

Исследование феномена идентичности, в частности содержания, механизмов формирования, функций продолжает привлекать ученых всех

сфер – философов и психологов, социологов и антропологов. Безусловно, этот феномен интересен и политологам.

Материалы и методы исследования *Materials and methods*

Началом изучения решения проблем формирования социальной, и в том числе гражданской идентичности для нас послужила экзистенциальная феноменология Э. Гуссерля и А. Щюца (Гуссерль, 2005; Щюц, 2004). В основе данной философской концепции лежит представление о субъективно осознанной социальной коммуникации и взаимодействии людей как базисе идентичности. Методологический смысл феноменологической дескрипции состоит в понимании и толковании, поскольку феноменология – это герменевтика в начальном смысле этого слова.

Идеи феноменологии и философские концепции экзистенциализма, взаимообогащаясь, сформулировали новое направление – экзистенциальную феноменологию, которая направлена на осмысление различных аспектов повседневного существования человека. Именно экзистенциальная феноменология выводит смысл вещей из субъективности (правда, в её обусловленности миром, физиологией и множественностью), а не из сущностно обоснованной объективности. Именно экзистенциальная феноменология, которая выделилась в первой половине XX века в Германии из феноменологического движения, сегодня становится, на наш взгляд, адекватным инструментарием для выявления, понимания и концептуализации наиболее важных аспектов бытия современного человека, в том числе и молодежи. Основы данного направления заложены в трудах М. Хайдеггера, Х. Арндт и М. Шелера, они определили новый неклассический стиль философствования, способствовали рождению новых идеалов и норм философского и научного знания. Все это делает феноменологию одним из наиболее значимых и популярных в современной философии направлений (Шелер, 1994).

С нашей точки зрения, автономная личность в современном российском государстве еще не сформирована, намечен только некий переход от личности коллективистской к личности автономной. Данное обстоятельство и позволяет предлагать для развития гражданской идентичности российской молодежи как долгосрочные всеобъемлющие технологии, так и краткосрочные автономные.

Потребовал осмысления и анализ проекта крупнейшего современного французского философа Алена Бадью, представленный проф. А. Г. Черняковым (СПбГУ) «Истина и бесконечность у Бадью и Хайдеггера». Следуя Хайдеггеру и Сартру, Бадью считает ключевой

философскую проблему свободного, с одной стороны, и увязшего в реальной жизни, с другой стороны, субъекта. По Бадью, бытие фокусируется в событийности, но истинно ли событие как таковое? Как это определить? Тем более, что историческая феноменология событий требует бесконечного процесса «верификации истины». Оба философа понимают истину как несокрытость, но, по нашему мнению, истинность события зависит как от исторического периода его интерпретации, так и от этического самоощущения субъекта – интерпретатора. Например, очевидно, что гражданственность, если она присуща личности, предполагает творение Блага для Отечества и общества, но вопрос о средствах достижения этого Блага всегда явится дискуссионным.

Исходя из вышесказанного, нам представляется, что возможности феноменологической дескрипции как стратегии философских исследований бытия современного человека велики, хотя специфика экзистенциальной феноменологии как самостоятельного направления на сегодняшний день недостаточно изучена.

Глубина философской мысли в экзистенциальной феноменологии определена ограниченностью предмета исследования: человеческая экзистенция и ее феномены. Смысл вещей выводится из субъективности, поскольку все вещи обретают смысл в зависимости от бытия – в – мире самого субъекта. Экзистенциальной феноменологии в отличие от феноменологии отказывается от позиции незаинтересованного наблюдателя и преодолевает дуализм субъекта и объекта познания, что особенно подкупает. Феноменологический опыт рассматривается как «источник взаимного преобразования человека и вещи» (Бедрицкая, 2012). Интерпретация результатов феноменологических исследований подразумевает самостоятельную активность людей, вещей и самого исследователя.

По мнению представителей экзистенциальной феноменологии (М. Хайдеггер, Х. Арндт), жизнь всегда требует осуществления выбора, а следствием этого становится существование человека в одном из модусов: модусе «собственного» или модусе «несобственного». Значит, поскольку человеческое существование всегда подразумевает выбор, оно рассматривается феноменологической философией исключительно как возможность.

Одной из конститутивных характеристик экзистенции человека в экзистенциальной феноменологии становится «со – бытийность»: бытие с другими и темпоральность одновременно, - что имеет как позитивный, так и негативный смыслы. Негативный смысл связан с постоянным существованием человека в пространстве публичности, что ведет к отказу

от реализации своих возможностей бытия. Позитивный смысл заключается в признании возможности индивидуализации человека не в самоизоляции, а в со - бытии с другими, где только и возможно постижение уникальности каждого.

Мы понимаем, что отказ экзистенциальной феноменологии от субъект – объектных методических приемов естественных наук и развитие гусслеровской идеи интуитивного видения сущности привели к решению «мировоззренческой» задачи преодоления духовного и культурного кризиса человечества в целом и личности в частности посредством процесса взаимного раскрытия и преобразования. Результат – разительное изменение целостного мировосприятия человека. Экзистенциальный выбор, переход от одного модуса к другому требуют изменения образа мышления, осознания человеком самого себя и своей роли в общей системе, а также – проявления воли. От чего же зависит этот выбор? Несомненно, как от личностной позиции человека, так и от окружающего его социума.

Безусловно, личность как аспект философского рассмотрения многогранна и многоаспектна. Но феноменологический подход требует обращения к идеям основоположника философской антропологии М. Шелера. По его мнению, собственная сущность человека находится за пределами его биологического и социального существования, она лежит в его духовности, возможности человека быть личностью (Шелер, 1994).

Выдающийся представитель русского религиозного экзистенциализма Н. А. Бердяев называл личность духовной сущностью и считал что «активность человеческого духа» должна определять «активность его действий» (Бердяев, 1994). Данной точки зрения придерживается и О. А. Коряковцева (Коряковцева, 2008). Именно на этих философских постулатах мы предлагаем выстраивать технологии формирования гражданственности молодежи.

Вышесказанное делает необходимым обращение к двум «вечным вопросам» философии: в чем смысл человеческого существования и каково в нем соотношение индивидуального и коллективного? Именно потому, что они непосредственно связаны с самоопределением современной молодежи, а значит, и с формированием ее гражданской идентичности.

Общество создается людьми, его история – это деятельность человека, преследующего свои цели. Любое первичное действие принадлежит индивиду, включенному своим происхождением, воспитанием и профессией в определенные группы и в общество в целом. Внутренний мотив – это прежде всего потребности: материальные и духовные; индивидуальные и общественные; стратегические и сиюминутные; здоровые и нездоровые, - которые часто вступают в противоречие. Для формирования гражданской идентичности необходимым условием

является, чтобы потребности индивидуальные и общественные совпадали, чтобы сиюминутные порывы не побеждали. Так, например, перестройка в России не удалась, поскольку сиюминутные потребности и индивидуальные интересы определенных слоев общества взяли верх. Встает целый ряд вопросов: гражданственность – это духовная или материальная потребность? Индивидуальная или общественная? Стратегическая или сиюминутная? Какой интерес лежит в ее основе?

Общеизвестно, интерес есть осознание потребности, продукт общественного развития, причина индивидуальных и групповых человеческих действий. Определенные интересы часто возникают под воздействием идеологии (например, нацизм), поэтому неудивительно, что с «уходом» коммунистической идеологии в российском обществе остро встал вопрос о Национальной Идее, которая необходима для формирования российской идентичности, что неоднократно подчеркивается О. А. Коряковцевой (Коряковцева, 2008).

Результаты и их обсуждение *Results and discussion*

На основе концептуальных идей экзистенциальной феноменологии нами и была предпринята попытка интегративного обобщающего анализа исследований ряда аспектов идентичности в социальных науках. Целью подобного анализа явилось осмысление проблемы идентичности молодого поколения в условиях современного российского общества. С начала нашего столетия понятие идентификации вошло в тезаурус зарубежной психологии, этот феномен постоянно исследовался с позиций различных теорий личности (Доссэ & Бугайчук, 2013).

Феномен идентификации, начиная с З. Фрейда (который, собственно, и ввел термин «идентификация»), изучают сторонники психоаналитического направления (эпигенетическая концепция развития личности Э. Эриксона); приверженцы французской социально – психологической школы (в рамках теории социальных представлений С. Московичи); последователи символического интеракционизма (концепция баланса идентичности Ю. Хабермаса); представители когнитивной психологии (теории социальной идентичности Г. Тэджфела и Дж. Тернера, самокатегоризации Дж. Тернера) и других направлений.

В отечественной литературе анализу основных наработанных к сегодняшнему дню теоретических представлений об идентичности посвящены работы Г. М. Андреевой, Н. В. Антоновой, Е. П. Ермолаевой,

Н. Л. Ивановой, Т. В. Мищенко, Ю. П. Поваренкова, Е. Т. Соколовой, Т. Г. Стефаненко, Л. Б. Шнейдер и др.

Мы сделали анализ подходов к определению идентичности известных российских ученых Н. В. Антоновой, Н. Л. Ивановой и Ю. П. Поваренкова. Общей для социальных наук сегодня принята точка зрения, которая опирается на теорию Э. Эриксона. Поясним лишь несколько основных характеристик личностной идентичности, которые отмечаются в работах Э. Эриксона и его последователей. Идентичность есть «результат активного процесса, отражающий представления субъекта о себе, собственном пути развития и сопровождающийся ощущением сильного «Я» в собственной непрерывности, тождественности и определенности, что дает возможность субъекту воспринимать свою жизнь как опыт продолжительности и единства сознания, целостности жизненных целей и повседневных поступков, действий и их значений, которые позволяют действовать последовательно». «Согласно Эриксону, – отмечает Т. М. Буякас, – этот процесс организации самого разнообразного жизненного опыта обеспечивает человеку чувство имманентной идентичности – «субъективное ощущение тождества и целостности» (Буякас, 2000).

Дж. Марсиа определил идентичность как «структуру эго – внутреннюю, самосоздающуюся, динамическую организацию потребностей, способностей, убеждений и индивидуальной истории» (Антонова, 1996). По мнению Ю. П. Поваренкова, для операционализации понятия идентичности Дж. Марсиа выдвинул предположение, что данная гипотетическая структура проявляется феноменологически через наблюдаемые паттерны «решения проблем», то есть через ситуацию выбора. Решение каждой, даже незначительной жизненной проблемы вносит определенный вклад в достижение идентичности. По мере принятия все более разнообразных решений относительно себя и своей жизни развивается структура идентичности, повышается осознание своих сильных и слабых сторон, целенаправленности и осмысленности своей жизни (Поваренков, 2003).

В работах А. Ватермана в большей степени акцентируется ценностно-волевой аспект развития идентичности. А. Ватерман считает, что идентичность связана с наличием у человека четкого самоопределения, включающего выбор целей, ценностей и убеждений, которым человек следует в жизни. Цели, ценности и убеждения А. Ватерман называет элементами идентичности. Они формируются в результате выбора среди различных альтернативных вариантов в период кризиса идентичности и являются основанием для определения жизненного направления, смысла жизни.

Таким образом, опираясь на обзор зарубежных исследований, посвященных понятию идентичности, сделанный в работах Н. В. Антоновой, Н. Л. Ивановой, Ю. П. Поваренкова можно выделить следующие характеристики данного понятия: чувство идентичности, единицы или элементы идентичности, формирование или развитие идентичности.

Вслед за зарубежными исследователями российские ученые также обратились к понятию «идентичность» (Мищенко, 2005).

Проблематикой природы идентичности занимались такие психологи, как Л. Б. Шнейдер, Д. Б. Колесов. Д. Б. Колесов соотнес представление об идентичности в логике и психологии. По его мнению, в логике идентичность – это вывод об отсутствии различий: одинаковость, неотличимость, полное совпадение черт сравниваемых объектов, процессов, явлений окружающего мира. В психологии идентичность – это переживание индивидом своего единства с каким-либо индивидом или их группой или своей приверженности к чему-либо, идее, принципу, «делу». Таким образом, идентичность в логике – это следствие отсутствия различий между сравниваемыми объектами, идентичность же в психологии имеет место, несмотря на различия, вопреки им.

Л. Б. Шнейдер связывает идентичность с самосознанием и определяет ее как «сложный феномен, сложную психическую реальность, включающую символические и рациональные уровни сознания, индивидуальные и коллективные, онтогенетические и филогенетические основания. Идентичность есть психический компонент самосознания, формирующийся и существующий в мире человека. Мы знаем, кто мы, осознаем свою идентичность в мире людей, профессий, наций и пр.»

Согласно концепции В. С. Мухиной, идентификация также является центральным механизмом структурирования самосознания.

По определению Е. Т. Соколовой и ее соавторов: «Идентичность – это устойчиво переживаемая тождественность Я во времени и пространстве. Оно предполагает аутентичность самовосприятия, высокий уровень интеграции частных динамических и противоречивых образов Я в единую связную систему, благодаря чему оформляется и сохраняется устойчивое, обобщенное и целостное индивидуально-личностное самоопределение, поддерживаемое и разделяемое общностью значимых других».

Е. И. Кузьминой осуществляется интерпретация категории идентичности с опорой на рефлексивно-деятельностную методологию анализа психологии свободы: 1. Основу бытия составляет свобода. 2. Свобода обнаруживается через выбор. 3. Свободный выбор предполагает ответственность. Ответственность представляется в форме переживания. 4.

Ответственность за свой выбор несет конкретный человек: Я (самосознание). 5. Выбирая, Я осуществляет самоопределение, самоорганизуется и персонализируется. 6. Самоопределение в различных ситуациях, персонализация через отношения с другими, самоорганизация как приобретение устойчивой структуры и формы интегрируется в идентичность. Идентичность характеризует актуальное состояние человека, качественную определенность Я в переживании Я-целостности и тождественности на срезе жизненного пути.

Вывод - сегодня идентичность понимается как сложный феномен, тесно взаимосвязанный с такими процессами, как самосознание и самоопределение, самоактуализация и персонализация, выбор и «событийность».

Отметим, что понятие «социальная идентичность» в научной литературе встречается всё чаще и это не случайно: в контексте последних социальных изменений усиливается интерес к проблеме социального выбора и самовыражения.

В трудах Дж. Мида, Г. Тэджфела, Дж. Тернера и их последователей утверждается, что социальная идентичность является результатом идентификации человека с конкретной общностью: расой, полом, профессиональной группой, национальностью и т.д. Н. Л. Иванова отмечает, что идея о наличии двух аспектов идентичности – ориентированного на социальное окружение («модус несобственного») и на уникальность проявлений человека («модус собственного») – наиболее полно воплотилась в теории социальной идентичности Г. Тэджфела и Дж. Тернера. По мнению Г. Тэджфела, личностная и социальная идентичности представляют собой два полюса одного биполярного континуума. На одном полюсе – поведение, полностью определяющееся личностной идентичностью, на втором – поведение, полностью определяющееся социальной идентичностью. Более типичным является поведение, находящееся между этими полюсами (Иванова, 2001).

Отметим, что на своем жизненном пути человек испытывает постоянное изменение структуры социальной идентичности, включаясь в новые сообщества. Вхождение в группу подразумевает принятие соответствующих групповых норм, правил взаимодействия (Доссэ & Бугайчук, 2013).

Достаточно полный анализ динамики групповой идентификации был проведен Т. Г. Стефаненко, И. Ю. Дьяконовым и М. Л. Бутовской. Согласно концепции данных авторов, выделяются три этапа данного процесса. На первом этапе, названном декларацией идентичности, в Я-концепцию индивида входит представление о себе как представителе группы (например, я – женщина, я – русская, я – нищая, я – пенсионер и т.д.).

Основным источником информации о качествах идентичности здесь становятся мнения и оценки членов других групп (референтных для индивида). На втором этапе происходит отождествление человека с другими членами группы. Индивид включает в образ Я общие характеристики новой группы, членом которой становится, а также усваивает нормы и стереотипы поведения, которые для нее характерны. Источником информации здесь являются другие члены группы, с которыми индивид вступает во взаимодействие в ходе совместной деятельности. Наконец, на третьем этапе индивид не только приписывает себе усвоенные нормы и стереотипы социальной группы, но они становятся регуляторами его поведения. Центральным механизмом развития идентичности здесь выступает соотнесение норм группы с собственной системой ценностей. Таким образом, идентификация с группой подразумевает непрерывный процесс сопоставления собственных ценностей с нормами группы. Уход от данной рефлексивной деятельности препятствует вхождению в группу уже на первых этапах этого процесса и провоцирует возникновение у человека маргинальной идентичности.

По мнению психологов, занимающихся проблемой групповой идентификации, потребность в самоуважении люди реализуют посредством отождествления себя с группой, которая оценивается ими позитивно. Если группа, с которой человек себя отождествляет, в силу каких-либо обстоятельств теряет в его глазах положительные характеристики, он будет стремиться либо дистанцироваться от нее физически или психологически, либо же прилагать усилия к восстановлению ее позитивного значения, каждый из этих вариантов в конкретном обществе и в конкретной культурно – исторической ситуации будет наполняться специфическим содержанием, их соотношение также будет специфично. Данной точки зрения придерживается и Н.А.Ананьева. Она рассматривает идентификацию с группой на примере идентификации с партнером.

Вопрос о необходимости восстановления позитивного значения группы отождествления особенно остро встает в период исторических общественных трансформаций, когда даже нация и государство теряют для человека свое позитивное значение, что и происходило до недавнего времени в России.

Таким образом, социальная идентичность, понимаемая как самоопределение индивида в социальном пространстве, как «событийность», предполагает категоризацию этого пространства, определение особенностей тех или иных позиций, групп и выработку поведенческих стратегий, необходимых для того, чтобы занять желаемую позицию. В связи с этим выделяются такие виды социальной идентичности,

как гражданская идентичность, религиозная идентичность, территориальная идентичность, национальная идентичность и т.д. Важно учесть, что наша страна многонациональна, поэтому прежде всего следует решать проблему формирования именно гражданской идентичности, предполагающей чувство гражданской общности, оценку у каждым своего статуса гражданина.

Современные тенденции в изучении гражданской идентичности характеризуются активизацией исследований в начале XXI века, которая обусловлена актуализацией идентификационных процессов на уровне гражданской общности.

Интегративный анализ научной литературы показывает, что у ученых, пришедших к осознанию необходимости разработки понятия «гражданская идентичность», отсутствует единая точка зрения относительно понимания данного явления. Например, в своих диссертационных исследованиях Т. В. Водолажская определяет гражданскую идентичность как реализацию базисных потребностей личности в принадлежности к группе; И. В. Конода оценивает ее в качестве политико-ориентированной категории, в содержании которой выделяются политико-правовая компетентность личности, политическая активность, гражданское участие, чувство гражданской общности; А. М. Кондаков осмысливает гражданскую идентичность как осознание принадлежности человека к общности граждан того или иного государства, имеющей для него значимый смысл; М. А. Юшин представляет ее как тождественность личности статусу гражданина, как оценка своего гражданского состояния, готовность и способность выполнять сопряженные с наличием гражданства обязанности, пользоваться правами, принимать активное участие в жизни государства.

В диссертационной работе Р. Ю. Шиковой гражданская идентичность рассматривается как структурный компонент социальной идентичности и определяется как результат процесса самоотождествления субъекта с соответствующими социальными группами на когнитивном и эмоциональном уровнях личности. Мы разделяем точку зрения А. М. Кондакова и М. А. Юшина: именно чувство сопричастности к деяниям на Благо Отечество (общества и государства) и участия в них определяют гражданина в единстве «активности духа» и «активности действий».

Исследованием проблемы гражданской идентичности в рамках социологической науки ведет С. В. Рыжова, которая изучает тенденции поддержания межэтнической толерантности в контексте формирования национально-гражданских идентичностей у русских и титульных национальностей в республиках; интересным работами Е. М. Арутюновой по определению содержания государственно-гражданской идентичности у студентов социально-гуманитарных направлений, исследования

Е. А. Гришиной по выявлению особенностей гражданской идентичности российской молодежи и т.д. Анализируя структуру гражданской идентичности, Е. А. Гришина отмечает, что «гражданская идентичность имеет объективную (предписанную как формально – государством и правом, так и неформально – доминирующими культурными и социальными стандартами и нормами) и субъективную (относительно произвольно конструируемую индивидом) составляющие». По ее словам, именно соотношение объективной и субъективной составляющих гражданской идентичности определяет степень ее целостности и функциональности для обеспечения социального воспроизводства через осуществление соответствующих социальных практик. Например, в стабильном обществе доминирует объективная составляющая. А в том случае, когда происходит радикальная трансформация социокультурных ценностей и норм в обществе, преобладает субъективная составляющая гражданской идентичности, что и наблюдается сегодня в России и ряде других стран.

Структура гражданской идентичности многогранна. В нее входят: государственная идентичность – соотнесение себя с определенным государством, восприятие своих конституционных прав и обязанностей; патриотизм – наполнение государственной идентичности ценностным содержанием, чувством сопричастности, гордости и любви; гражданственность – качества гражданина, характеризующие его как активного члена государства и общества, не только следующего своим правам и обязанностям, но и реально участвующего в его жизни. По нашему мнению, гражданскую идентичность целесообразно рассматривать как осознанный процесс соотнесенности или тождественности человека с определенной государственной общностью в конкретном социально-политическом контексте. В настоящее время гражданская идентичность справедливо рассматривается в науке в первую очередь как фактор консолидации вокруг интересов страны, поэтому степень ее укорененности в сознании и поведении граждан выступает как залог политической и духовной консолидации, а также единства общества. Побуждением к конкретному действию является стимул как отражение интереса в сознании людей. Каков же у современной российской молодежи стимул к социальной активности и гражданственности?

Подобная деятельность – это часть общественной (социальной) практики. Следовательно, сегодня требуется расширение пространства такой социальной практики, в ходе которой молодой человек осознавал бы себя Гражданином. Но при этом не следует забывать о ряде биологических особенностей детей и подростков, прямо влияющих на их социальную

жизнь, на которые указывают А. Розе (США) и Я. Щепаньский (Польша) (Социальная философия, 2000): длительная зависимость детей от родителей (долгая опека со стороны взрослых); медленное взросление; долгое обучение и социализация; пластичность, врожденные импульсы и потребности. Все это способствует развитию сложных образцов поведения и приспособлению, в том числе и социализации, а значит, именно в этот благоприятный период роста человека необходимо закладывать основы социальной, в том числе гражданской идентичности и в системе общественных связей формировать социокультурные мотивы.

Заключение **Conclusions**

Тейяр де Шарден справедливо заметил: «Мир движется в сторону усложнения, а оно сопровождается ... все большей значимостью психического сознательного» (Тейяр де Шарден П., 2002). Наш интегративный анализ научных исследований некоторых аспектов идентичности в области социальных наук подтвердил, что с развитием человеческого общества вопрос о смысле и образе жизни ставится все острее, а ответ на него – все неоднозначнее, поскольку в основе вопроса лежат наши ценностные предпочтения. Сегодня традиционная шкала ценностей рухнула, и не только в России, и в духовной атмосфере общества все более ощущается «экзистенциальный вакуум». Австрийский психолог Виктор Франкл обращает внимание на то, что «... в отличие от человека вчерашнего дня традиции не диктуют сегодняшнему человеку, что ему должно» (Франкл, 1990). Действительно, современный молодой человек не знает, что ему нужно, что он должен, а значит, и – что хочет. Следствием этого может быть либо конформизм, либо абсентеизм, либо экстремизм.

Философы XX века пришли к общему мнению, что две известные концепции смысла жизни «Иметь» или «Быть» не противоречат друг другу, они взаимообусловлены. В каждом человеке присутствует и то, и другое, главное, что преобладает... В своей работе «Иметь или быть» Э. Фромм, ссылаясь на З. Фрейда и его «Неудовлетворенность культурой», подчеркивает, что личность, чья ориентированность на обладание и владение превалирует и по достижению половой зрелости, остается постоянной, является патологической личностью, а значит, и общество, где членов с такой ориентацией большинство - больное общество (Фромм, 1986).

Человек склонен как к добру, так и к злу. Казалось бы, он волен выбирать, но его выбор обусловлен ситуацией в его идентификационной группе и обществе в целом. В каждом обществе преобладают определенные

стремления и способы их удовлетворения, следовательно, решение жизненных проблем и экзистенциальный выбор зависят не только от личности, но и от условий ее существования. Так какое же общество стремится построить Россия? «Больное» общество потребления? Или общество, в котором преобладает позиция «Быть»?

Принцип обладания заложен в инстинкте самосохранения, значит ли это, что концепция «Иметь» всегда будет превалировать? Вовсе нет, поскольку ей противостоят особые «со-бытийные» человеческие качества: потребность в общении с другими, потребность в самореализации, потребность в социальной активности и даже готовность жертвовать собой ради общественных интересов (а выполнение долга Гражданина, на наш взгляд, - одно из высших проявлений такой жертвенности). Недаром и Моисей, и Иисус, и Будда, и Конфуций, и Сократ, - все великие духовные учителя человечества в своих заповедях утверждали практически одни и те же гуманистические нормы человеческой жизни.

Представители экзистенциальной феноменологии (А. Камю, М. Хайдеггер, К. Ясперс, Ж-П. Сартр) соглашались, что человек в итоге всегда одинок и мало что зависит от него, поскольку мир неустойчив: он постоянно предстает в разных интерпретациях. Но они оставили Человеку выбор. И сегодня мы его понимаем следующим образом: Человек может выбрать не только, как ему жить, но и, как ему относиться к миру. Именно выбор этого отношения к миру кажется нам самым важным в самоопределении формирующейся личности в условиях общественных трансформаций. Человек может рассчитывать только на выражение своей позиции (отношения) или отстаивать ее и тем самым оптимизировать социальную среду. Жан Поль Сартр справедливо заявляет, что реализовать себя можно не погружением в себя, но в поиске цели вовне, что Человек ответственен и за себя, и за общество (Сартр, 1989).

Встает вопрос, каким образом личность, наделенная правом выбора и долгом ответственности может повлиять на общественную ситуацию? Каково сопряжение индивидуального и коллективного как основы идентичности?

Очевидно, что разные формы коллективного предполагают и разные формы индивидуализации людей. Это определяет отличия одной социальной системы от другой, особенности которых на основе феноменологического метода можно четко описать посредством сопоставления преобладающих способов связи индивидуального и коллективного бытия людей.

Сегодня отношения индивида и социума эластичны и многогранны, а значит, созданы условия для более широкого проявления его

индивидуальности. Автономия индивида растет, что, с одной стороны, ведет к одиночеству и возможности манипулировать его сознанием и поведением, а, с другой стороны, способствует возвышению самости Человека, раскрепощает его творчески.

Эта противоречивость отражается на развитии потребностей и мотивов современного человека. В развитых слоях общества, где забота о пропитании уходит на второй план, материальное богатство уже «не обожествляется», Человек ищет другие точки приложения своим силам, например, распространяются антииндустриальные, антиглобалистические теории, растет активность экологических движений и т.п. Меняется характер требований к содержанию и результатам труда, наступает глубокий перелом в общественных настроениях. Так ли это в России? Вероятно, российское общество в целом сегодня живет идеей «заработать на приличную жизнь»; мы еще не насладились благами цивилизации. Но в то же время в нашем сознании еще сохранились традиционные для Руси идеи святости, странничества, подвижничества и жертвенности во имя Высшего Блага, которым всегда почиталось Благо общества и Отечества. Все сказанное подтверждается результатами экспериментального исследования гражданской идентичности молодежи, проведенного в лаборатории «Изучение гражданской идентичности молодежи: сущность, условия развития, перспективы» в 2015-2016 г.г.

Опыт прошлого как образец для подражания сегодня не совсем годится, хотя в ответах ряда реципиентов акцент с количества (степень материального достатка) переносится на качество и новизну благ и услуг, на возможности проявить свою самостоятельность и способности в профессии и общественной жизни. Очевидно, что нужны новые способы ориентации молодых в действительности.

Массовый стандарт в отличие от ценностей традиционной групповой культуры не закрепляет личную идентичность, не дает готового ответа на вопросы: Кто Я и с кем Я? К чему Я должен стремиться и почему?

Молодому человеку приходится делать собственный выбор из возможных вариантов, определять свое отношение к себе и к миру. Поле свободного самоопределения широко. На ранних этапах становления личности этот выбор очень труден. По нашему мнению, задача системы образования – помочь в главном: в становлении и развитии социальной, в том числе гражданской идентичности. Иначе в России не может быть сформировано развитое гражданское общество, о котором так много говорят видные политики и СМИ. Кроме того, следует помнить, что в самой молодежной среде в связи с недоверием к интеллектуальной компетентности общественных и политических институтов и их информации идет поиск новых форм социальной активности и общения,

который выражается в повсеместном распространении неформальных движений.

Подрастающее поколение необходимо прежде всего хорошо знать и понимать, убеждать делом и привлекать к делу. Социальная феноменологическая психология способствует этому, утверждая, что каждый человек видит мир по-своему, отражая собственную субъективность. Экзистенциально-феноменологический подход в психологии ориентирует на изучение «жизненной» феноменологии, на объяснение своеобразия интерпретации «жизни» с позиций конкретного человека.

Очевидно, что эффективная модернизация современного образования тоже невозможна без философского осмысления. Философия образования призвана определить философско-антропологическую основу понимания личности ребенка, сущности и целей образования; выявить гносеологические принципы процессов познания и обучения; обозначить методологическую основу дидактики.

Выводы:

1. Осмысление проблемы подтвердило наличие экзистенциального вакуума в XXI век, в том числе и «вакуума идентификации», что может привести молодежь к конформизму, абсентеизму, экстремизму.
2. Для преодоления «Вакуума идентификации» необходим выбор жизненной концепции «Быть в со-бытии» с другими, а не «иметь». Экзистенциальная феноменология убеждает, что самым важным в самоопределении личности в период общественных трансформаций является выбор личностью ответственного отношения к миру.
3. Россия сегодня – на перепутье: растущая автономия индивида противоречит традиционным идеям подвига на Благо общества и Отечества. А основой высокого уровня идентичности будет оптимальная сопряженность индивидуального и коллективного.
4. Для формирования гармоничного гражданского общества необходимо системно решать задачу становления и развития социальной, в том числе гражданской идентичности, поскольку она является важнейшим фактором политической и духовной консолидации граждан. Для решения данной задачи следует модернизировать государственную молодежную политику: не столько должны делать общество и государство для молодежи, сколько – молодежь для общества и государства.

5. Для развития идентичности необходимо изменение направление вектора государственной молодежной политики: использование как автономных, так и долгосрочных технологий формирования гражданственности молодежи; воспитание по принципу от «активности духа» - к «активности действий».

Для исследования процессов в молодежной среде и условий формирования идентичности особенно важно определить, какова ценностная шкала и мировоззренческие ориентиры личности в современной культуре, каково осмысление социокультурных оснований жизни индивида и общества.

Ответы на эти вопросы можно найти в результатах исследования социальной и гражданской идентичности современной российской молодежи, проведенного вышеупомянутой Лабораторий, но об этом – в следующей статье, а здесь мы осмыслили концептуальные идеи «экзистенции» и «идентификации» личности, предложенные современной наукой и убедились, что решение «мировоззренческой» задачи преодоления духовного и культурного кризиса человечества связано с экзистенциальным выбором каждого, с осознанием человеком самого себя и своей роли в общей системе отношений. Для оптимизации данного процесса необходимо системная долговременная работа по формированию идентичности российской молодежи.

Summary

Many domestic and foreign authors note that today the human need for identity exits leading to one of the first places. Category identity took shape as an essential part of understanding in today's socio-cultural processes. However, despite the abundance of theoretical and empirical research, it is still one of the most complex and multi-valued theory. Depending on in which area of human knowledge, the term "identity", it acquires the value and meaning. Note that this concept becomes one of the central problems in modern science, because it is associated with the complex problems of social theory and practice: examines issues of identity and its individual species, including civic identity. Integrative analysis of the research of some aspects of identity in social science has confirmed that the development of human society, the question of the sense and lifestyle put increasingly scarce and the answer is - everything is ambiguous, because the heart of the matter lies our value preferences. Clearly, different forms of collective and involve different forms of human individualization. This determines the difference of one social system by another, especially that based on the phenomenological method can be clearly described by a comparison of the prevailing methods of communication of individual and collective human existence.

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THE NEED OF INTERDISCIPLINARY PARTNERSHIP IN RECREATION AREA TO WORK WITH STREET YOUTH

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Abstract. *Both Europe and Lithuania aim at involving youth into the activities, encouraging their activeness and participation in social life. The article analyzes the social work with street youth. The initiatives of social work in informal environments of a city streets by applying interactive methods, interfering with creative-artistic or sports leisure activities are discussed. The results of the research carried out highlighted the need of interdisciplinary partnership in recreation area to work with street youth.*

Keywords: *socio-cultural work, recreation, street art, street youth.*

Introduction

There are two general objectives distinguished in the European Union youth policy: to pursue that young people are given more equal opportunities in education and the labour market and to pursue active citizenship, social inclusion and solidarity of young people (EU Youth Strategy, 2009). The strategic objective of the Lithuanian National Youth Policy Development Programme for 2011-2019 is to create a favourable environment (conditions) for young people's lives and self-expression in Lithuania.

According to the data of Eurobarometer in 2013, the youth activity is increasing every year, but only one in five (22 percent) participates in the activities of youth organizations, 15 percent get involved in local community activities, and 44 percent were not involved in any activity lately. Youth unemployment is very high - 8.7 million young people can not find an appropriate work, 27 million young people are prone to poverty and social exclusion (Eurostat, 2014), the same trend prevails in Lithuania as well: in the first quarter of 2016 there were 23.4 thousand young unemployed people aged 16-29, youth activity is low - only 27-28 percent are involved in some activities, there is a widely spread stagnation of the formal education system, youth

organizations engage only 10-13 percent of the youth (Meldžiukas, 2016). This suggests that the existing methods fail to meet the expectations.

Working with young people in an informal environment, using interactive methods interfering with their creative-artistic, sports or other leisure activities - it's just part of youth work forms that highlight new trends of activities with the youth in Europe (Kellett, 2011; Dunne, et al., 2014; Georgallis & Moyart, 2016). Innovative methods of work pose new challenges on social workers, whose one of the roles is recreational role, i. e. organizing leisure activities (Spierts, 2003).

The Lithuanian social workers carry out the function of organizing and implementing leisure activities in social institutions (Qualification requirements for social workers, 2015). The aim is to move away from traditional methods of work to non-traditional ones, with the efforts of the service reaching the customer, rather than the customer reaching the service. Such innovations as mobile youth work, youth work in open spaces and others are applied. Such methods are particularly suitable for the development of socio-cultural work¹ with disadvantaged youth.

Lately in Lithuania there is a new activity of social workers - work with street youth². The focus is on the socio-cultural environment of young people by offering them attractive forms of expression, in order to enable young people not only to realize their potential, but also to express the accumulated grievances that prevent them from integration into social activities. This is another challenge that requires expertise in the field of recreation³. There is a lack of more systematic work in this area as well as a lack of collaboration.

Arts are recognised as a particularly effective form of socialization: artistic cultural events help a person to integrate into the society, to adapt to its requirements, or on the contrary - to resist social environment and rebel (Brazauskaitė & Dikčiūtė, 2015; Šinkūnienė & Savickaitė, 2008). Despite that, up to now social workers as well as artists implement socio-cultural projects with the street youth separately. There are also more problems that hinder the development of socio-cultural work in Lithuania like, institutional attitude of social workers towards problem solving, lack of funding for socio-cultural activities, lack of competence of social workers for carrying out socio-cultural activities, and absence of the interinstitutional recreational model to work with youth (Dvarionas, Motiečienė, Ruškus, Mažeikienė, & Naujanienė, 2014).

¹ Sociocultural work – socialisation and empowerment of a person, group or community by applying sports, artistic and other meaningful leisure activities (Spierts, 2003, Šinkūnienė, 2013)

² Street youth – young people aged 14-29 who spend a significant amount of their leisure time on the street without care of parents or guardians (Darbo su jaunimu gatvėje praktinis gidas /Practical Guide for Work with Street Youth/, 2015)

³ Recreation –personal benefits in terms of meeting physical, emotional, philosophical, and other important health-related needs of participants. Expanding role in health, wellness, quality of life, and environment (McLean, D. D., & Hurd, A. R., 2015)

The study of Lisauskienė & Aleksienė, (2016) highlighted the commitment of social responsibility at different levels (formal vs. informal) and different environments (educational vs. creative) the socio-cultural work carried out by street youth workers and street art professionals simultaneously. The findings of the interview revealed the need for cooperation in synergy. It turned out that professionals working with this target group are not aware of each other's activities, though both sides emphasize the need for systematic cooperation.

The aim of this study is to base the need of interdisciplinary partnership in recreation area working with street youth.

The objectives are to analyse the socio-cultural work with disadvantaged youth trends in Europe; to highlight the initiatives of work with disadvantaged youth in Lithuania; to reveal attitudes of social workers towards creating interdisciplinary partnership in recreation area working with street youth.

Qualitative **research methods** are 1) systematic review of European and Lithuanian publications. 2) semi-structured interview and content analysis.

Review results

1. Socio-cultural work with disadvantaged youth trends in Europe

We search for answers to a question: what are the models of socio-cultural work with disadvantaged youth in European countries. All European countries have different experience working with street youth. We take some examples. In almost all institutions in Germany, where Mobile Youth Work (street work) is carried out, staff members formulate working principles, which they hold on to in their work. These working principles will be presented below selectively. They also serve as the basis for the description of quality criteria for Mobile Youth Work (Specht, 2010). In spite of the defensive-waiting strategy, establishing contacts remains an interaction, which is actively organised and forced by the street worker. The street worker must be prepared for presenting himself. Every Mobile Youth Worker will have to find his own style in the Great Britain. It is important to be authentic and to be alert for non-verbal and verbal signals. This demands self-reflective behaviour towards one's own biography (Tiffany, 2010). The concept of mobile work with youth is still only partially detected in Slovakia. Considering the fact that the whole sector of work with youth is only being formed, the new ways and new starting points are sought and discovered. It was important for the concept of mobile work with youth to create the space for implementing its methodology. The methods of work are oriented towards an individual, group and partially also the community (Kulifaj, 2010).

European consultation with street-connected children and young people for the UN Committee in the report made the following recommendations for the European countries working with street youth:

- To establish police training to defend children's rights; establish multicultural police forces; create local forces that would have a close relationship with the public in their area;
- To open a social dialog between the young people, social workers, authorities, the public;
- To recognize and determine the street as a place of creativity. Local authorities should appreciate the artistic expressions of local residents, from both a cultural (graffiti, music, sculpture, film) and sport-based point of view. For this to happen, it is important to open community centres available for everyone, where the young people can meet, even those usually marginalized. Social workers must reinvest in the street and to use it as space of creativity (Rapport of Dynamo International and Consortium for street children, 2016).

It can be stated that all European countries have different experiences of work with social risk youth on the street; however, key trends that are of importance for all the countries were identified, namely: preparation of a social worker for work on the street, finding an individual working style, ability to make a contact, and use of different working methods.

The fact that the European consultation with street-connected children and young people for the UN recommended for the European countries to recognize and determine the street as a place of creativity, demonstrates the significance of artistic recreational activities for work with youth on the street.

2. Initiatives of work with street youth in Lithuania

In Lithuania, the area of social work on the street is still at an early stage of development. The first projects of street social work in our country are entirely consistent with the substantive provisions of both paradigmatic posture and its methodology. That is why they can be recognised as the same phenomenon as in the West, which is known as street social work (Švedaitė-Sakalauskė & Eidukevičiūtė, 2015). The fact that in Lithuania so far the tradition of social work on the street has not formed yet does not mean that there is no such need. The research by Laureckis & Petružytė (2016) revealed that help for youth on the street is necessary. Young people lack social skills, self-confidence, their self-assessment is negative, and they are prone to delinquent behaviour, self-mutilation or suicide. Young people feel rejected, are angry with themselves and the whole world. They are unwilling to engage into social activities or educational sessions; more often choose informal not binding gatherings.

Other researches show that street youth involves into different recreational activities organised on the city streets. The Lithuanian success stories of work with street youth are the projects executed by street art professionals (Aleksienė & Ambrazaitė, 2014). The beginning of the street art was a protest, rebellion against the established rules that helped the artists to deliver their opinion and to express the accumulated anger and to attract the attention of members of the public (Shapiro, 2005). Today professional street art is a postmodernist art form, where the artistic language is a social phenomenon and meaningful form of communication.

The results of the research by Aleksienė and Ambrazaitė (2014), where three famous Lithuanian street culture project operators, experts of different street art branches – street dances, DJs, music, graffiti experts took part, showed that the street art projects implemented in Lithuania as social art practice and preventive criminal behaviour practice help to distract the youth from the activities unacceptable to the society and to make positive socialisation. In the organisation and implementation of social artistic projects, interdisciplinary teams of artists and social workers work in cooperation. It indicates that art in social activities is an effective form to work with youth; however, it so far has evidenced during individual social art projects and lack support from the society and social policy-makers.

The research by Lisauskienė and Aleksienė (2016) also highlights it. The research aimed at investigating the peculiarities of recreational activity organisation in social work with the youth. The analysis of the obtained data demonstrated that the means of street art can be beneficial to a young person not only in self-realisation, being exposed to the society or entertaining others, but also an important factor of personality development. Another important fact is that street art can be a way to solve social problems, such as abuse, hooliganism, unwillingness to learn. The benefits of recreational activities are underlined in the answers regarding the changes of personality when getting involved into recreational activities. The youth becomes more self-confident, happier, feel better, are able to trust adults and show more respect when communicating with each other. The research results show the role of a social worker in recreational activities. Social worker should be an active professional in the professional field, be willing to get involved into non-formal activities with the youth and show empathy. A social worker should be able to professionally and constructively plan and validate own activities, be aware of street subculture and be able to do street work.

The results of the research by Lisauskienė and Aleksienė, (2016) disclose the demand for synergetic cooperation of street youth workers and street art professionals when working with street youth. It appears that the specialists working with the target group are not aware of each other's activities, yet they

claim that it is important to cooperate; they also highlight the relevance of mediation implemented by a social worker. In order to elaborate social work with the social risk youth, it is important to develop recreational activity methods in social work and improve the competences of social workers to coordinate street youth leisure activities.

The analysis of this research demonstrates that a social worker working with the youth of social risk groups is exposed to new challenges demanding new working environments, new work forms and practical skills of recreational activity.

How do street youth workers deal with these challenges? Is mission “the street as a place of creativity” possible?

Interview design and results: Attitudes towards creating interdisciplinary recreation partnership to work with street youth

In Lithuania, work with street youth is just at its early stage of development. In Vilnius city there are two functioning groups established on the initiative by young social work specialists, which independently develop this field of social work. So far, there is no regulation for such activities of street youth workers in Lithuania.

Based on the conclusions of the researches presented above, street art is an effective form to work with youth, **the goal of the research** is to reveal attitudes of social workers towards creating interdisciplinary partnership in recreation area for the work with street youth.

Type of research – qualitative research. **The method of data collection:** is a semi-structured interview. **The method of analysis;** qualitative content analysis. **The method of sample:** convenience sampling. According to V. Žydžiūnaitė (2006), convenience sampling consists of variables that are easy to find taking into consideration the characteristics of informants that are of interest to the researcher.

The research sample. The informants who participated in the study were 4 social workers involved in work with street youth. So far, only such a small staff is constantly working on the street in Vilnius. In other Lithuanian cities / towns this activity is not being developed. Social workers were interviewed in a time of “Work With Youth Forum” which took place in Vilnius, 29 September, 2016. Interviews with informants each took an average of 25-30 minutes.

The method of analysis. The research data obtained during the interview is analysed by applying the qualitative content analysis method. The method was applied based on the qualitative content analysis steps provided by V. Žydžiūnaitė, G. Merkys, S. Jonušaitė (2005), which include: *multiple text*

reading, distinguishing of categories based on key words, dividing of category content into subcategories, interpreting and justifying of categories and subcategories with evidence extracted from the text. Two essential categories were distinguished: challenges of integration of recreational activities and interdisciplinary partnership. In the analysis of the research data subcategories are presented in bold.

In the analysis of the results of the interview, the opinion of the research participants is presented under the following codes: first social worker (A), second social worker (B), third social worker (C), fourth social worker (D).

Questions:

1. What are challenges and / or interferences of integration of recreational activities into social work with street youth?
2. Is there a need for creating interdisciplinary partnership in recreation area for the work with street youth?

1. Challenges and interferences of recreational activities integration

A negative government attitude and dominating stereotypes in the society is a challenge for street youth workers. By the results of their difficult activities they have to prove both to the government representatives and the whole society that street youth can be creative, positive, they can change and be useful for the society. An important aspect is that, according to the research participants, in Lithuania all innovations are difficult to be implemented, and social area is not an exception. New working *methods*, new approach receive resistance. “...you talk to the government representatives and feel that you go to the wall...” (C). “...I hear so many excuses but not problem solving options...” (A). “...at first, it is necessary to know a young person and only then to offer artistic activities, as the majority has negative attitude towards them, there’s just no need...” (D). “... I often hear – what that culture could change?...” (B).

Another important problem of integrating recreational activities into social work is the **lack of professionalism**. There is no institution that would train workers for work on the street. Initiative groups learn from their own experience, use good experience of foreign countries; however, in Lithuania they have nobody to discuss or consult with. <...it is strange when now universities invite me to deliver a public lecture on the work on the street...> (B). <...only foreign literature, forums and own contacts helped me to understand the rules for the work on the street...> (A).

The main obstacle preventing the integration of recreational activities into social work area is **funding**. In the opinion of the research participants, the state is unable to allocate money as this type of activity is not regulated, and there are few competitions announced or the conditions for participation therein are unreal, long-term activity experience is required, great work results, etc. “... even

there are not many socio-cultural competitions announced or the conditions for participation therein are unreal...” (A) “...if you have a good idea, sometimes you need also own funding...” (C), “...and where are leisure zones where youth could engage in artistic activities?...” (D), “.. the mere fact that there are no premises where we could normally work says it all...” (B).

The analysis of the interview showed that informants unwillingly speak about cooperation with artists and other colleagues only because this experience raises **new challenges** for them at work. They state that <...it is difficult to start communicating with other specialists as they feel lost when they see you...> (A), <...they see you as a rival, and maybe as an evaluator of their activities...> (C), <...often joint activities are seen as additional work requiring lots of efforts and time...> (D), <...it requires lots of time and efforts so that these relationships continued...> (B).

Thus, according to the informants, it is complicated to develop the activities of social work with street youth. It requires great determination, patience and desire to help young people. The following main obstacles in the integration of recreational activities into social work were identified: unregulated activities, lack of funding, lack of professionalism and experience of work on the street. The main challenges that are faced include insufficient attention from the government representatives for this problem and stereotypes dominating in the society, fear of innovations.

2. A Need of creating interdisciplinary partnership

Despite complicated experience in creation of partnerships, the opinion of all the informants was unanimous that one of the most important factors in working with risk youth is **social network**. The results of each worker's activities depend on the relationship established by him/her with specialists of other areas. “...what help we can offer for youth depends on to what institutions we can send them ...<... the stronger cooperation network among organisations is, the more you can help...>” (A), “...We do not know what problems we face on the street; thus, it is important to make as many contacts as possible with other organisations of that neighbourhood” (B), <...our goal is each month to visit one new organisation... and then it is of great importance to constantly keep that relation: to call, come over”(C). “...network is very important, the basis should be given by government representatives.” (D).

The need for cooperation was highlighted by the understanding of research participants that **artists are not social workers, and social workers are not artists**. Cooperation is necessary also in order to learn from one another. “... how properly should communication with them be started?” these are the questions asked by our partners..” (C). “...for many years I have been working with youth, quickly make contact with them, but I really do not know how to paint...” (A). “...I would need more psychological knowledge as there are

situations when young people are very sensitive, and I do not know what to say to them..., the latter is stated by our partners” (D).

The need for cooperation in creative area revealed through the answers by the research participants that street youth is different in every neighbourhood. The need for cooperation between youth workers with street art professionals depends on **the willingness of youth** to involve into recreational activities. *<...One thing is the rage. Graffiti was very popular...> (B)*, *<...Arts, I would say, is a softer part.. and, yes.. I like some, indeed... Guys in the centre are bit different, a cultural thing...> (C)*. It was stressed that in order to involve youth into recreational art activities also in other neighbourhoods it is necessary to achieve a certain communication level with youth. *<...I do not know, but to my mind, it is absolutely possible and very cool. Just such stage “of acting together” should be achieved and here it is very important trust with guys and you use it as a tool so that they can create something...> (A)*.

The fact that **street art is not valued as a professional art area** in the society is one of the obstacles that stops youth from involvement into creative activities. *<.We even saw that they painted, have bottles, but they say “no, .. I can’t”. somehow, as they were afraid that we will inform about them...> (D)*. However, the role of an artist as a teacher was stressed, with the help of which youth, and at the same time the society, would understand that street art may be professional and socially important. *<... With the help of artists it is possible to find the forms which would make minimum harm and remained what is called, for example, graffiti. For instance, on the street to spill from sand a certain message, which in case of real wind disappears and makes no harm to anything, but graffiti was made, it is artistically, creatively thought-out measure. The same is with rap, isn’t it? Just recently a rap story or Lithuania’s history in rap was famous in all social media in Lithuania. In fact, it tells historical events but also says, there Germans, Polish or Russian... when Lithuania was oppressed...> (C)⁴.*

The analysis of the research results revealed the role of a **social worker – mediator**. In the opinion of the informants, a social system is best understood by a social worker, thus, he should be able to form the network of different government, art, employment, healthcare specialists, keep the relationship with them, and if necessary, to find a necessary specialist for solving the young person’s problem *<...after all, a social worker should be known in the community, he should be an active member of the society and that everyone knew him...> (D)*. *<...it would be great if specialists knew about each other’s activities and wanted to cooperate...> (B)*, *<... a social worker should gather*

⁴ The informants had in mind a popular video clip: https://www.youtube.com/watch?v=V4veBuE_QA0

together not only other social workers but also specialists of different areas, after all, he is entitled the role of the enabler...> (A).

Hence, cooperation with specialists of other areas and having as many contacts as possible create possibilities for helping the young person and grant more confidence to the social worker himself. Thus, interdisciplinary partnership would grant more stability to the activities, help managing unexpected situations, develop competences of workers, and improve operational skills.

Conclusions

1. Both in European countries and in Lithuania work with social risk youth on the street is under development; however, every country has different work results and experience. Recommendations “European consultation with street-connected children and young people for the United Nations” provide general guidelines for the countries towards what social work on the street should be oriented: creation of a social dialogue between youth, social worker and society; greater involvement of police and other law enforcement authorities in protecting child’s rights; understanding street as a creative space.
2. In Lithuania street youth workers only start their activities, thus, youth workers face new challenges, innovative working methods and practical skills of recreational activities are to be developed. Specialists (social worker and street art professional), working with this target group do not know about each other’s activities, but they state that it is important to cooperate and cooperation that could be implemented by a social worker in order to foster social work with social risk youth is of relevance.
3. The main challenges faced by specialists working with street youth include insufficient attention from the government representatives, negative stereotypes dominating in the society, fear of innovations; key obstacles for integration of recreational activities into social work are the following: unregulated activities of social work on the street, lack of funding, lack of professionalism and experience as well as avoidance of work requiring additional efforts.
4. In view of social workers, interdisciplinary partnership in creating spaces attractive to street youth and carrying out creative activities is necessary. Cooperation would provide more stability, help to control unexpected situations, develop workers’ competences. The main obstacles for the development of this cooperation are as follows: stereotypes dominating in the society and the government that street art is not a professional area of

art. Youth is not motivated to engage into the activities as they think that this type of activities is illegal and those who want to create, do it in secret.

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THE PREPARATION OF POLISH SOCIAL WORKERS TO WORK WITH PERSON EXPERIENCING DOMESTIC VIOLENCE. EDUCATIONAL EXPERIENCES AND CHALLENGES

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Abstract. *Today's social worker has to face many new challenges that arise due to socio-economic and cultural changes. One of the extremely important and difficult areas of social workers' job is to work with people who are experiencing domestic violence. The aim of the following article is to show previous experience in the field of theoretical and practical social worker's training in work with people experiencing domestic violence and the difficulties arising because of the imperfections of the system (i.e. due to lack of appropriate diagnostic tools, intervention strategies and supporting institutions). To show the weaknesses of education, a secondary analysis of the data (including programs, study plans) was made and expert interviews with employees who undertake work with a person experiencing violence were conducted. The analysis allowed to propose a concept of social workers' training in working with a person experiencing domestic violence (child, woman, elderly person), based on best practices, i.e. from Israel and Canada*

Keywords: *education of social workers; work with victims of violence; domestic violence; new training programs.*

Introduction

Aging of the society carries a lot of socio-economic consequences while being a big challenge for the social policy of the state. Looking at the changing demographic situation from the long run perspective one can claim that at some moment there will be a situation when the number of the elderly surmounts the number of the young considerably which will cause imbalance of the generation ratio drastically.

The subject of social workers' education for the work with seniors is important due to a few reasons. One of them is the increase of the demand for

caring services connected to the increase of the number of elderly people and their prolonging lifespan. Another reason is the changes of family life and lack of interest for the elderly among their family. A further reason is created by phenomena marginalized by family members and social and medical workers like abuse against seniors and ageism which shows itself by, among other, aversion towards the elderly and accordingly the young do not connect their future with their work with the elderly. In Polish conditions the current situation in social aid plays an important part as well.

Educating social workers for work with the elderly is a big challenge. In the times set for the cult of the youth it is hard to persuade young people that seniors may be and are active, have their desires and are able to realize them and that working with the elderly is not degradation but it is equally important and satisfying as any other job. Educating young people towards caring for an elderly person is not popular.

The proof for the need of educating social workers towards work with seniors is the fact that in Poland the state or the art of social work services for seniors is unsatisfactory and usually comes down to caring services (72 %) and financial help (52 %). Social work is indicated only by each fourth of the surveyed while clubs for seniors and specialistic guidance exist only in one tenth of the surveyed. (Krzyszowski, 2013, 13). Similarly, apart from the interest in social work with the elderly itself, the quality of education taking into consideration the ability of diagnosing various needs and situations experienced by seniors in both their family and institution environment.

Therefore, the aim of this article is to highlight the importance of knowledge and skills of students of social work in the field of diagnosis, intervention and support of older people experiencing violence. Previous studies carried out among social workers in the field of counteracting of violence against the elderly (Tobiasz-Adamczyk, 2009) and analysis of the plans and programs of social workers training allow to draw conclusions that education in this area is marginal.

The phenomenon of elder abuse and the knowledge of social workers

Elder abuse (see Krug et al., 2002; Lachs & Pillemer, 2004) is a single or a repetitive intentional action or non-action carrying the risk of hurting the elderly person who is under care of the guardian being in such a relation to that person which should ensure well-being, while, in reality it is a source of “harm or stress for the senior” (The Toronto Declaration on the Elder Abuse, 2002).

In the light of gerontological literature elderly abuse is most often connected to family violence (Freeman, 2008; Hwalek & Sengstock, 1986; Johnson, 1986), or there are various forms of it stressed in the analysis, e.g. physical abuse, neglect, mental, sexual, material abuse, breaking the rights, financial abuse or

their consequences like: emotional or physical harm (Rathbone-McCuan, 1980; Chen, 1981; Gioglio, Sengstock, & Hwalek, 1986). The analysis of the chosen definitions of the phenomenon of abuse (e.g. Nerenberg, 2006) allows to identify two important dimensions of the abuse connected to the role of the abuser and the nature of the activity (aggressive and invasive action towards the elderly person vs forsaking the action on the side of the guardian and/or neglecting the duties towards the elder) (see Johnson, 1986). It is worth underlining that the dimension concerning the nature of activity does not include the phenomenon of self-neglect, the basis of which is self directed aggression. The mentioned phenomenon is currently a subject of intense research (Band-Winterstein & Eisikovits, 2014; Band-Winterstein et al., 2014; Band-Winterstein et al., 2006; Band-Winterstein, 2015a, 2015b¹).

The typology suggested by World Health Organization (WHO) (Krug et al., 2002) defines forms of self aggression, e.g. self neglect, and those imposed by activity of other people, groups or institutions, eg. social marginalization, ageism which are harmful from the point of view of the elderly. There are a lot of theories claimed as representative for the way of thinking of the reasons and mechanisms of abuse (James & Gilliland, 2013). The factors defined in them may interact in more or less complicated ways. Among them the most important are (James & Gilliland, 2013; Tobiasz-Adamczyk, 2009; Freeman, 2008; Hwalek & Sengstock, 1986; Johnson, 1986; Pikuła, 2013):

- On the individual level: biological conditions increasing the possibility of being a victim or an abuser, individual experience connected to abuse, eg. being abused in the childhood, mental disorders and illnesses, eg. schizophrenia, personality disorders, and/or somatic disorders like moving disability, drug addictions, etc. On the interpersonal level: the type of interpersonal relationships in the family, peer group, the risk of abuse behavior.
- On the demographic level: risk factors connected to the place of living, belonging to various social groups (school, neighborhood, place of work) with high level of unemployment, social mobility, population density, existence of deviant groups.
- On the socio-cultural level: socially approved attitudes concerning abuse, behavioral models, etc. (e.g. treating abuse as an indicator of courage, an efficient way of solving problems or situation control).

¹ In the theoretical part, the reference was made to research studies carried out in Canada and Israel, as well as to experiences in the field of education and work of social workers with older people experiencing violence, because in these countries mentioned areas of work and education of social workers are compiled in the best way, and research are conducted in most intensively way by well-prepared research teams.

Furthermore, the results of research conducted within the international EuROPEAN project (van Bavel et al., 2010) show that the notion of elder abuse is understood differently in different European Union countries. For example, according to the definition worked out in Ireland, abuse is an activity trespassing the fundamental rights of elders (Working Group on Elder Abuse, 2002). On the other hand the definition suggested in Holland stresses the meaning of the relationship between the victim and the abuser (Comijs, 1998). In other countries that phenomenon is understood first of all as home abuse (Czech Republic, Italy, Poland, Slovenia), abuse directed at the weaker including women, children and seniors (Czech Republic, Italy and Slovakia) and as discrimination (Slovakia). Such big disparity within understanding the notion “elder abuse” and the lack of a universal definition caused by that makes running comparative international studies of the phenomenon difficult (Jagielska et al., 2015, p. 280-281).

Even though since 2006 all theoretical approaches to abuse including home abuse in families, child abuse and partner abuse indicate elder abuse (assuming that each of those mentioned forms of abuse, i.e. physical, psychological, sexual, neglect or deprivation concern seniors as well) it is still the problem which has been relatively rarely mentioned in Poland. Even if it is mentioned it is undertaken by medical environment and marginalized by sociologists, teachers and educators, social workers, psychologists, police and law environment.

Elder abuse does not cause interest and is not perceived as an important threat for the old age. It is joined by unclear criteria of recognizing abuse and working out efficient procedures how to behave in case of encountering abuse and a low level of social awareness towards the problem which, subsequently, causes that an elder, being a victim of abuse, even while contacting a medical or aid institution not always can count on help and may be left alone (Kennedy, 2005). Difficulties in recognizing elder abuse come mainly from fear of false recognition, a low awareness of the abused people themselves, lack of knowledge on the appropriate procedure in case of abuse both on the side of the victims and professional workers of social and medical services.

To increase awareness of societies and professionals various EU countries conducted lots of actions and campaigns undertaking the problem of elder abuse and indicating support and help forms in the situations of suffering from abuse. However, there have been very few of them in Poland. One of those was the 2014 anti-abuse preventive campaign held in Wrocław including the elder abuse (<http://www.kampaniaprzemoc.pl>) and the project “Support Model” realized in it which aimed at creating Support Coordinators working with abused people in order to implement “The Change Program” in their situation (www.modelwsparcia.cis.wroclaw.pl). What is more, the research on the phenomenon of abuse and promulgating good practices for its prevention was conducted in the project “Unheard Voices: Developing the East Central European

Network for the Prevention of Elder Abuse” financed by EASSW (Jagielska et al., 2015) and in the project EuROPEAN European Commission (van Bavel et al., 2010). The aim of the project was to define the frames for referring to elder abuse prevention all over Europe. Organizations from Austria, Czech Republic, Greece, Ireland, Italy, Holland, Poland, Slovenia and Slovakia took part in the project. In June 2010 a document “Elder abuse: background and place” was developed. The published work contained research results from nine countries which were to help understand the phenomenon of elder abuse. At the beginning of 2011 reports on particular social and cultural elder abuse environments were published together with a collection of 55 good practices in preventing abuse. A database of good practices on elder abuse prevention (van Bavel et al., 2010) containing materials translated into 9 languages was developed and it is intended to be disseminated among national and international policymakers, interested parties and experts. Among good practices there are no suggestions from Poland, which proves an occasional character of both elder abuse research and the preventive, prophylactic, intervention or therapeutic actions.

Elder abuse is a problem which still requires research and thorough studies allowing for defining the range of the phenomenon all around Poland. Despite the increase of interest in the issue of elder abuse there is still lack of national research, the subject of which concentrates on elder abuse and self-neglect. The research conducted so far have had local character (e.g. Halicka, 1995, 2010; Tobiasz-Adamczyk, 2009; Twardowska-Rajewska & Rajewska-de Mezer, 2005; Rudnicka-Drożak, 2006; Sygit & Ossowski, 2002; Synak, 2002, Bedyńska et al., 2009, Jaszczak-Kuźmińska & Michalska, 2010; Korzeniowski & Radkiewicz, 2015). However, that research gives only a partial view of the phenomenon and a variety of methods and research techniques used in them and even no compliance of definitions and forms of abuse (various authors presenting the research problem use various terminology and typologies) make it difficult to compare the research results from particular research centers.

Nevertheless the research implies a few urgent questions worth thorough research and undertaking actions connected to vocational education especially in relation to social workers, nurses, medical doctors and other professionals working with elders. Particularly, as it is shown, among other, in the research of Beata Tobiasz-Adamczyk (2009), people working with elders (Tobiasz-Adamczyk researched medical doctors, MOPS (City Center of Social Aid) employees, community and clinical nurses and DPS (Social Assistance Homes) employees have totally different images of the elder abuse phenomenon as a problem encountered in their jobs (as a social problem, the results in per cent are close for the researched people and much higher than those included in the experience of professionals), in the aspect of physical abuse (least differentiated data), mental abuse (most perceived by doctors, 30.4 %, least perceived by nurses,

ca. 8 %, and social workers, 16 %), neglect (45.6 % perceived by doctors and only 26.8 % by social workers, 12.3 % by community nurses and 10.9 % by DPS employees), abandoning (20 % by clinical nurses, 15.8 % by doctors and considerably less by community nurses, MOPS and DPS employees), financial/material abuse (31.6 % by doctors, 28.7 % MOPS employees and nurses and DPS employees: 18.5-16.9 %). Considerable differences in the assessment of the phenomenon had a few reasons, one of which was shortage of profound knowledge on the phenomenon and intervention actions which should be undertaken in case of diagnosing abuse, lack of diagnostic tools and skills needed to use them. Those shortages decide upon the possibility of recognizing abuse (low recognizability) and undertaking intervention strategies (e.g. talking to a home community member, most often the abuser or a person dependent on such a person was treated as a way of responding to abuse by family at the victim's place of living).

Therefore there is a need of educating social workers on diagnosis, intervention and support of abused elders (cf. Tobiasz-Adamczyk, 2009).

Challenges for social workers' education

A social worker who is to work responsibly with elderly people, especially with those suffering abuse, must possess appropriate knowledge, skills and social competence. In Poland social workers get their work qualifications during university studies of both the 1st (bachelor) degree and the 2nd (master) degree at the courses of social work or pedagogy, sociology, family studies running qualification training courses within social work specialization.

A social worker can choose various specializations while studying. Among many of them (e.g. a family assistant, an institutional care assistant, social work with an elder and a handicapped person, a course on increasing activity and social guidance) the least chosen, unfortunately, are those giving a license to work with an elderly person (data come from the recruitment in 2012-2016 from the universities located in the southern Poland, which train social workers). The research encompassed university courses run at universities in southern Poland. The analysis of programs implies that those courses contain very little knowledge on diagnosis, intervention, support or appropriate forms of therapy referring to elder abuse. That knowledge is most often a part (e.g. 1 or 2 hours) of a given subject which takes various needs and situations concerning elders into consideration (e.g. diagnosing needs of elders). Such small knowledge on the phenomenon in question incorporated in lots of other content, lack of skills in using appropriate diagnostic tools, conversation strategies, intervention or support activities and shortage of suitable therapy forms addressed at abused elders causes that even though in a situation when social workers suspect they may deal with

elder abuse they do not undertake proper action because they possess neither skills nor knowledge on the subject. If such a situation does not change, social workers will still possess meagre knowledge and skills and present negative attitudes towards abuse like those proved by Tobiasz-Adameczyk (2009) in her work .

A well-trained social worker is the one who recognizes the appearance of symptoms of negative situations experienced by elders, reads them in reference to the needs of the people who she/he works with and undertakes suitable measures, i.e.:

- knows the needs of the elderly,
- can communicate efficiently and listen actively,
- can diagnose elder abuse and self-neglect,
- can undertake appropriate intervention strategies towards abuse victims and their abusers,
- knows forms of support for the abused,
- knows and can show forms of therapy and institutions running therapeutic activities for abused elders.

“While educating social workers one should pay special attention to issues dedicated to elders, and especially to recognizing life situation of seniors, proper recognition of their needs as it will enable suitable animation of the elders’ lives” (Jagielska et al., 2016, p. 17).

Conclusion

The results of studies on elder abuse and the quality of education of social workers for the work in the area make it possible to assume that:

- Elder abuse exists in all forms but it is rarely or never perceived by social and medical workers (concerns home abuse, self-neglect and abuse suffered at aid institutions).
- Among institution employees abuse is marginalized and unnoticed. It is still a taboo. One can get too little knowledge and too few skills on the subject during university studies and there is little literature and discussion on the subject with a few forms of abuse e.g. sexual abuse or self-neglect existing in scientific discourse only marginally.
- The scale of the phenomenon is hard to assess: medical and social aid institutions employees, despite having the knowledge on diagnostic criteria, do not always undertake action in order to give help and support (there is no statistics or register of such activities).
- Lack of adequate knowledge of social workers on elder abuse, lack of standardized diagnostic tools for elder abuse assessment and of intervention procedures make the phenomenon marginalized.

Therefore there is an immediate need to educate social workers on the work with the abused.

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YOUTH IDENTITY FROM ECOLOGICAL PERSPECTIVE BETWEEN EDUCATION AND PREVENTION

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Abstract. *Socialisation is one of the key processes that shapes the identity of youth. This construct, which over the last century has undergone significant transformation, became a pattern for determining the purposes of upbringing (Nature vs. Nurture), or interpretative model that is used to explain character of this process from a socio-cultural perspective. On the basis of ecological framework, the concept of resilience and positive psychology, in recent years it has been developed a new approach towards socialisation - Positive Youth Development (PYD). Because of its relevance, pragmatic assumptions, this model is worth examining in terms of teleology, epistemology and methodical context.*

According to the Ecological Systems Theory of Urie Bronfenbrenner the youth socialisation process is included in the micro, meso, exo and macro systems. While the socialisation process, youth experiences the interactions between these systems, which in consequence shapes its identity. An element that fits into a methodical context is the characteristic of chosen supportive, educational and preventive actions undertaken towards youth in the northeastern Poland.

Keywords: *adolescents, Positive Youth Development, socialisation, youth identity.*

Introduction

Motto: Young people are condemned to wander within and between multiple borders and spaces marked by excess, otherness and difference. This is a world in which old certainties are ruptured and meaning becomes more contingent, less indebted to the dictates of reverence and established truth. While the circumstances of youth vary across and within terrains marked by racial and class differences, the modernist world of certainty and order that has traditionally policed, contained, and insulated such difference has given way to a shared postmodern culture in which representational borders collapse into new hybridised forms of cultural performance, identity and political agency (Giroux, 1994, pp. 287–288).

The identity of contemporary youth is very complex construct, interpreted from different perspectives, shaped by a number of factors. While analysing the characteristics of the young generation of the first decades in third millennium, we should note, that, development issues should be viewed from a global perspective. Living in a global village, there shouldn't be forgotten the factors determining development of children and youth in other countries or continents.

Robert M. Blum and Kristin Nelson-Mmari (2004, pp. 553–558) capture processes projecting global socialisation and development of young people in a few points: child survival, shifting demographics, international migration, rural to urban migration and poverty. They perceived that a huge increase in number of young people has resulted from the child survival initiatives implemented in the second half of XX century, especially in the developing regions of the world. This demographical change causes that global societies become even younger.

According to second factor (shifting demographics) they pointed, that the highest demographical increase is noted in less developed regions of the world, especially in Sub-Saharan Africa. Such situation is linked with cross-national migration. In the wider context these factors are underlined as influence of migration from the poor South to the rich North: income disparities between and within regions, labour and migration policies of countries, political conflicts, natural disasters, war, environmental degradation (e.g. loss of farmland), brain drain (Blum & Nelson-Mmari, 2004, p. 554).

Obviously a global migration is only one side of the problem. In the last decades the number of youth from rural environment, looking for better future in urban areas, is also quickly increasing. This form of social adaptation is not always successful and causes many side effects, specific for migration in each dimension: unemployment, poverty, exclusion, violence, prostitution or substance abuse. Among them, poverty is a special factor, which plays a specific role. First, there is the base for migration process, motivation for searching better perspective for live. Second, unsuccessful migration increases poverty, generates marginalization, underclass, or culture of poverty (Jencks & Peterson, 1991; Lewis, 2011; Wilson, 1987). This processes increase unsuccessful socialisation, place members of youth generation far from the social, cultural and economical mainstream.

According to these global factors the open question concerns youth identity. The aim of the study is to present the impact of socialisation process that takes place in different social environments (ecological perspective) on the development of youth identity. Additionally, it has been presented the role of good practices in the aspect of education and prevention from local institutions in northern eastern Poland in the process of developing youth identity. According to the ecological model by Urie Bronfenbrenner (1979, 1986) human development during adolescence is determined by the environment, defined as a set of

connections with family, neighbourhood, peer groups, as well as the quality of the relationship with school and available forms for self-realisation. Based on these assumptions, contemporary socio-cultural environment may be perceived as uncertainty (Brown, 2015; Geldens & Bourke, 2008) or even risk (Alaszewski & Coxon, 2009; Beck, 1992), because of precarious social, cultural, economic, and morally-ambiguous situations. Such form of social exclusion (due to limited work and social infrastructure resources, hence creating a sense of being an outsider) has immense effects on youth (Johnston, McDonald, Mason, Ridley, & Webster, 2000) endangering the development of one's identity (Watters, 2003), enhancing the inability to identify and engage in typical adult roles, as well as manifesting itself in the deposition of aspects such as decisions to start a family and undertaking full-time employment (Bradley & vanHoof, 2005; Geldens & Bourke, 2008).

Paradoxically mentioned above factors can be also perceived as the source for potential change. As Ingrid Schoon pointed *Rapid social changes, especially changes in labour market opportunities, place increasing demands on young people's initiative and ability to navigate possible options and multiple demands. While previously individual lives were supposed to be more strongly shaped by structural forces, i.e., social class, gender, and ethnicity, it has been argued that young people are now increasingly expected to actively shape their own destiny* (Schoon, 2007, p. 163). According to Manuel Castells identities are sources of meaning for the actors themselves, and by themselves, constructed through a process of individuation (2010, p. 7). This proves that it is being realised in dynamic developmental relation between risk and protective factors, perceived as the area of human existence.

Three Phases of Adolescence

Richard Lerner and Lawrence Steinberg (2011) pointed to the three phases of youth development. According to these authors, the first two are solidly elaborated in the literature, but the third phase is still in progress and under construction. The first phase started at the beginning of the previous century. The turning point was the publication of the of Stanley G. Hall (1904). The author emphasises the kind of mismatch between human nature and the concepts of education of the young generation (Nature vs. Nurture). In accordance to that socialisation process of adolescents has to be attuned to social requirements. The transmission of heritage in different dimensions (e.g. tradition, history, culture and social order) is the basis for education, upbringing and socialisation.

The second phase of the theory of adolescence began half century ago with the launch of longitudinal research on life cycle and functioning of individuals in different sociocultural realities. Taken into account the multiplicity of

perspectives, it was noted that (under the assumption of cultural relativism), the phenomenon of multiculturalism and the complexity of the social structure are the areas of adolescence. The attention is paid to the flexibility of individuals to adapt to life conditions. In this phase of theoretical reflection, adolescence is seen as a key stage of human life cycle, in which (except external, biologically determined puberty) there is also creation of own independence.

Two theoretical approaches at this stage deserve special attention. According to ecological theories the essence of analyses is the growing interaction between individuals and environment. Another theoretical approach (resilience theories) explaining the mechanism of positive adaptation to the environment, which is characterised by resistance to potential or real factors, jeopardize the development of the individuals. This is the ability to survive a stressful, difficult situation, manifested in the ability to return (the occurrence of such a situation in the future) to the normal functioning (Caldwell, Zimmerman, Bernat, Sellers, & Notaro, 2002).

The third phase of reflection on adolescence is in an opposition to the previous assumptions, where adolescence and socialisation were seen primarily in terms of broadly interpreted problems: intoxication, sexual initiation, widely understood demoralisation. According to the above point of view, socialisation was understood as a process of solving problems. Differently, from the third phase perspective the previous strategy allows only to half-effects solving problems. Equally important is to enable youth to develop positive resources, positive identity and relations with prosocial groups. Theoretical background of the third phase is a continuation of selected theses from the second stage (resilience, ecological concept). Additionally, it pays attention to the link between applied sciences and human development. The analyses are focused on deficits and dysfunctions (risk factors) and on the potentials, opportunities (protective factors). This research activity remains in close relation with the needs of the environment. Because of the importance and significance of the third phase, we pay a special attention to this stage.

Positive Youth Development (PYD)

Rainer K. Silbereisen and Richard M. Lerner define that positive youth development is an reflection on adolescents, which has arisen because of the interest among scientists in using developmental systems, or dynamic models of human behaviour and development for understanding:

1. the plasticity of human development,
2. the importance of relations between individuals and their real-world ecological settings as bases of variation in the course of human development (Silbereisen & Lerner, 2007, p. 3). In other words, PYD

means better mental health and lower rates of risk behaviour and delinquency.

Positive Youth Development is perceived as three interconnected ideas:

1. youth have an inherent capacity to grow toward optimal development if given appropriate opportunity and supportive developmental ecologies;
2. youth programs orchestrate at the community level a range of developmentally appropriate supports and opportunities that build on and enhance the strengths of youth;
3. youth programs are designed to emphasize competency, skill building, youth participation, and inclusion (Benson, Mannes, Pittman, & Ferber, 2004, p. 782).

Thriving in the field of positive development refers to changes, adolescents experience and undertake for growing into a well-adapted adult status. The proximal processes indicating thriving are academic achievement, taking over responsibility, psychological well-being, the ability to delay gratification, and appropriate strategies for dealing with problems and developmental risks (Lerner, Lerner, & Almerigi, 2005). As outcomes of the process of thriving five attributes (the five C's) are suggested, namely intra and interpersonal competence, confidence in others and own competences, a strong character, and supportive social relationships with high levels of connection and care. Moreover, a sixth C (e.g. contribution) may be the result of the development toward an engaged, interested, and motivated adolescent (Larson & Wilson, 2004, p. 302).

Peter. L. Benson and his colleagues at the Search Institute in Minnesota point basic framework for developmental assets dividing them into external and internal assets (Benson, 2007). According to this perspective external development assets consist of four elements:

1. Support - means, that young persons experience in family positive communication with parents; that means young person and her or his parents communicate positively, and young person is willing to seek advice and counsel from parents. They can also get support from the other non-parent adults. Adolescents also experience caring neighbours, provides a caring, encouraging environment at the school, and their parents are actively involved in helping young person succeed in school.
2. Empowerment - means, that adolescents perceive that adults in the community value youth, are given useful roles in the community, are involved in community life, feel safe at home, at school, and in the neighbourhood.
3. Boundaries and expectations - means, that adolescents' families have clear rules and react consequently, monitor the young person's

whereabouts, adolescents' schools provides clear rules and consequences, their neighbours take responsibility for monitoring young people's behaviour. Adults and peers in environment model positive and responsible behaviour.

4. Constructive use of time - adolescents should spend three or more hours per week in practicing: music, theatre (or others arts), sport or organisations in school or community, one or more hour in religious institutions, avoid spending night with friends „with nothing special to do”.

Benson and his colleagues precise also four internal assets of PYD:

1. Commitment to learning - means, that adolescents are motivated to do well in school, actively engaged in learning, care about her or his school.
2. Positive values - adolescents should place high value on helping other people, promoting equality and reducing poverty, act on convictions and stand up for their beliefs. They should also accept and take personal responsibility, ‘they should tell the truth even when it is not easy.
3. Social competencies - means, that young people know how to plan ahead and make choices, have empathy, sensitivity, and friendship skills, have knowledge and competences for contacting and building relationship with people of different backgrounds (cultural/racial/ethnic); they can also resist negative peer pressure and dangerous situations, resolve conflict non-violently.
4. Positive identity - means, that they report high level of the self-esteem, feel, that their life has purpose, think optimistic about their future.

Good Practices from Environmental Context

Gathered information is based on the desk research and the field research done in local environment in North Eastern Poland (Bialystok). All analysed methodical examples are presented in a form of four dimensions: general description, aim of the treatment, description of participants and undertaken actions.

Name of the Programme: Miejski Program “Wychowawca Podwórkowy” (Municipal Programme "Tutors at the Backyard")

1. Description of the Programme:

A large amount of risk factors that contemporary impact on societies, foster undertaking by youth risk and problematic behaviour. It takes part mainly in the youth free time. Additionally, insufficient offer of extra activities that would be universally accessible, attractive and free of charge is not conducive either to build an alternative towards risky behaviour or developing potentials and sources

(e.g. interests, abilities, talents, psychosocial skills), which are the basis of positive youth identity.

The Programme is an example of an activity that directly relates to minimize the impact of risk factors on problematic youth behaviour. It was established in 2007 in Bialystok. The Municipal Council in Bialystok is the body that is responsible for the Programme from legal, organizational and financial perspective.

2. Aim of the Programme:

The aim of the Programme is to prevent socially unacceptable behaviour of children and young people by organizing their free time to develop their interests and preventive actions.

3. Participants:

Beneficiaries of the program are children and young people (from 5 to 18 years old) who are living at different estates in Bialystok. Programme tutors organize free time for children and youth in the afternoons on weekdays and Saturdays in the school year, as well as during the holiday season at a convenient time for the participants. The activities take place in schools (pitches, gyms, classes), housing cooperatives (housing estates squares, sports fields, rooms) and in different places, according to the subject matters.

4. Undertaken actions:

Educators take actions related to:

1. animation of the leisure time for children and adolescents (activities and recreational trips, themed activities concerning: cooking, dance, music, sport etc.);
2. initiation of activities aimed at teaching and learning by the young generation of social skills, including proper communication and positive relationships with themselves, in family, school, peer group and local environment;
3. help in solving various difficulties and problems (e.g. individual, family, school, legal, social) of children and youth through supportive, corrective and remedial activities.

Bialystok is one of the Polish cities where the program runs fine and fastest. Promoting the idea of the Programme, as well as a willingness to share gained experience, resulting in growing interest in the establishment of similar initiatives by local authorities in other places in the country.

Centrum Sprawiedliwości Naprawczej dla Nieletnich (Restorative Justice Centre for Juveniles)

1. Description of the Programme:

Creation of Restorative Justice Centre was a key element associated with fact that in our city courts did not use the opportunity and did not have the possibility

to adjudicate educational measure (e.g. juvenile is being supervised by youth organization or minors are funnelled to perform certain activities to the victim or the community as a consequence their of misbehaviour). This was due to the lack of institutions in Podlaskie Region in which such a measure could be implemented. Therefore, in 2012, the idea of the project was developed in the Police Prevention Department in Białystok and implemented jointly with Stowarzyszenie na Rzecz Integracji Dzieci i Młodzieży „Przyjaciele z Osiedla” (Association for the Integration of Children and Youth "Friends of the Estates").

Because of the element of restorative justice, this initiative encourage juvenile into an active participation in the process of deciding about own destiny. It teaches him to take responsibility for himself and his actions, and causes that he is more willing to implement actions in determining which he participated.

2. Aim of the Centre:

Restorative Justice Centre for Juveniles is a project aimed at responding to the problems of juvenile crime and its reduction in the early stages of social maladjustment. Additionally, it is important to allow a wider usage by court of educational measures (e.g. commitments to specific behaviour, youth or social organization supervision) over minors. From the perspective of minor and his parents/legal guardians, the aim is to propose an alternative towards following the traditional justice system's procedures.

3. Participants:

The actions in the Centre are dedicated towards minors, their parents/legal guardians and local courts. They can take part in activities that are offered in the Centre from three months up to one year. In special cases the contract can be extend.

4. Undertaken actions:

The activities that are undertaken in the Centre concerns better knowledge and understanding of justice system and obeying the law by minors. Additionally it is important to develop their psychological and social skills. Simultaneously, minors' parents of legal guardians participate in therapy or educational skills workshops.

The actions are undertaken in three different spheres:

1. suffering the consequences of own behaviour – each minor is involved in community works related to committed criminal act (e.g. plant a forest, clean graffiti, collect garbage, help those who are in need). Additionally, minors take part in at least one educational meeting while discussion is about risk and support factors which influence minors' behaviour.
2. modification of socially unacceptable behaviour – this action depends on the results of the previous diagnose of the deficits of the minors. It

concerns a modification of behaviour that is socially unacceptable (e.g. different workshops and trainings).

3. strengthening positive behaviour – actions in this sphere concern searching for minors' sources and strong points such as talents, hobbies, interests (sport, theatre, writing, music, work) and its developing.

Restorative Justice Centre for Juveniles in Białystok, was one of the first institution in Poland which implemented in its actions the basic elements of restorative justice concept.

Chrześcijańskie Centrum Edukacyjne “Diament” (Christian Education Centre “Diamond”)

1. Description of the Centre:

Christian Education Centre “Diamond” was created because there was a lack of qualitative work with children from orphanages. The first results of the work were related even to adoption of children or establishing foster families for them. Later the need of spending free time in a constructive way by children and juveniles was observed among the educators from the Centre, that is why children and youth clubs, summer and winter camps were proposed for children and youth. Activities undertaken in the Centre develop and evaluate steadily and are adequate to the current needs of local society.

2. Aim of the Centre:

The main aim of the Centre is to create asylum from risk of violence, alcohol and drugs towards children and youth by e.g. educational activities, charity and caring, promotion of Christian values and nurture the Christian lifestyle, advice and assistance in the upbringing and education of children, help for orphans and abandoned children, help people with disabilities, promoting the idea of adoption family of orphans and abandoned children, counselling and assistance to families in difficult life situations.

3. Participants:

Centre works with children and youth from dysfunctional, poor and pathological families, which struggle with problems of alcoholism, drug addiction and unemployment. Centre also supports children from orphanages as well as children with mental disabilities.

4. Undertaken actions:

1. conducting two clubs for children and young people from dysfunctional families: Children's Club "Diamond" and Youth Club "Shelter";
2. organizing extra activities (e.g. plays, games, sports, watching movies, reading books, English, drama, music, art);
3. family meetings in the weekends for children from orphanages - to enable staying in private homes and experience a family atmosphere by

- children from orphanages. Thanks to this action close relationships with the families and children are established. In some cases these relations enable to establish adoptive or foster families;
4. summer and winter camps for children from orphanages and dysfunctional families in little groups from 2 to 5 children, to build close and intimate bonds;
 5. rehabilitation for children with intellectual disabilities and their families;
 6. nomadic and therapy camps for juveniles;
 7. actions to help children from poor families (e.g. preparing Christmas gifts or purchasing school textbooks).

Conclusions

Presented methodical examples of good youth work practice are part of the analysed theoretical perspective, which is based on the environmental resources of youth resilience, understood as the strengthening protective factors and minimising risk factors. Efficiency of initiatives undertaken at the local level depends to a large extent on gained knowledge and experience, but also on implemented evaluation procedures.

According to the aim of the article, functioning of the above institutions will be discussed in pursuance of U. Bronfenbrenner's ecological model:

- referring to the microsystem, described projects provide and reinforce positive patterns of youth activity and healthy functioning related to their attitudes and social roles;
- in the context of the mesosystem, good practices that have been presented in North Eastern Poland positively reinforce adolescents' connections with their socialization spheres. Youth relationships with family as well as peer groups, schools, local institutions are taken into account;
- the analysed projects also include the interrelationships between mesosystems (the exosystem perspective). Presented good practices involve the cooperation of particular environments or systems in which an individual does not function, but where the processes and events affecting his environment take place (cooperation of case management teams);
- in the macrosystem perspective of the presented programs, important aims refer towards respecting: culture; ecology; social empowerment and pursuit adolescents' responsibility for themselves and local community.

It must be assumed that further cooperation between policy makers, tutors, social workers, social scientists should concentrate on building better conditions for youth development and will inspire to take further initiatives to support youth resilience.

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LITHUANIAN AND LATVIAN SOCIAL EDUCATORS' OCCUPATIONAL STRESS AND THE ANALYSIS OF ITS COPING POSSIBILITIES: SOCIAL EDUCATORS' EXPERIENCES

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Abstract. *Stress is a condition related to complaints or disturbances of physical, psychological or social nature, which occur, if an individual does not feel able to fulfil all the requirements and expectations. In order to cope with stress situations, a person makes a particular effort for the regulation of it, in other words, for coping (overcoming, self-control). The coping is a multidimensional construct. The studies on this construct are rather recent in science, are carried out in the last twenty years. Due to that, the focus in stress research has shifted. Currently, more studies are conducted on prevention problems, how to develop and find resources in personality to cope with stress effectively. The first results of the study on the stress management peculiarities of social educators are reviewed in this paper as well. The research aim: to disclose the context of manifestation of occupational stress experienced by Lithuanian and Latvian social educators and its coping possibilities.*

Keywords: *social educator, social workers, stress, stress management, stress coping strategies, coping possibilities.*

Introduction

Stress and psychosocial risks at work are one of the main work safety and healthcare problems in Europe. They affect significantly both person's health and the economic welfare of organizations and countries.

Stress has a negative impact on organizations in various ways, for instance, reduction of business efficiency, increase in absenteeism, increase in a number of employees, who come to work while being ill and unable to perform their duties, as well as increase in a number of accidents and injuries. There are several causes of stress, for instance, content of work, organization, environment, and poor communication at work.

While performing social work to help a client in his life situation, the work of social specialist should be oriented towards the "change" of client's relationships with the environment and other people, not towards the "change" of the client himself. Relationship development in social work is the most essential, in order to help the client efficiently, ascertain his needs and resources, so the client can solve his situation on his own. The quality of relationships and the pace of consultation process is affected by both the client's and social worker's personality, character traits, personal life experience, culture, values, traditions and internal motivation. In many cases, it is complicated to help the client to solve the situation; there are no desired results for a long term, often the client gives up due to difficulties. It causes stress for both the social worker and the client.

If a person feels stressed for a longer period of time and he has no possibility or skills to affect it (i.e. chronic stress), it requires considerable resources from a person, mobilization, and, as a result, person's psychological and physical sense of self is affected. Chronic stress results in a number of psychological and somatic symptoms, for instance, a sense of helplessness, depression, anxiety, inability to see perspective; deterioration of social relationships, working capacity, personal performance, and cognitive abilities take place, behavioural disorders, sleep disorders, health problems (for instance, gastric and cardiac disorders, headache) and other expressions occur. These symptoms do not necessarily mean illness, but, if a person cannot regulate stress, they can result in serious psychological and physical illnesses.

Therefore, stress management issue is very important. R. Lazarus and S. Folkman set two types of stress management: problem-oriented stress management, in which the progress is focused towards the resolution of stress situation, and emotion-oriented management, which is applied in situations that cannot be changed.

The research aim: to disclose the context of manifestation of occupational stress experienced by Lithuanian and Latvian social educators and its coping possibilities.

The research subject: the context of manifestation of occupational stress experienced by Lithuanian and Latvian social educators and its coping possibilities.

Theoretical aspects of stress management

H. Selye, the founder of the stress theory, considers that stress is a non-specific response of the body to any demand of the body (Selje, 2011). T. Cox, in his turn, defines stress as any effect that disrupts the natural balance of the body. Changes in the body include both physical injuries, different types of illnesses and emotional disorders (Cox, 1985). Yet, there is an opinion that stress arises only

with the circumstances that are difficult to overcome for the body (Cuyne & Lazarus, 1980).

K. Maslach (Maslach, 1982) believes that "professional burnout" is related to the mismatch between work and personality. If this mismatch becomes too strong, burnout risk increases. Six mismatch types are proposed:

- *between work and worker's resources.* The requirements set for a worker are much higher than he actually can fulfil. Social work is related to a considerable mental effort, processing of complex information. Social workers must take full responsibility for the effective resolution of the client's problems and meeting the social needs every day.
- *between the desire for independence at work and strict management control.* Any expression of independence or creativity is suppressed; workers must comply with the management regulations.
- *between a personality and his work assessment (wage).* Undervaluation of one's own work, considering it insignificant, as well as underestimation of oneself as a professional occurs. Social welfare workers' work assessment is insufficient. Social work weaknesses are topicalized in the media more frequently than the positive results.
- *between a personality and his relationships with the other colleagues.* More frequently, it is related to the lack of social support and the assessment (positive) of work from colleagues. In rural communities, a social worker is most often the only specialist in his field.
- *between a personality and sense of justice.* Most frequently, it is related to the labour payment and resources invested in the work (energy, time). Social welfare workers' work assessment is insufficient in comparison with input into the fulfilment of work tasks.
- *between ethical moral personality principles and work requirements.* Most frequently, it is related to the mismatch between morally ethical and religious beliefs and work specificity. For instance, workers must provide people with information, in which they do not believe themselves, or even intentionally mislead people.

After the review of psychological factors of social welfare workers' work, it is obvious that there is a possibility of distress risk and, over a longer period of time, the risk of burnout syndrome development. The research carried out in 2011 by B. Miķelsons "The causes of professional stress and the peculiarities of the situational anxiety level of social workers and employees of non-governmental organizations" shows that the average rates of anxiety in subject groups, according to the Spielberg anxiety questionnaire, correspond to a medium high situational

anxiety level. Major stress causes are relationships with others, career and achievements, work strain (Miķelsone, 2011).

Every person tries to do something to overcome stress. Overcoming comprises cognitive, emotional and behavioural strategies. There is a wide range of stress overcoming strategies, the systematization and description of strategies is provided in a number of papers, but there is no common classification. Stress overcoming strategies in psychology literature are called coping strategies.

R. Lazarus sets out two types of strategies, which differ in terms of focus on strain:

- problem-focused strategy, oriented towards the resolution of the problem caused by the stressor;
- emotion-focused strategy, oriented towards work with emotions – to change the perception of a subjective situation in a way that the imbalance of demands and resources would not cause stress (Bartlett, 1998; Lazarus & Folkman, 1984).

In problem-focused stress coping, a person is aware of all the information on possible measures and mobilizes for a certain action with an aim to change the threatening situation to a safe and harmless one. These actions could be directed towards oneself and the environment, using both aggression, rationality and responsibility (Vazne, 2011).

Emotion-focused stress coping regulates emotions that are caused by a stress situation. A person can avoid thinking about the situation and also overrate it, without changing the real situation itself. Reassessment of stress is very important in the situations when reality is unchangeable. Emotion-focused stress coping includes distancing, self-control, search for social support, escape, avoidance, responsibility and positive overvaluation (Vazne, 2011).

According to the views of various authors, stress situations can be solved effectively, using several strategies simultaneously and working practically. Avoidance, escape and the strategy of positive overvaluation of the situation are considered ineffective.

The research sample and methodology

The respondents (N = 33) – social educators in Lithuania and Latvia – were chosen from educational institutions employing the purposive convenience sampling method. The professionals' experience was analyzed using the qualitative data collection method (semi-structured interview), which employed open-ended questions that did not limit possible answers according to assessment areas foreseen by the researchers. The latter were distinguished conducting the analysis of the scientific literature and authors' studies disclosing peculiarities of stress experienced by adults representing different development periods,

professions and activity areas (Bubelienė & Merkys, 2009, 2012; Frydenberg & Lewis, 1993; Folkman & Maskovič, 2004; Valickas, Grakauskas, & Želvienė, 2010; Kepalaitė 2013; Kriukova, 2010; Lazarus & Folkman, 1984).

The content of answers, which constituted the basis of the study, was broken down by corresponding diagnostic areas, subdivided into categories (diagnostic indicators), notional statements were selected. Rating of each category was identified by calculating the frequency of notional statements of the category. In the course of the research, the specialists' subjective experience about stress experienced in the professional activity, its coping techniques, strategies had to disclose. Research data were handled applying the content analysis method, using an open coding procedure (Corbin & Strauss, 2014).

Analysis of Research Results

The study aimed to analyze what ways and strategies were used by social educators in order to cope with or reduce stress in their professional activity. We present the data (Table 1), analysing subjective experiences of these professionals.

Table 1 Ways of Coping with Occupational Stress Used by Lithuanian and Latvian Social

Category	Sub-category	Proving statement	No. of statements LT	No. of statements LV
Dissociation from a stressful situation	Activities helping to relax	<i>“a walk”; “I breathe in fresh air”; “I drink a cup of coffee, tea to relax”; “sitting near the fire”</i>	17	4
	Purposeful leisure	<i>“reading books”; “crafts”; “watching comedies”; “music”; “crosswords”</i>	10	17
	Physical activity, sport	<i>“physical work”, “sport”, “active stay in the nature”</i>	6	13
	Separation of professional and personal relationships	<i>“I try not to bring bad memories about work home, I try to dissociate”; “I tried to solve everything at work”; “I don’t work at the weekends”</i>	6	10
	Diversion of emotions and self-control	<i>“I tried to forget everything quickly and engage in other activities”; “I learned to control myself”; “ I try to react calmly, not to raise my voice, to calm the child or family members”</i>	4	6
	Avoidance and retreat	<i>“I try to avoid stress”; “if possible, I avoid”</i>	2	2

Solution of problems	Discussion of the situation with the staff	<i>"I discuss with colleagues"; "we have a discussion of the situation", "we find new ways of solutions", "we try to look at the situation in a new way or another aspect"; "we analyze complex situations"; "self-help groups"</i>	15	12
	Professional development	<i>"I was looking for ways how to overcome this"; "I was reading literature on the subject"; "we addressed for help to other institutions, professionals"</i>	8	12
	Development of a positive attitude	<i>"I look at the situations positively: the glass is not half empty but half full", "I am learning to enjoy things"</i>	7	4
	Distinguishing of priorities at work	<i>"I am trying to select the most important works"; "I choose important works for learners rather than for inspectors"; "I plan works and prioritise"; "I select what is most important every day and what allows to perform tasks well"</i>	6	-
	Coping with stress on one's own	<i>"I try to solve problems on my own", "I persuade myself", "I tried to concentrate and solve"</i>	5	-
	Discussion of the circumstances of the situation with the pupil's family	<i>"I talked to the children's mother"; "I explained to the family"; "I first sorted out with the family"</i>	5	-
	The talk with the pupil	<i>"I talk with teens"; "I succeed to convince"</i>	5	-
Social support	Colleagues' support	<i>"I received support, understanding, empathy"; "I keep close contacts with the school psychologist"; "I received moral support from colleagues", "I talk with administration"</i>	9	12
	Use of therapy or supervision	<i>"I have supervisions"; "Supervision with the psychologist was very useful"; "self-analysis"; "art and music therapy"</i>	5	-
Emotional release	Emotional releases and rest	<i>"I weep myself out, I unburden myself"; "sometimes, just sleep and rest", "I rested, recovered"</i>	4	4

Data obtained employing the qualitative semi-structured interview, the analysis of social educators' subjective experiences enable us to look at ways, strategies of occupational stress experienced by these professionals in a complex manner and reconstruct them. Semantic units decoded and generalised in the course of the study presuppose the most characteristic contexts of stress coping strategies of these professionals in their professional activities: *dissociation from a stressful situation, solution of problems, social support and emotional release.*

Research data enable to state that social educators try to cope with stress in their professional activities constructively, by focusing on the problem (*solution of the problem* N = 79), and unconstructively, emotionally (*dissociation from the stressful situation* N = 101), looking for social support (N = 26), although the latter way of coping with stress can be attributed to partly constructive ways (Bulotaitė & Lapeškienė, 2006; Pikūnas & Palujanskienė, 2005; Kriukova, 2010; Lazarus & Folkman, 1984).

Reconstructing the constructive space of coping with stress; i.e., solution of problems, several subcategories show up: *discussion of the situation with the staff, professional development, development of the positive attitude, distinguishing priorities at work, discussion of circumstances of the situation with the pupil and family.*

Research data demonstrate that seeking to cope with stressful situations in professional activities constructively, social educators discuss the problems with the staff (N = 27), they *discuss with colleagues, find new ways of solutions, organize self-help groups*, where they discuss complex cases, possible solutions, share feelings and experiences. Complex situations are discussed with learners pupils and their families (N = 10). In some cases informants rely on themselves (N = 5), and try to cope with stress themselves (*I try to solve problems myself*).

Professional development (N = 20), development of the positive attitude (N = 11), foreseeing the priorities in professional activities (N = 6) are also to be treated as constructive strategies oriented to the solution of the problem. Social educators *read literature, seek assistance from other institutions and professionals, plan and prioritize their works, look at the situations positively, try to enjoy things.*

The research data analysis shows that social educators also try to cope with stress in their professional activities in an unconstructive way, dissociating from stressful situations, trying to relax (N = 21), engage in leisure activities (N = 27), sport (N = 19), separating the professional relationships from personal relationships (N = 16), controlling and diverting emotions (N = 12) or just emotionally releasing (N = 8). Social educators state that in such cases they try to *walk in the fresh air, nature, work physically, exercise, read books, watch comedies, listen to music, do handicrafts, not to work at the weekends or just at times weeping themselves out, unburdening themselves, sleeping off, etc.*

Trying to cope with stress, informants seek social support (N = 26), which can also be considered to be a partly constructive stress coping strategy. This does not disclose the reason of the problem and does not solve a difficult situation but enables to control emotions, analyze oneself, get support and change the approach to the situation (Bubelienė & Merkys 2012; Klizas & Šulnienė 2012; Loikienė & Pileckaitė-Markovienė 2013). Social educators receive colleagues' support (N = 21), use therapies and supervisions (N = 4), they state that they maintain *close relationships with a psychologist, receive moral support and empathy from the administration* and that *colleagues, supervision, self-analysis, art and music therapy* are useful for them, etc.

The differences in the responses of Lithuanian and Latvian respondents shall be examined using other methods, which reveal deeper stress management aspects. There is a lot of information about the stress management and it is of different quality. The respondent in his life applies what he have read and understood. From this aspect, Latvian respondents tend to apply emotion-focused coping strategy– relaxation techniques, self-control, distancing from the situation in order to change the intensity of distress.

Conclusions

In many cases, when carrying out social work in order to help the client in his life situation, the social worker faces with complications in client's situation resolution, there are no desirable results for a long time, the client often gives up because of difficulties. It causes stress for both the social worker and the client.

There is a wide range of stress coping strategies. Overcoming comprises cognitive, emotional and behavioural strategies. R. Lazarus and S. Folkman set two types of stress management: problem-oriented stress management, progress focused on the resolution of stress situation and emotion-oriented management.

This research allows to reveal coping with the professional stress strategies of social pedagogues, to notice the manifestation of productive strategies and tendencies of strategies' usage. Some differences among revealed strategies from Lithuanian and Latvian cultural context could be based on peculiarities of research methodology and different social cultural and educational contexts.

Reconstruction of the context of social educators' professional activities enabled to distinguish stress coping strategies used by these professionals, which could be conditionally divided into constructive, oriented to problem solving and unconstructive, oriented to the emotional space. Constructive, problem-solving strategies enable to look for and disclose reasons of complicated situations, their manifestation, discuss this with the participants of the situation, look for best possible solutions, improve in the professional space and mature as a personality. Analysis of empirical data revealed that Lithuanian and Latvian social

pedagogues are using more constructive coping with professional stress strategies: to discuss the difficult problems with colleagues and parents; professional growth; ability to make priorities.

The summary of semantic units given by professionals highlights that informants also try to cope with stress in their professional activities in an unconstructive way, often emotionally or involving benefits of social context. Such stress coping strategies used by professionals do not help to disclose the reasons of stressful situations, aggravate search for most optimal solutions but enable to slightly distance themselves from stressful situations and control emotions. The analysis of data also revealed that specialists in Lithuania and Latvia are tend to go in for sports, involving into physical and more relaxing activities, or just trying to have a rest with the purpose to cope with the stress. Also those mentioned coping strategies orientated into social context are strengthened with the ability to manage their own emotions or even with the avoidance of stressful situation.

The choice of behaviour in stressful situations is a manifold complex process, which often depends on the type of the situation, its complexity, human values, psychological resistance, defence mechanisms, maturity of the personality and other variables.

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THE DEVELOPMENT OF INDEPENDENT LIVING SKILLS IN YOUNG ADULTS WITH INTELLECTUAL DISABILITY IN SHELTERED HOUSING ACCOMMODATION

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Abstract. *National Programme for Social Integration of People with Disabilities for 2013 - 2019 has set a strategic objective to create a positive environment and conditions for a dignified and fully fledged life of people with disabilities in Lithuania, to guarantee equal opportunities and the quality of life of people with disabilities. The article analyses the experiences of the social workers, who work in sheltered housing accommodation with young adults with intellectual disability, when developing independent living skills in young adults with intellectual disability. Sheltered housing accommodation is social services institutions providing social care, in which persons live in home environment and conditions are created for them to manage their own personal life on their own with the support of the social workers. A qualitative-empirical study has been conducted by using the method of a semi-structured interview. The study data were processed by using the method of content analysis. The results of the empirical study are based on the experience of 11 social workers, who have been working in sheltered housing accommodation with young adults with intellectual disability for at least 3 years. The study has revealed that the following independent living skills are considered to be the most easy to be developed: cooking, simple housework, hygiene skills. The young adults also easily develop public transport use skills. The young adults most often acquire work skills by tidying their home environment. The most difficult, according to the social workers, to develop are economic skills: to manage their budget, to allocate finances, to pay for services, and to do the shopping. The young adults with intellectual disability find it difficult to develop their parenting skills. Communication skills are developed while learning etiquette and complying with it in a large range of environments, by encouraging to communicate courteously with other persons, showing personal example, taking a good example from others, taking part in different events, festivals and communal activity. The development of independent living skills occurs by engaging young adults in a practical activity. Particular attention is given to the development of healthy lifestyle skills. The young adults are encouraged to make decisions by guiding them in the right direction, while respecting their interests; the responsibility for the decisions made by them and the consequences of those decisions is also developed. Activity planning, organising and personal skills are developed.*

Keywords: *independent living skills; sheltered housing accommodation; social worker; young adults with intellectual disability.*

Introduction

Article 19 of the United Nations Convention on the Rights of the Persons with Disabilities “Living independently and being included in the community” establishes the right of the persons with disabilities to independent living and comprehensive inclusion in society while distinguishing three key aspects: the country, which has ratified the convention, must give a guarantee that a person with an intellectual disability has the freedom to choose domicile, to receive specialised services, which they need, and to access the services and amenities, which are available in their community, on an equal basis with others. The Convention also establishes the segregation or isolation prevention of the persons with disabilities in the community. European Disability Strategy 2010-2020, Common European Guidelines on the Transition from Institutional to Community Based Care (2012), Lithuanian National Programme on Social Integration of the Persons with Disabilities for 2013-2019, The Action Plan on the Transition from Institutional to Family and Community Based Care for the Persons with Disabilities and Children Deprived of Parental Custody for 2014–2020 also underline the transition from institutional care to community oriented environment, starting with the promotion and support of independent living and ending with houses intended for small groups. L. Rey et al. (2013) maintain that personal independence is considered a person’s foundation for quality of life and social integration. The recognition of the autonomy and independence of a person with disabilities marks a shift from social integration as the realisation of the objective of a society’s development to social integration as an individual’s self-actualisation and self-realisation.

Sheltered housing accommodation for the persons with intellectual disability is a humane alternative to centralised care institutions, which gives the persons with disabilities an opportunity of staying to live in the community and environment they are accustomed to. *Sheltered housing accommodation* is social service institutions providing social care, in which persons live in home environment and the conditions are fostered for them to independently organise their personal (family) life, partly assisted by a social worker and a social worker’s assistant (Social Service Catalogue, 2006).

The young adults with intellectual disability (depending on the level of a disability), living in sheltered housing accommodation, need the greater or lesser assistance of a social worker, which enables them to live independently, to participate and get involved in communities. One of the priority tasks of a social worker is to assist the young adults, who live in sheltered housing accommodation,

in developing and strengthening independent living skills. The possession of independent living skills strengthens the possibilities of a person with an intellectual disability to independently resolve his social problems, to maintain social ties with society, to participate in society's life, to overcome social exclusion (Fleming, et al., 2016).

Sheltered housing accommodation for the persons with intellectual disability is a new phenomenon in Lithuania, therefore, there is a lack of research in this area. The studies (Germanavičius et al., 2005; Rimšaitė, 2006; Pūras & Šumskienė, 2012; Pūras et al., 2013; Šumskienė & Pūras, 2014; Baranauskienė & Lileikienė, 2015), which analyse the aspects of social care of the persons with intellectual disability, mainly revealed the present condition of these persons in residential care institutions, are creating a demand to develop communal services as an alternative to institutional care.

The studies show that institutional care always cause a lower quality of life and lower quality of services than those provided in the community and often gives rise to social exclusion and segregation for life. According to Samašonok (2013), the process of preparing a person for independent living in care homes is more complicated due to educational system itself when his family is substituted by an institutional authority, in which quite often one-sided and formal work with educatees is performed, they are denied an opportunity to act and resolve their everyday life problems independently, to try out various roles, to draw experience from life, which in its turn does not create favourable conditions for the development and expression of a socially active personality, makes it more difficult to acquire skills which are necessary when living independently.

In the context of the processes of deinstitutionalisation, it is important to analyse the experiences of the provided communal services, including sheltered housing accommodation, for persons with intellectual disability. It is of particular relevance to speak about the development of independence in the young adults with intellectual disability and the possibilities of their social inclusion into the community. The improvement of the preparation of the young adults with disabilities for independent living in the community remains an important and pressing problem facing society.

The objective of the study is to reveal the specificities of the development of independent living skills in the young adults with intellectual disability in sheltered housing accommodation on the basis of the experience of the social workers.

Research methodology

Research methods. Qualitative research type was chosen for the study. According to J. W. Creswell (2009), the purpose of a qualitative study is to

research complex phenomena with the properties that are characteristic of them and present the meanings and approaches, that were expressed by the participants of a study, on a researched phenomenon. In the study, the method of a semi-structured interview, which enables to come close to the understanding of human experiences, designation of meanings, the definition of meanings and the construction (explanation) of reality, was used. This article overviews the interview questions covered these problematic questions: what independent living skills of the young adults with intellectual disability the social workers, working in sheltered housing accommodation, assist in developing and how they do that.

The obtained data were analyzed by the content analysis method. Qualitative content analysis was carried out in accordance with the inductive, study data based and categories composed logic. According to J. W. Creswell (2009), content analysis is a technique which, having examined the specificities of the text, allows, objectively and systematically, to draw reliable conclusions. The qualitative content analysis was performed regarding the following sequence (Creswell, 2009): repeated reading of the content of transcript interview texts, distinction of meaning elements in the text analysed, grouping of the distinguished meaning elements into categories and sub-categories, integration of the categories/sub-categories into the context of the phenomenon analysed and description of their analysis.

The sample of the research. Criteria-based sample was used in the study. The informants were chosen according to the following criteria: 1) the social workers who have a degree in social work, 2) the social workers who work in sheltered housing accommodation with young adults with intellectual disability; 3) the social workers whose length of their working time in sheltered housing accommodation is at least 3 years.

The study was conducted in the October-November of 2016 in sheltered housing accommodation with young adults with intellectual disability. 11 social workers participated in the study.

Ethics of the research. Personal permission of the informants to take part in the research was sought. The researchers obliged themselves to the research participants not to divulge the information related to the organisation and the informant. The principles of anonymity, volunteerism and benevolence were followed. The social workers were acquainted with the goal of the research, the interview questions, and the importance of argumentated reflection on their experience.

The validity of the research: researchers openness for research phenomenon, prejudices and premature suspension of the understanding and reflection. The survey data are interpreted based on critical selfreflection, honesty, careful selection of proving statements.

The usage of the research results. The findings of the research are important for social workers who work in sheltered housing accommodation with young adults with intellectual disability and for formers of social policy.

Analysis of research results

The development of independent living skills is one of the most important factors of quality of life assisting the young adults with intellectual disability in integrating into society, in successfully overcoming everyday problems of independent living. The successful development of independence in a person with disabilities depends in a great measure upon independent living skills he possess and upon the fact in what measure the new skills will be linked to the acquired previously.

The scientific researches (Montgomery et al., 2006) revealed that the young adults with intellectual disability, who live independently, often encounter difficulties due to the lack of independent living skills. They need a social worker's assistance, support when developing independent living skills. The objective of the development of independent living skills is to create conditions to each person with intellectual disability, according to their opportunities, to acquire knowledge and skills, which enable to manage their domestic life, to maintain a healthy lifestyle, to eat, to get access to education, to work and the like in the most functional, economic and esthetic manner, i.e. to be as independent of others as possible (Radzevičienė, 2003).

During the study an interest was taken *what independent living skills of the young adults with intellectual disability the social workers, working in sheltered housing accomodation, assist in developing and how they do that.*

When analysing the findings of the study independent living skills, which the social workers assist in developing in young adults, and the types of assistance used by the social workers, which assist young adults in developing independent living skills, were distinguished (Table 1).

Table 1 **The development of independent living skills in the young adults with intellectual disability**

Skills	Types of assistance when developing independent living skills
Household management	Individual and group counselling, conversations; practical activity on the advice of a social worker; individual practical tasks; group practical tasks oriented towards the solution of the problem
Personal hygiene	
Communication skills	The creation of favourable emotional atmosphere and positive mutual relationships in the sheltered housing accomodation; the formation of appropriate behaviour by setting a good personal example; the discussion

	of conduct rules, the adoption of them and adherence to them by common accord; the organisation of joint festivals and birthdays when encouraging and developing the friendliness in the young adults, independence, confidence in their own strength, assistance to each other; by engaging the young adults in the joint activity of the sheltered housing accommodation and the community; by accompanying a young adult to other institutions and authorities, counselling and advising how it is appropriate to behave; the solving of practical life situations by analysing and solving the situations or creating educational situations; individual and group counselling; the discussion of practical situations together with a young adult while looking for the best way to solve a problem; communication skills and teaching etiquette; conversations on various communication topics
Healthy lifestyle	Individual and group counselling; a practical activity which encourages the young adults to lead a healthy lifestyle; individual and group practical tasks; conversations
Economic	The provision of practical knowledge; the presentation of practical tasks how to plan monetary income and expenditure, to save, to afford the housing they are in, to go shopping; individual and group counselling; advising; demonstration
Learning and labour	Practical activity; conversations when encouraging to obtain professional training; individual and group counselling; the visitation of vocational training institutions; assistance when choosing a career which would be in line a young adult's competences and interests; the provision of emotional support; assistance when preparing a curriculum vitae, while searching for information on employment, getting ready for a job interview, while registering at the employment office; accompanying and mediation; assistance when overcoming learning difficulties, when solving work problems
Personal	Practical daily activities; individual and group counselling; the provision of emotional support; the solution of problematic situations

The results of the study revealed that the social workers assist young adults in developing *household management, personal hygiene* skills. The informants maintain that each young adult in the sheltered housing accommodation has his own personal space and property, the supervision of which requires from the young adults household management skills and contributes to the development of independence and responsibility. The social workers seek to develop personal responsibility in the young adults for personal hygiene, taking care of their clothes, cleanliness of their room, environment, cooking. It is sought that the young adults, when performing personal hygiene procedures, tidying their home, working in the yard or kitchen, to the extent of their capacities, would do everything independently and would improve the skills they already possess. The informants maintain that the young adults, while carrying out daily chores „ *learn to use household appliances, devices, various kitchen utensils safely*“ (A), „*they*

learn to prepare food safely and to keep it safely“ (H), „to develop washing, ironing, dust cleaning, floor cleaning, carpet vacuum cleaning, waste sorting skills“(B), „they learn to supervise their personal effects and manage them“(D), “to develop awareness on sanitary, hygiene requirements and come to grips to adhering to them“ (I); „they learn to cook and serve food, to lay the table“ (C), „they learn to perform simple clothing repair operations“ (F), „basic home safety rules are explained and how to behave in case of danger, who to contact for urgent assistance in special cases“ (K).

The social workers maintained that when enhancing household management and personal hygiene skills in the young adults it is important to follow the principles of an individual approach, systematicity, continuity and transferability. The informants pointed out that when assisting the young adults in developing the mentioned skills they counseled them individually and in small groups, the young adults performed group practical tasks oriented towards the solution of the problem, developed skills individually and during group practical workshops, for example, lunch cooking together with the young adults at weekends and on public holidays.

The informants noted that, for the young adults, cooking, housework, hygiene, environment tidying and public transport use skills are easiest to develop.

Having analysed the findings of the study, it can be said that the informants attach great importance to the development of **communication skills** in the young adults with intellectual disability. The social workers seek that, in the sheltered housing accomodation, positive mutual relationships, favourable emotional atmosphere would be created when strengthening humane relationships, which are based on respect and trust, among the young adults themselves and between the social workers, their assistants and the young adults. The informants maintained that the employees, when communicating with the young adults, attempt to behave positively, to demonstrate the example of an appropriate communication. The young adults also discuss and adopt the rules, which regulate mutual relationships and facilitate communication,

together by common accord, the rules, which each agrees to follow and adhere to. Positive mutual relationships are also sought to be created by organising joint festivals, birthdays, encouraging and developing friendliness, independence, confidence in their own strength, assistance to each other in the young adults.

Communication skills are developed in the young adults by engaging them in a joint activity: community festivals, voluntary service, events, excursions etc. By participating in the various events, the young adults have an opportunity to develop communication skills when communicating with other people, they learn to be among strangers, they expand and enrich their social relationships and develop a socially appropriate behaviour. It should be noted that social skills are built up during a person's active engagement. Practical activity assists in realising

the skills, which have already been built up, and strengthening them by practical experience.

Communication skills are developed also by accompanying a young adult to other institutions and authorities. The informants noted that, although a social worker is at hand, a young adult is always encouraged to talk independently, to request the assistance, to manage their own personal affairs: „*by accompanying a young adult to institutions, authorities, we teach how to behave, how to get where they need, what to say*“ (G).

According to the informants, a personal social worker's example contributes towards the development of appropriate communication skills most: „*...I always explain, set an example of courteous communication*” (I), „*you show that you need to communicate courteously, not to scream, not to shout, to tell what you want calmly and clearly*” (D). Communication skills are also developed and established by taking part in the solving of practical life situations, the analysis and solution of the situations, which have emerged, or creating educational situations: „*if somebody behaved inappropriately, we ask how he feels when communicating inappropriately (shouting, screaming), whether he would like to take the place of the person he shouted at*” (E); „*we sit down and perform the situation, we teach how they need to behave, to communicate and we tell how they should not behave*“ (K); „*if some conflict situation emerges and somebody curses and uses swear words, after that, counselling always follows*“ (C), „*during the counselling, most frequently we simply encourage a young adult to express his opinion, to think over calmly, not to be in a hurry*“ (B). When counselling a young adult his personal opinion is always heard, later on, when discussing practical situations together with a young adult, the best approach to the problem is sought.

The informants maintained that it is particularly important to teach a young adult to be open, to dare to request assistance when it is necessary: „*we strongly encourage our clients to dare to request the employees or other people for assistance, if the situation is not clear or they do not understand anything*“ (F).

During practical workshops, bullying and reactions are discussed: „*not only did we encourage not to bully, but to be active themselves, if they notice bullying*“ (B), „*we discuss the causes of bullying and its consequences, tolerance, on the basis of real life situations from their own, other people's experience*“ (C). The social workers maintained that they invest considerable time in joint conversations: „*we talk a lot about feelings. We react, if we see bullying in the mutual relationships of the residents*“ (H). The informants maintain that they teach the young adults not to be afraid to courteously express their opinion and cheer up the shier young adults: „*we always emphasise to the shy young adults that they would express their opinion in any case, even if it completely contradicts that of the employees or other people, however, that they would do that courteously*“ (G). The social workers maintained that they inform the young

adults on the human rights: „we talk on the human rights, we inform, we simply analyse situations when some situation emerges to the client himself, we analyse the actions of other people, we talk about what it is possible to do and what has not been done and the like“ (C). The young adults with intellectual disability can be bullied because of their disability, it is particularly important that they would distinguish bullying, would observe how they behave themselves, would learn to understand whether they really do not hurt others by their actions and words.

A large degree of importance is attached to the development of **healthy lifestyle skills** in the young adults. The social workers encourage the young adults to look after their health, to build up healthy lifestyle skills. During the study, the informants revealed that they often counsel the young adults on healthy lifestyle, they accustom them to maintain a healthy lifestyle: „we encourage daily physical activity, to get rid of harmful habits“ (A), „we accustom them to spend their leisure time meaningfully and actively“ (D), „they learn to cook a healthy and valuable food“ (K), „we strengthen the emotional health of the young adults by teaching them to resolve conflicts, to adequately respond to remarks and various calming down and self-control techniques“ (G).

The social workers have particular regard to **the development of the economic skills** in the young adults with intellectual disability. The informants noted that, when developing economic skills, practical knowledge and practical experience, which many of the young adults, who have come to reside in sheltered housing accommodation, do not have, are of particular importance. Therefore, when developing the economic skills in the young adults it is sought that they would acquire practical knowledge and practical experience. The social workers pointed out that the young adults, with their assistance, learn to plan monetary income and expenditure, learn to save, to afford the housing they are in, to go shopping: „they learn to create a plan what for, when and what sum will be used“ (A) „what sum they can lay aside from the income they receive“ (G), „they learn to save“ (K) „together with young adults, we go to the shopping centres, we show how they have to go shopping, we advice which goods are of higher quality, which price is the most acceptable, we teach to use an automatic teller machine in order that he would be able to withdraw money for himself, that he would be able to check his account balance, in order that he would see and know himself how much he has got for subsistence“ (F). The informants noted that when developing the economic skills of the young adults they assist, teach and advice them, however, they always follow the rule to encourage the young adults to be independent, to learn to do everything on their own and not to do it instead of them. On the other hand, the informants pointed out that economic skills are the most difficult to develop.

The informants noted that it is particularly important for the young adults with intellectual disability to obtain proper education, to find a job, to express

themselves, to develop independence, to integrate into society. Therefore, the social workers attach great importance for the development of **the learning and labour skills** in the young adults. Having analysed the findings of the study, it was revealed that the social workers develop the labour skills of the young adults with intellectual disability through practical activities. The young adults most often acquire labour skills by tidying their home environment, performing their housework chores: „...we go out to rake leaves together, to sweep the yard, we plant flower beds ” (I), “...extensive work is necessary, you need to weed up, you need to water, to plant...” (K). The informants maintain that the young adults are encouraged to obtain professional training in order that they would be able to more successfully integrate into labour market: „you encourage to take up vocational education, to obtain a trade“ (C), „we visit vocational training establishments“ (E), „together with an adolescent, we discuss and assist in choosing the career which would be in line with his competences and interests“ (F), „I provide emotional support to the young adults who learn or work“ (G). The social workers also assist a young adult both in integrating into labour market and while registering at the employment office and when communicating with potential employers, while preparing a curriculum vitae for the young adults, getting ready for a job interview: „if anybody needs, we register all such people at the employment office, if, for example, they need to communicate with their workplace, then we also communicate“ (D); „we assist in seeking employment, we help him prepare a curriculum vitae, we go for a job interview together, we accompany to work on their first workday and encourage him, we explain and mediate, in order that a young adult would be able to adapt easier“ (B); „together with young adults, we look for job advertisements, we accompany to their job interview“ (J). It should be noted that a part of the young adults with intellectual disability get successfully established in the labour market: „there are working residents, it can be established that we have persons who got established in the labour market“ (B). The social workers asserted that their assistance in expanding young adults’ learning and labour skills is support, counselling, help when overcoming personal, learning, work problems.

The development of **personal skills** is one of the important factors of successful social integration of the young adults with intellectual disability. The social workers assist young adults in developing self-knowledge, self-control, coping with stress, conflict resolution, decision-making, self-trust, personal responsibility, dutifulness skills: „for a young adult, it is particularly important to know himself, therefore, we pay great attention to self-knowledge, to reveal and to develop self-trust“ (A), “self-control is very important, in order that the young adults would be able to get established in society and not to get into conflict in the community“ (E), „self-control is significant in order to maintain working relationships, to communicate properly“ (K), “we develop dutifulness and

responsibility through the establishment of rules and adherence to them in daily life“ (C). The young adults are assisted in acquiring personal skills by the provision of individual and group counselling, the teaching how to resolve problematic situations, conflicts, the provision of emotional support to them.

Conclusions

On the basis of the experience of the social workers it was revealed that the social workers, when preparing the young adults with intellectual disability for independent living, pay particular attention to the development of communication, personal hygiene, healthy lifestyle, housekeeping, economic, labour and personal skills. The study revealed that the young adults with intellectual disability find it easiest to build up cooking, domestic work, personal hygiene, environment tidying and public transport use skills. The hardest, for the young adults with intellectual disability, to develop are economic and parenting skills.

The social workers assist the young adults with intellectual disability, who live in the sheltered housing accommodation, in developing independent living skills in them in the following ways: individual and group counselling, conversations, practical activity, individual and group practical tasks oriented towards the solution of a problem, solving practical life situations, analysing and solving situations which have emerged or creating educational situations, the provision of practical knowledge, demonstration, discussing of practical situations together with a young adult when searching for the best way to solve a problem, advising, assistance, the creation of a favourable emotional atmosphere and positive mutual relationships in the sheltered housing accommodation, the provision of emotional support, a personal example, the establishment of behaviour rules and adherence to them, teaching etiquette, the accompanying of a young adult and mediation.

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СОХРАНЕНИЕ ПРИВЯЗАННОСТИ РЕБЕНКА К ОБОИМ РОДИТЕЛЯМ В УСЛОВИЯХ РАЗВОДА: К ПОСТАНОВКЕ ПРОБЛЕМЫ ИССЛЕДОВАНИЯ

Conservation Child's Attachment to Both Parents in the Divorce: on the Problem Research

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Abstract. *This paper discusses the development of a child whose parents are divorced. In deciding with whom the child should stay, the court is based on his interests, it is very often decisive is the child's own opinion about who he wants to live. An important problem in this situation is the active influence of one parent (most of whom currently live child) on the decision-making process a child. To achieve the desired result the parent often resorted to negative methods of influence on your child, creating a negative image of the second parent. To minimize the negative effects of divorce of parents for the child's development the positive attitude of the child to both parents after a divorce is needed. However, judicial practice shows that maintaining a positive attitude of the child to both parents after a divorce, are often deliberately destroyed by adults for their own benefit. The objects of the analysis were 30 court cases from attorney's Kupriyanova court practice. The subject of analysis is the position of the parent with whom the child resides at the time of the court with respect to the second parent. For the processing of the experimental data used statistical package SPSS. It was obtained that the probability of the formation of the parent with whom the child remains after the court decision, the child's negative attitude towards the other parent more than 1/3.*

Keywords: *divorce, from whom do the child remains, the negative image of the other parent, the child's upbringing.*

Введение **Introduction**

Развитие ребенка, родители которого находятся в разводе, качественно отличается от развития ребенка в полной семье. Современные нейropsихологические исследования (Герхард, 2013; Ньюфелд & Матэ, 2012) подтверждают, что нормальное развитие ребенка возможно в условиях покоя и психологического комфорта, в семье, где с родителями

все хорошо. В атмосфере распространяемого родителями раздражения, в ситуациях проявления гнева, отказа в общении, отвергнутости, - названные негативные факторы отрицательно воздействуют на нервную систему, тормозя процесс развития. Психика ребенка нацеливается на совладание с тревогой, вызванной нарушением привязанности к обоим родителям. Аффективное возбуждение тормозит интеллектуальное, эмоциональное и волевое развитие ребенка. В целях сохранения психологического благополучия ребенка предполагается, что законодательные нормы в бракоразводном процессе в отношении ребенка призваны минимизировать психологический урон, наносимый разрывом единства родителей детскому развитию в целом. Для современной российской практики судопроизводства актуально исследование факторов, оказывающих негативное и позитивное воздействие на развитие ребенка, родители которого в разводе. Целью данной статьи является оценка вероятности формирования отрицательного отношения ребенка к родителю, с которым ребенок расстанется по решению суда, со стороны другого родителя на основе эмпирического исследования.

**Юридическая регламентация условий воспитания ребенка
родителями в разводе в современной России**
*Juridical regulation of child rearing conditions parents in divorce in modern
Russia*

В соответствии с п. 3 ст. 65 Семейного Кодекса РФ место жительства детей при раздельном проживании родителей устанавливается соглашением родителей. При недостижении такого соглашения спор между родителями разрешается судом исходя из интересов детей и с учетом мнения детей.

По общему правилу при расторжении брака между супругами, имеющими общих несовершеннолетних детей, суд в обязательном порядке разрешает вопрос о том, с кем из родителей будут проживать несовершеннолетние дети после расторжения брака, если между родителями не достигнуто соглашение по данному вопросу (п. 2 ст. 24 СК РФ).

Споры, связанные с определением места жительства ребенка, могут рассматриваться и вне связи с требованием о расторжении брака - как в период брака (если супруги стали проживать раздельно), так и после его расторжения (если в момент расторжения брака спора о месте проживания ребенка не было либо если место жительства ребенка ранее было определено решением суда, но в последующем изменились обстоятельства и материально-бытовые условия одной из сторон).

К обстоятельствам, которые суд должен принять во внимание при разрешении спора об определении места жительства ребенка, закон относит: привязанность ребенка к каждому из родителей, братьям и сестрам; возраст ребенка; нравственные и иные личные качества родителей; отношения, существующие между каждым из родителей и ребенком; возможность создания ребенку благоприятных условий для воспитания и развития (род деятельности, режим работы родителей, материальное и семейное положение родителей и др.).

Достаточно часто судами назначается судебно-психологическая экспертиза по делу, которая проводится с целью установления наличия или отсутствия психологического влияния на ребенка со стороны одного из родителей, мотивационных линий поведения каждой из сторон, психологической характеристики системы взаимоотношений ребенка с каждым из родителей и членами их семей. В некоторых случаях судами назначаются комплексные психолого-педагогические экспертизы. Экспертное заключение помогает подтвердить или опровергнуть те или иные доводы каждой из сторон, что необходимо для принятия правильного решения по делу (Асташов et al., 2011).

Принимая во внимание предусмотренное ст. 12 Конвенции ООН о правах ребенка и ст. 57 СК РФ право ребенка выражать свое мнение при решении в семье любого вопроса, затрагивающего его интересы, а также быть заслушанным в ходе любого судебного или административного разбирательства, а также учитывая практику рассмотрения международных дел, Верховный Суд РФ в Обзоре практики разрешения судами споров, связанных с воспитанием детей (утв. Президиумом Верховного Суда РФ 20 июля 2011 г.) обращает внимание на то, что сейчас должны быть по-другому (в отличие от данного им разъяснения в Постановлении Пленума ВС РФ от 27.05.1998 N 10 "О применении судами законодательства при разрешении споров, связанных с воспитанием детей") расставлены акценты в отношении обстоятельств, которыми следует руководствоваться при решении вопроса о вызове и опросе в судебном заседании ребенка: в первую очередь судье следует исходить из права ребенка быть заслушанным в ходе любого судебного разбирательства, затрагивающего его интересы. И лишь затем и только при наличии оснований полагать, что присутствие ребенка в суде может оказать на него неблагоприятное воздействие, судья выясняет по этому поводу мнение органа опеки и попечительства (Алексеева et al., 2015).

Проблема и цель исследования ***The problem and the purpose of the research***

Таким образом, при решении вопроса, с кем должен остаться ребенок, суд максимально исходит из его интересов, при этом очень часто решающим является мнение самого ребенка о том, с кем он хочет жить. Актуальной проблемой в описанной ситуации является активное воздействие одного из родителей (чаще того, с кем в данный момент проживает ребенок) на процесс принятия ребенком решения. Для достижения желаемого результата указанный родитель зачастую прибегает к негативным методам воздействия на своего ребенка, формируя отрицательный образ второго родителя. Формирование отрицательного образа родителя, с которым ребенок в разлуке, усугубляет негативные процессы в его развитии. Разрушение привычной триады «отец-мать-ребенок» порождает неуверенность и неустойчивость мироощущения ребенка в течение долгого времени. По свидетельству психологов «все ситуации, которые продлевают конфликт между родителями, неизбежно усиливают и продлевают состояние неуверенности у ребенка» (Матейчик, 2006). Разрыв между родителями отрицательно сказывается на качестве привязанности ребенка как к тому родителю, с которым он в разлуке, так и к тому родителю, с которым остается ребенок. Минимизация негативных последствий развода родителей для развития ребенка возможна при соблюдении ряда условий, первым из которых психологами названо положительное отношение ребенка к обоим родителям после развода. Однако, судебная практика свидетельствует о том, что сохранение положительного отношения ребенка к обоим родителям после развода, зачастую сознательно разрушается взрослыми в собственных интересах.

Экспериментальное исследование вероятности формирования положительного/отрицательного образа родителя в разводе ***Experimental study of the probability of the formation of the positive / negative image of the parent in divorce***

Объектом анализа выступали 30 судебных дел об определении места жительства ребенка и порядка общения с ребенком из судебной практики. Предметом анализа являлась позиция родителя, с которым ребенок проживает во время суда, в отношении второго родителя.

В случаях, когда в начале спора ребенок охотно или спокойно общался со вторым родителем, а во время процесса начинал резко отказываться от общения со вторым родителем без объективных на то причин, мы считали, что родитель, с которым проживает ребенок, создает

негативный образ второго родителя. Так произошло в 17 из 30 проанализированных дел. Отказ ребенка общаться со вторым родителем в разных случаях фиксировался психологами, органами опеки, судом или судебными приставами.

В случае Ани 2009 г.р., проживающей с мамой, бабушкой и дедушкой, судебные приставы констатировали, что ребенок не хочет общаться с папой потому, что «у него глаза как у волка, я его боюсь». В случае Артема 2002 г.р., оставшегося проживать с папой, в суде сказал, что не хочет жить с мамой, так как она «пишет на папу разные жалобы». Арина 2004 г.р., проживающая с мамой и отчимом, отказалась общаться с папой, сказав в суде «он мне врет, я после общения с ним долго плачу». Федя, 2013 г.р., проживающий с мамой и ее родителями, стал неожиданно отказываться ехать с папой, просто говоря «нет, нет, нет» и глядя при этом на маму в ожидании ее одобрения. Женя, 2004 г.р., проживающая с мамой и отчимом, в суде сказала: «для меня папа не Игорь, а Рома (отчим)». Ваня, 2008 г.р., которого отец силой не вернул маме после выходных, стал говорить маме, что «я к тебе не пойду», «если я пойду к тебе, я больше не буду ходить на хоккей». При этом примечательно, что в случаях, когда дети оставались жить с папами, несколько отцов в целях привязать к себе ребенка использовали одни и те же фразы: «я без тебя умру», «ты меня больше не увидишь», «мама тебе врет», «мама хочет, чтобы мне было плохо». Мамы в свою очередь создавали негативный образ отца более завуалировано, в большинстве случаев заставляя ребенка отказаться от общения с отцом якобы по их собственному решению.

Важно отметить, что в вышеупомянутых и других случаях, которые относятся к случаям, когда родитель, с которым проживает ребенок, создает негативный образ второго родителя, проведенные психолого-педагогические обследования детей показали наличие у детей высокую степень тревожности.

В свою очередь, в 13 случаях из 30 дети не отказывались от общения со вторым родителем. Положительный или нейтральный образ второго родителя создавался с использованием слов: «Мама очень занята на работе, поэтому у нее нет возможности тебя часто видеть», «Папа очень помогает нам финансово» или тому подобное.

Статистические методы

Statistical methods

Для обработки экспериментальных данных использовался статистический пакет SPSS.

Экспериментальные данные использовались для оценки вероятности того, что родитель, с которым остался ребенок, создает отрицательный образ второго родителя.

Обозначим вероятность того, что родитель, с которым остался ребенок, создает отрицательный образ второго родителя, буквой **p**. Число проведенных экспериментов – 30. Случайная величина, равная числу разведенных семей, в которых родитель, с которым остался ребенок, создает отрицательный образ второго родителя, имеет биномиальное распределение. В нашем исследовании это число получилось равным 17. Проверим гипотезу о том, что вероятность **p** равна $1/3$ против альтернативы **p** больше $1/3$.

Для этого в пакете SPSS вводим переменную results, значения которой равны 1, если в результате анализа было установлено, что родитель, с которым остался ребенок, создает отрицательный образ второго родителя, и 0 в противном случае.

В меню Analyze выбираем процедуру Nonparametric Tests, а в нем процедуру Binomial.

В поле Test Proportion выбираем вероятность нулевой гипотезы 0.3.

Результаты работы процедуры представлены в таблице 1.

Таб. 1. Результат проверки гипотезы о вероятности создания отрицательного образа родителя

Table 1 The result of testing the hypothesis about the probability of creating a negative image of the parent

	Категория	№	Вер. набл	Тестир. вер	Мин. Ур. Знач.
Результ.	1.00	17	.567	.333	.007
Гр.1	.00	13	.433		
Гр.2		30	1.000		
Всего					

В столбике Asympt. Sig. записан минимальный уровень значимости того, что нулевую гипотезу нужно отвергнуть. Таким образом, с минимальным уровнем значимости 0.007 мы отвергаем гипотезу и полагаем, что **p** больше $1/3$. Следовательно, исходя из экспериментальных данных, мы получаем оценку того, что родитель, с которым остался ребенок, создает отрицательный образ второго родителя: **p** больше $1/3$.

Выводы *Conclusions*

1. Проведенное эмпирическое исследование показало, что вероятность формирования родителем, с которым остается ребенок после судебного решения, отрицательного отношения ребенка к второму родителю больше 1/3. В соответствии со статистическими закономерностями это означает высокую степень вероятности появления негативных отношений ребенка к родителю, с которым он оказывается разлученным по решению суда.
2. Психолого-педагогические исследования подтверждают возникновение негативной тенденции в развитии ребенка в ситуациях нарушения детско-родительской привязанности, обусловленных разлукой с одним из родителей.
3. Формирование оставшимся с ребенком родителем отрицательного отношения к другому родителю усугубляет негативные тенденции детского развития.

Это обстоятельство нуждается в детальном исследовании с целью определения оптимальной стратегии принятия и исполнения судебных решений в осуществлении бракоразводного процесса семьи с ребенком.

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THE IMPROVEMENT AREAS OF SOCIAL PEDAGOGICAL ASSISTANCE PROVIDED TO PUPILS WITH EMOTIONAL AND BEHAVIOURAL DISORDERS

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Abstract. *The article reveals problems and weaknesses of social pedagogical assistance provided to pupils with emotional and behavioural disorders (EBD) and provides insights into the development of social and educational support at schools. The qualitative research (focus group and interviews), in which there participated social workers and teachers (two groups of informants), has been conducted. The content analysis of the research findings has revealed the major weaknesses of assistance provided to pupils with EBD and its improvement areas: lack of professionals providing necessary help at schools, lack of teachers' special professional competences (the ability to recognize EBD problems, knowledge and skills of providing assistance), lack of cooperation between child assistance specialists, teachers, and parents (feedback problems), and a lack of motivation.*

Keywords: *social pedagogical assistance, pupils with emotional and behavioural disorders (EBD), social support at school, special professional competences.*

Introduction

The research findings published by education researchers and practitioners reveal that the number of pupils with behavioural and/or emotional disorders (hereinafter referred to as EBD) at schools has been systematically increasing. As laid out in the Descriptor of the Procedure of Identification of Groups of Pupils with Special Education Needs and Division of their Special Education Needs into Groups approved by the Order of the Republic of Lithuania Minister of Education, Minister of Health, and Minister of Social Security and Labour (No. V-1265 / V-685 / A1-317, 13 July 2011), the group with different disorders encompasses pupils with learning disorders (in two or more academic subjects: reading, writing, maths, and other), as well as emotional, behavioural, speech and language disorders that are revealed when children are mastering the curriculum, i.e. acquiring the key competences. In the document, emotional and behavioural

disorders are defined as a heterogeneous group of disorders that occur as behavioural and emotional responses, sharply different from the usual age-related, cultural, and ethical norms, and that are also expressed by inattention, impulsivity, and/or poor behavioural regulation. The behavioural and/or emotional disorders include: attention deficit and hyperactivity disorder; behaviour (oppositional defiant disorder, anti-social behaviour) and emotional disorders (anxiety, mood spectrum disorders, etc.).

Miškinytė and Adomaitienė (2013) note that behavioural and/or emotional disorders are particularly exposed in adolescence. Khan et al. (2011), based on the findings of their research, assume that when this group of children regularly experience stress at school due to failures, they lose the opportunity of education in a free, unfettered environment. Galkienė (2009), Jokūbpreikšas and Bubnys (2013) state that the well-being for the teenagers with EBD can be ensured by well-timed social pedagogical assistance and support from adults (parents and teachers). While providing assistance to teenagers with EBD, not only the search for individual forms and methods of assistance is important, but also the choice of an educational paradigm which predetermines not only the attitude of teachers, but also the attitude of the society towards the assistance to children with special needs. The majority of researchers (Geležinienė et al., 2011; Frederickson & Cline, 2011) support the idea of inclusive education, which is the most effective strategy of assistance provision to children with special needs, including children with EBD. Ališauskas et al. (2011) note that inclusion is associated with the elimination of barriers, i.e. the removal of all obstacles that disturb the qualitative provision of social educational assistance to all pupils and which ensures its availability.

While analysing the effectiveness of organizing the assistance to pupils with EBD, Geležinienė et al. (2011) suggest the use of the following strategies of assistance: behavioural modelling, application of a system of sanctions and encouragement, cognitive behaviour simulation (pupils are encouraged to understand and regulate their behaviour), systemic ecological modelling (focus on the change of environment by changing one's behaviour); medical behavioural modelling (medical treatment is needed to improve one's state). According to the authors, in order to pursue qualitative organization of assistance it is important to create a system of model harmonisation. Galkienė (2009) notes that the most important is to develop each child an individualized program which could ensure positive socialization and qualitative education (learning).

The accomplished studies distinguish the causes of change in the education system. The socialization and learning difficulties, conditioned by children's behavioural and/or emotional disorders, have received the greatest attention (Rippon, 2000). Special assistance to pupils with EBD and its limits are analysed

more thoroughly and extensively. The research on the customization and differentiation of education is carried out by both foreign (Reicher, 2010; Frederickson & Cline, 2011) and Lithuanian researchers (Ališauskas, 2007; Ališauskienė & Miltenienė, 2004; Galkienė, 2009); also a huge emphasis is put on the issue of integration of pupils with EBD (Frederickson & Cline, 2011). One of the most relevant issues is the organization of education (learning) and assistance to pupils with special needs. A number of studies have been conducted on the subject: Geležinienė et al. (2011) studied the organization of assistance to pupils with EBD, other researchers focused on the provision of special educational assistance to pupils with special educational needs (Ambrukaitis, 2012; Ališauskas et al., 2011; Gudonis et al., 2011). After revising the research of foreign and Lithuanian researchers, it is noticed that the problems faced by children with EBD in educational institutions, their expression and reasons were most frequently analysed, and a particular attention was paid to the discussions of issues regarding integrating pupils with special needs into the education system and organizing the process of assistance. In all studies it is stated that a special pedagogical assistance is not sufficient if considering a particular case of a pupil, although the resource of potential assistance in general education school is available. The content of social educational assistance to pupils with EBD in national schools is not sufficiently studied; a lack of researchers' attention to social educational assistance to pupils with EBD is observed.

The purpose of the research: the improvement areas of social educational assistance provided to pupils with emotional and behavioural disorders.

Research Methodology

The study has been conducted by gathering qualitative data (written opinions, group and private discussions). In order to clarify the content of social and educational assistance to pupils with EBD and the areas of assistance improvement, the qualitative research has been chosen (group discussion and interviews). In this stage it has been decided to go deeper into the experience of social workers and teachers-class tutors while supplying this kind of assistance. The said professionals are the closest to the pupils with special needs; they intensively cooperate with pupils and their parents and decide academic and social problems of pupils with EBD at school. According to Creswell (2009), a qualitative research enables to better understand the investigated phenomenon, reveals its characteristics, and discloses the peculiarities of attitudes.

In order to carry out the research, two methods have been selected: group discussion (with 9 social workers) and individual interviews (with 9 class tutors/teachers) from nine schools of Klaipeda city and district. Later, informants

were asked to clarify certain aspects of the investigated problem in writing. In the process of selecting informants, the selection criterion has been applied. All the informants who participated in the research were women.

Firstly, individual structured interview with class tutors, working with 5th-8th graders with behavioural and/or emotional disorders, has been performed. There have been chosen those class tutors who worked with 5th-8th grade students at different schools – it was intended to reveal a wider range of their experience, therefore, 9 interviews out of the 23 have been selected for the result analysis, i.e. those interviews during which informants emphasized the most important means of social educational assistance to pupils with EBD, analysed and argued the areas of social educational assistance, reflected their professional competences. The average work experience of teachers-class tutors was 12 years. It was important to investigate and to find out what teachers thought about the problems of social educational assistance to their students and which improvement areas they considered to be appropriate.

In the second stage of the research, a group discussion method has been selected, in which there participated social workers. It enabled to identify different experiences of social educational assistance provided at different schools, their similarities (similar weaknesses and strengths), on the basis of which the assistance to pupils with emotional and behavioural disorders could be improved, and the improvement areas of the identified problems. Participants of the group discussion (social workers) have enough experience necessary while providing assistance to pupils with EBD, also, by means of discussions they can provide fuller and more detailed answers, find similarities of provided assistance more quickly, and discern the common tendencies of social educational assistance. The average work experience of social workers was 8 years.

Content analysis. While analysing the results of interviews, it has been intended to distinguish those statements, which, according to the informants, emphasized the essential causes and conditions (e.g.: the most important, a fundamental basis, in the first place, only, the main condition, everything, and etc.) and which received the approval of the majority of the informants. During the content analysis, the statements of informants were grouped into several categories and subcategories (Creswell, 2009; Mayring, 2014). The data obtained during the research was divided into two categories: the content of social educational assistance to pupils with EBD; the improvement areas of social educational support to pupils with EBD. The informants, who had participated in the research, were introduced to the interview transcriptions; they specified the thoughts, expressed during the interview; then they were introduced to the results of the survey and their analysis. The research instrument. All the questions, provided to the informants, were formulated into a number of units: the content

of social educational assistance to pupils with EBD and the areas of improvement of social educational assistance to pupils with EBD.

Research Results and their Discussion

While discussing the areas of improvement of social educational assistance to pupils with EBD, firstly it has been tried to find out what is the content of social educational assistance according to the informants. In this category – the content of social educational assistance to pupils with EBD – the opinions of informants were grouped regarding their importance (were identified by informants as the most significant) and their frequency (were mentioned by the majority of the informants) (Fig. 1). In another category – the areas of improvement of social educational assistance to pupils with EBD – three main subcategories were identified: regulation of EBD assistance at school, work with parents/parent education, and the development of teachers' competences (Table 1).

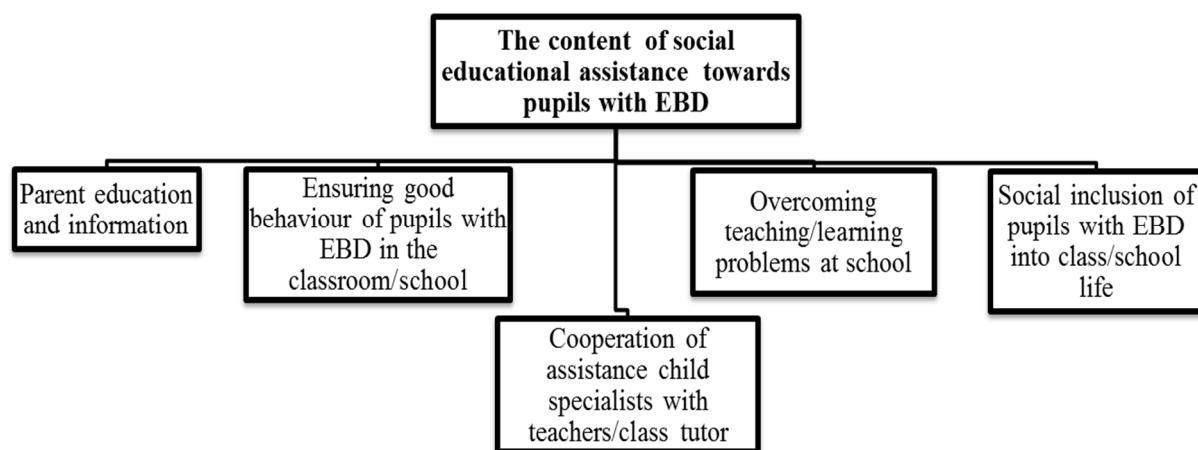


Fig.1 Attitudes of social workers and class tutors regarding the content of social educational assistance to pupils with EBD

The content of social educational assistance. The participants of the qualitative research: teachers, class tutors and social workers unanimously asserted being providers of social pedagogical assistance to pupils with EBD. Class tutors emphasized that by being teachers of different subjects they seek to deal with the problems of not only teaching or learning. All the participants of the research highlighted the problems concerned with misbehaviour, discipline at school and in the classroom of pupils with EBD, also related teaching (learning) difficulties, disturbances of communicating with peers and etc. During group discussions and individual interviews, the informants emphasized the issues of identification, diagnosis and naming of the problem of pupil's misbehaviour. They also emphasized that firstly there are noticed the problems in child's behaviour, i.e. discipline in the classroom, violations of coexistence rules at school, and etc.

Special pupils' needs, i.e. emotional and behavioural disorders, are revealed only by going deeper into the causes of such behaviour. Associating reasons of the improper behaviour in the classroom and at school with pupil's behaviour and emotional disorders, also competent diagnosis of this is a huge challenge for both teachers and the family of a pupil. Geležinienė et al. (2011) note that one of the main challenges for educators is to identify the needs of children with special educational needs, to understand the peculiarities of education of these children, to organize work in heterogeneous groups. Most often the family does not agree to consult the professionals in order to identify this problem. The informants mentioned that the pupil's parents often, even having the conclusions and recommendations from the professionals of child assistance services, deny these problems or hide them from teachers, *"parents do not say, even if they know"*, *"deny"*, *"they [the parents] keep silent"*, *"assert that inadequate requirements are applied to their child"*, and etc. According to the informants, parents usually react to the fact of recognition of emotional behavioural disorders of their child in three ways: do not know, hide, deny. While talking about working with parents, social workers and class tutors also emphasize their lack of competence in reasonably revealing parents that the causes of problems of regressive and (or) undisciplined pupil must be sought for in a joint effort, that they need to be addressed quickly, that belated solution to the problem might be harmful to their child, have negative consequences. Educators note that unlike other special needs (vision, hearing or other physical impairments), emotional and behavioural disorders tend to be justified as a feature of the personality. It is also justified as teachers' reluctance to accept pupils with *"their opinion"*, *teachers' reluctance to work with "free"*, *"other generation"*, *"modern" pupils*.

Table 1 **Informants' views on improvement areas of social educational assistance to pupils with EBD**

Sub-categories	Groups of informants	Examples of statements
EBD assistance regulation at school	Class teachers	<i>"The fact that it is completely unclear, whether to look for solutions individually, or to address the Child Welfare Committee"</i> , <i>"most importantly, nobody at the school knows who has to solve the problems"</i> , <i>"you are left alone in the class dealing with the problems"</i> , <i>"it is only not clear how to organize work in the classroom"</i>
	Social workers	<i>"The best thing would be that psychologists would work with them"</i> , <i>"the essence is that teachers have to know how to attract pupils' attention, instead of sending them to us"</i> , <i>"it is completely unclear who face more difficulties: children, parents or teachers"</i> ,

		<i>“how to evaluate the assistance to a child”, “it is absolutely not clear how to provide feedback to parents”</i>
Working with parents / parent education	Class teachers	<i>“everything depends on the family”, “parents rush to defend, because they believe that it faults will be find in them”, “it is difficult to get information on how the problem is solved within the family”</i>
	Social workers	<i>“If a mother simply denies a problem”, “nothing is possible when a mother keeps silent”, “parents collectively hid that the child was diagnosed with EBD needs”</i>
Development of teaching competence	Class teachers	<i>“It is difficult to understand that a serious problem is hiding beneath this”, “it is completely unclear how to work with these pupils”, “there are absolutely no seminars about the methods of work with such pupils”, “there is lack of skills of how to help other children in the classroom to get on well with them”.</i>
	Social workers	<i>“Most importantly, how to identify that there are EBD problems, not just bullying”, “lack of arguments, how to make parents believe that a child needs special assistance”, “it is very necessary to gain skills how to explain parents how they can help”, “lack of techniques, tests, how to verify that pupil’s problem is EBD”</i>

Informants believe that in order to help their child parents choose inappropriate means: move the child to another school, prohibit the child to interact with other pupils, accuse the other students and their parents of negative attitude towards their child, do not allow any extra-curricular activity, etc. The research results by Ališauskas (2007) revealed that one of the essential barriers for the provision of social educational assistance is the lack of positive cooperation between teachers and parents. The majority of the researchers who have studied the peculiarities of social educational assistance to different groups of children (Ilgūnienė & Griškevičiūtė, 2012) emphasize that cooperation between professionals and a family must be based on partnership, which is expressed by equivalent interpersonal relationships, parents' involvement into the process of dealing with their child's problems, exchange of knowledge, expectations, strategies, resources (Kairienė, 2010). While discussing teaching (learning) difficulties, arising with/for pupils with EBD, social workers and teachers, emphasized the necessity for proper behaviour, attention, concentration, enforcement of discipline not only during classes, but also in involving pupils in extra-curricular activities. Social workers stressed the importance of extra-curricular activities for pupils with EBD. The informants noted that a timely assistance, which enables to construct proper communication with classmates and to maintain social relationships at school, usually helps these children to overcome education (learning) difficulties and to gain new social skills in extra-curricular activities. Proper behaviour with classmates and teachers was mentioned as an important aspect by social workers, who indicated that it is an

essential condition for pupils with EBD to be socially engaged into the class/school. Researchers, performing studies in the field of social pedagogical assistance (Ališauskas et al., 2011) consider peer support, customized training, applied behaviour analysis, positive behaviour support at school; development of social skills as effective strategies to help children with special needs to learn at school. It should be noted that both groups of informants (during group discussions and individual interviews) expressed the importance of close cooperation between child assistance specialists and teachers. The informants indicated that such cooperation is essential in providing social pedagogical assistance to family and child.

Improvement areas of social educational assistance to pupils with EBD. Social workers and class tutors noted various improvement areas of social educational assistance to pupils with EBD. From all the surveyed teachers, there can be distinguished three subcategories of opinions regarding the improvement areas of social educational assistance: regulation of EBD assistance at school, work with parents/parent education, development of teacher competences to assist students with EBD (Table 1). The informants link the regulation of assistance at school not only with the organizational procedures and competency to define problems, but also with the necessity of recommendations for working with pupils with EBD, methodological tools, instruments, which could help school teachers to differentiate / associate occurring student's behavioural problems with EBD. Ambrukaitis et al. (2012) emphasize the responsibility of specialists in providing possible directions and methods of remedial educational work. According to the researchers, while providing the direction of educational remedial work, it is important to take into account not only the characteristics of the disorders, but also individual child's needs, abilities (Labinienė & Ruškus, 2003; Geležinienė et al., 2011).

As noted by the informants, regulation of EBD assistance should include the recommendations for working with parents, provision of proper feedback of social and educational support for participants. The assessment of social pedagogical assistance was identified as a particularly important aspect, associated not only with the quality of assistance received at school, but also with feedback supply among assistance participants, opportunity for all assistance child specialists to assess and evaluate themselves timely. The importance of assessment is highlighted by the majority of scientists.

In the subcategory of the work with parents informants emphasized the necessity of parent education and awareness regarding the characteristics of emotional behavioural disturbance, opportunities of correction, educational assistance and long-term consequences because of failure to receive timely assistance. The informants emphasized that in the process of assistance provision

to pupils with EBD, there should be provided the methods of parents inclusion into the process of assistance supply; the recommendations of how to properly adjust the child's behaviour at home, how to encourage the participation in class/school life, how to encourage children to behave in the classroom properly, how to help children overcome learning (learning) difficulties must be also prepared. During the interview social workers noted that, by providing assistance to pupils with behavioural and emotional disorders, they seek to promptly and fully inform parents and encourage them to actively cooperate with school teachers. Kairienė (2010), Ilgūnienė and Griškevičiūtė (2012), referring to the results of cooperation among team members in providing assistance to children with special education (learning) needs, strongly emphasize the importance of cooperation between team members and family. While providing social educational assistance, cooperation among pupils' parents, social workers and class teachers is very important.

In the subcategory of the development of teachers' competence, teachers emphasized the usual feeling of helplessness to promptly and properly identify the causes of pupil's misbehaviour, to provide assistance to pupil during school hours, what are learning peculiarities of EBD pupils, how to deal with problems of inappropriate behaviour with classmates, “nobody explains how to clarify a lesson to such pupils”, “it is absolutely not clear how to work with those pupils”. The development of both general and the special competences enables social workers to provide assistance to the client more efficiently and professionally (Leliūgienė & Terechovienė, 2011). The studies by Gudonis and Mockevičiūtė (2008) have revealed that many teachers are not prepared to educate children with special needs, therefore, negative attitudes, reluctance to work with these children still dominate in educational institutions.

During the discussion social workers agreed with a view of a lack of properly prepared diagnostic methodology and recommendations regarding social pedagogical work with EBD pupils (fig.2).

While the number of pupils with emotional and behavioural disorders at schools is increasing, there is observed not only the lack of specialists, providing necessary help for a child, but also the necessity to prepare high-quality social educational recommendations for teachers, social workers, parents, regarding the education of children with EBD. These recommendations are relevant to all school professionals because, as shown by the research results, one of the most effective factors of social educational assistance is a coordinated teamwork between teachers and professionals.

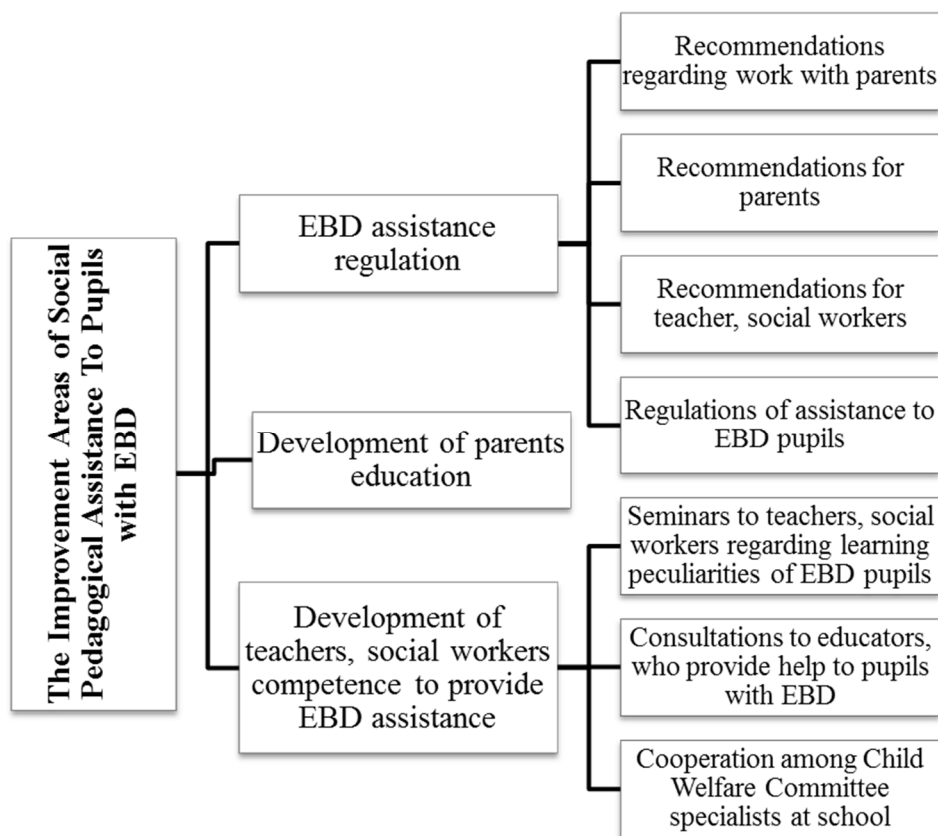


Fig.2 Attitudes of social workers and class teachers regarding the improvement areas of social educational assistance to pupils with EBD

Conclusions

After summarizing the data of the qualitative research, it can be stated that teachers and social workers are faced with various problems at schools, while providing assistance to pupils with behavioural and emotional disorders: i.e. parent education and supply with information, ensuring appropriate behaviour in the classroom/at school of EBD pupils, cooperation of assistance child specialists with teachers, class tutors, dealing with teaching (learning) problems at school, social involvement of pupils with EBD into the class/school life. The content of social educational assistance to EBD children, highlighted by the informants, points out the following most important areas of this development: regulation of assistance to pupils with EBD, improvement of parent education, development of teachers and social workers competence to provide assistance to pupils with EBD.

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PECULIARITIES OF TRAINING FOR CAREER OF LEARNERS WITH MILD INTELLECTUAL DISABILITIES

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Abstract. *This article describes the peculiarities of training of learners with mild intellectual disabilities. The aim of the article is to highlight problems and different theoretical approaches and theoretically validate the optimal ways of training for career of learners with mild intellectual disabilities. On the basis of scholarly literature, to analyses which areas of training for career are accessible to learners with mild intellectual disabilities. To discuss training for career as a person's readiness to enter adult life from the point of view of education. Young people with mild intellectual disabilities should be supported in understanding own wishes and possibilities. It is important that they start preparing for professional activity in early childhood, since it continues until a person becomes an adult. In the childhood, children should be introduced with different professions and encouraged to take interest in them. They should be encouraged to think about their future work, what they are successful at, as well as about the advantages of different activities.*

Keywords: *career education, special education needs, school.*

Introduction

In the conditions of the processes of globalization, the school cannot stay aside and should adapt to the resulting changes. Education of learners in special needs in general education schools demands the latest knowledge, since education should be accessible to all children irrespective of their abilities and needs. Hence, one of the major characteristics of the system of education is to provide appropriate conditions for children with mild intellectual disorders (MID) to learn according to programmes complying with their individual abilities, as well as applying teaching aids and methods and striving for the optimal quality of learning, which determines MID learners' readiness for career. Training for career is purposeful education of a person's career competences, which aim at helping a learner to develop their career competences essential for successful choice of the field of education so that a learner can successfully choose a profession or

working activity, as well as at fluent transition from school to adult life, further professional development and lifelong learning. Seeking for successful training for career at school and fluent transition into adult life, it is important that a good transition plan should be prepared which would enable a MID learner, his/her family and teachers to achieve the general aims of the transition process. Upon the implementation of these aims, young people would become economically active citizens having acquired professional training and skills compliant with the expectations and requirements set by adults. Seeking to become mature personalities, young people with mild intellectual disabilities need particular skills – personal independence (disposition / self-determination), problem-solving and setting aims. The development of the feeling of cognising oneself provides young disabled people with a possibility to evaluate individual strengths and challenges, even when seeking for collegial aspirations. The development of the skill to transmit information about own strengths and incurred challenges can be referred to as personal independency and self-determinance. It can be concluded that “independent (self-determinant) individuals can control own life to some extent, since they can determine the future goals related to their reality and situation being aware of own strengths and needs” E. M. Ankeny, J. P. Lehmann, (2011).

The skills of personal independence (self-determinance) provide young people with possibilities to assume adult roles E. M. Ankeny, J. P. Lehmann, (2010); S. S. Field, M. D. Sarver, S. F. Sha (2003). However, training of persons in special needs for career is still one of the areas of concern in the Lithuanian system of education.

Why is it important to allot sufficient attention to the development of the competences for training for career for learners with mild intellectual disabilities in school age?

Why does transition from school to working activity frequently become a challenge and a problem for youth in special education needs?

The object of the article – peculiarities of training of learners with mild intellectual disabilities.

The aim of the article is to highlight problems and different theoretical approaches and theoretically validate the optimal ways of training for career of learners with mild intellectual disabilities.

Objectives of the article:

- On the basis of scholarly literature, to analyse which areas of training for career are accessible to learners with mild intellectual disabilities.
- To discuss training for career as a person’s readiness to enter adult life from the point of view of education.

Seeking to reveal the peculiarities of training for career of learners with mild intellectual disabilities in the process of the transition from school to adult life,

the aspects of training for career and entering adult life are explored in further parts of the article.

The **research method** applied in the article is critical review M. J Grant, A. Booth (2009) and analysis of scholarly literature.

Methodology

The methodological fundamental of the research is existential and humanist philosophy. According to the representatives of existential philosophy A. Mickūnas, D. Stewart, (1994); Rudestam, (1982); W. Furman, (2001), every human being is unique and valued – every human being has an individual world outlook and no person experiences the world in the same way as others. Organising the process of training for career of young people with mild intellectual disabilities, it is important to observe the idea of existential philosophy: a person's actualisation "now and here" is most significant; the only situation that we can experience as human beings is the present – we can remember the past and we can plan the future. Therefore, the present situation is the only one that can be changed when planning youth career. The work is based on *the pedagogical conception of existentialism* that encourages the educator and the learner to take interest in essential issues of human existence, and to overcome satisfaction with life grounded on material well-being B. Bitinas, (2006). From the existentialists' viewpoint, a person (including a child) is free to make choices, whereas the duty of an educator is to consider a child's world outlook and teach him/her to make conscious choices, to help his/her understand and regard own possibilities.

Humanist philosophy is related to respect for human right to freedom, equality, development of inborn abilities and features, as well as personality development. Its main principle is recognition of every person's value and respect. According to Rogers (1973), if a young person "is willing to learn and develop, strives for knowledge and good accomplishment of everything, and feels desire to create", the pre-professional education that is inseparable from the formulation of personal education goals in the content of training for career is properly organised. The school, primarily, should help every learner to cognise oneself, to perceive own identity and search for purport of life. Hence, education should be directed towards a person, his/her self-expression and development. It is assumed that everything can be achieved by satisfying the essential needs of a child: she/he should be respected, loved, psychologically safe and valued by others, as well as able to value him/herself, plan and create own future.

Training for career and choice of a profession

The rapid processes of globalisation, demographic changes, economic fluctuation as development of technologies shock, transform and change the world and way of human life. Integration into the labour market in the rapidly changing environment is not an easy task for any young person, whereas it is much more complicated for a young person with mild intellectual disability. One of the conditions for successful transition of persons in special education needs from school to working activity is purposeful planning of learners' career. Preparation of an individual plan for transition would help a young person, his/her family and teachers to achieve general aims of the process of transition. Upon the implementation of these aims, young people would become economically active citizens having acquired professional training and skills compliant with the expectations and requirements set for adults.

Education for career is a purposeful development of a person's career competences. Its main aim is to help a learner to develop their career competences essential for successful choice of the field of education so that a learner can successfully choose a profession or working activity, as well as at fluent transition from school to adult life, further professional development and lifelong learning. The problem of the choice of a profession has been explored since old times from various aspects. In his book "The Republic", Plato discussed the inborn differences of people determining the nature of their professional activity.

Nowadays, different theories are employed to discuss the issues related to the choice of a profession: development and self-perception by D. E. Super (1961, 1962), typology by J. Holland (1973), social learning theory by J. Krumboltz (1979, 1990), professional aspirations L. Gottfredson, (1981), as well as adaptation to work by R. Dawis (1984, 1992).

The afore-said theories help to understand the processes of the choice of a profession, decision-making, and rendering support in case of difficulties. Today, these theories are combined in a unified theory of convergence, though their diversity is stated L. Jovaiša, (1999). Almost a hundred of years ago, F. Parson, the founder of professional orientation, formulated three main principles of the successful choice of a profession: good cognition of the self, awareness of the world of professions, and combination of this knowledge (Parson, 1909). Training for career and the implementation of pre-professional education is organised differently in different countries. It largely depends on the system of education, culture, customs and traditions of every country. In some countries, pre-professional education is implemented as an individual part of the system of education that has its own programme, duration and implementing institution. In other countries, pre-professional education is implemented integrating the content

of education for career into general education and vocational training considering the peculiarities of understanding and experience conditioned by learners' age.

Only a small group of Lithuanian researchers have analysed working, pre-professional and professional training of disabled persons: A. Juodraitis (1999, 2001) disclosed the theoretical fundamentals, D. Alifanovienė (2001) analysed the significance of social and household abilities, L. Kaukėnaitė (2001) explored the state of vocational education, J. Ruškus (2000, 2001, 2002, 2004) highlighted the significance of teachers' provisions, I. Baranauskienė (2003, 2004, 2008) investigated the connections between the vocational training of young people with mild intellectual disabilities and their professional adaptation, A. Galkienė, V. Gevorgianienė (2008) analysed entrepreneurship education of disabled learners, and G. Dulnevas (1969), referring to the research and experience of other countries, explored the necessity of changing the system of vocational education in special schools. He believed that the earlier children started education in special schools, the longer the period of education would be. This was conditioned by children's insufficient intellectual, social and physical maturity to choose a profession and start independent life. The scientific research of V. Karvelis (1969, 1979, 1981, 1987, 1994, 2001) had a great impact on the theory and practice of the vocational training of disabled people in Lithuania. The latest research into the vocational training of the disabled, their adaptation in the labour market and professional rehabilitation has been conducted by I. Baranauskienė (2000, 2002a, 2002b, 2003a, 2003b), I. Baranauskienė, J. Ruškus (2004), I. Baranauskienė, A. Juodraitis (2008) and others.

Implementing training for career in general education schools in Lithuania, it is highly important to help learners to choose the profile of learning, a profession and working activity. Professional consultation should continue in vocational training institutions constantly checking and evaluating the righteousness of learners' choice of a profession. Consistently working with learners with mild intellectual disabilities in educational institutions, purposefully applying the attained aims and defining clear connections between the social environment and experience of learners with mild intellectual disabilities, as well as choosing appropriate methods, these learners are exposed to all possibilities to learn with others and feel full-fledged members of the community. Most researchers claim that a person should start preparing for the integration into the labour market in early childhood, and it may last a long time or even the whole life. In the childhood, a child should be introduced with different professions and encouraged to take interest in them. They should be encouraged to think about their future work, what they are successful at, as well as about the advantages of different activities.

The Description of the Procedure of the Implementation of Professional Orientation was confirmed following the Order of the Minister of Education and

Science and the Minister of Social Security and Labour “On the Approval of the Description of the Procedure of the Implementation of Professional Orientation” (No. V-1090/A1-314 of 4 July 2012) implementing Part 2 of Article 18 and Part 3 of Article 26 of the *Law on Education of the Republic of Lithuania* and Article 8 of *The Law on Vocational Training of the Republic of Lithuania*. It is stated that “*The aim of professional orientation is to help persons to purposefully choose possibilities appropriate for their education and employment, to provide conditions to acquire career competences, to actively create own career (i.e. a sequence of lifelong, self-expression and working experiences significant for a person and the society). Professional orientation is implemented by providing services regarding training for career, professional information and professional consultations.*”

The Description highlights that the services of professional orientation are provided to all persons, as well as the importance of assuring equal opportunities and assessment of needs. Observing the principles of impartiality and free choice, the implementers of professional orientation should deliver support to a person in choosing and realising the best possibilities of his/her career. To attain the afore-said aim, educators apply different forms of professional information: training for career is integrated into subject lessons and after-class activities, such as subject-specific, technical, arts and sports circles, school events, such as excursions, meetings with representatives of different professions, exhibitions, thematic evenings, lectures and conferences; meetings with the class teacher; as well as communication with parents. Seeking to achieve good results in the process of professional information, educators apply different methods: observation, verbal (conversations and stories), mass media, such as films, TV programmes, posters, special literature, dictionaries, reference books, booklets, brochures, etc.

In Lithuania, pre-professional education is implemented through integrating the content of training for career into general education and vocational training. In the teacher’s book “Education for Career” it is stated that “*seeking to find a place in the modern world of labour, a person should be able to purposefully act in the changing situation and life <...> considering the labour demands and aims of personal self-realisation. She/he needs career competences defined as the aggregate of attitudes, knowledge, understanding and abilities based on the cognition of oneself and own career, its planning, management and combination with other aspects of life*”. Four areas of career competences are distinguished in the integrated education for career outlined in general education programmes: self cognition, career possibilities, career planning and career implementation.

Four levels of competence development are defined:

- *The first level – acquisition of primary knowledge, understanding and abilities, formation of attitudes;*

- *the second level – acquisition of main knowledge, understanding and abilities, formation of attitudes;*
- *The third level – acquisition of specific knowledge, understanding and abilities, formation of attitudes;*
- *The fourth level – development and improvement of the acquired knowledge, understanding and abilities, consolidation of attitudes.*

The general education plans and general vocational training plans of Basic and Secondary Education General Programmes of Lithuania outline that schools should implement learners' education for career, yet at the same time, education institutions are given autonomy and freedom to organise orientation (career) services. However, on 30 September 2011, following Article 2.4 of Order No. V-1795 "On the Approval of the Description of the Procedure of Organising Education of Learners in Special Education Needs the Minister of Education and Science confirmed that *"since 1 September 2012 learners that have accomplished individualised programmes of basic education can continue learning in accordance with the programme of vocational training or learn according to the programme of social skills development"*. It can be concluded that the provisions of the order of the Minister of Education and Science is of discriminating character in terms of disabled children (with intellectual disabilities) and depriving them of employing the career competences defined in the "Model" of level four.

The order of the Minister of Education and Science deprives learners in special education needs of learning according to adapted or individualised secondary education programmes and directs them to continue studies only according to vocational training programmes or learn according to the programme of social skills development. This order is directly applied to all children with intellectual disabilities leaving no possibilities to continue learning after individual evaluation, as children with some disabilities, such as autism, or having mild intellectual disorders, can successfully integrate into general education schools and learn according to adapted programmes of primary and basic education. They are deprived of the possibility to continue studies and are forced to choose a vocational or special school, where they are educated with learners having major intellectual disabilities. Upon the completion of 10 grades, learners have the only possibility to study in schools of technologies and business, agriculture, handicrafts and food industry, and vocational training centres.

According to J. Ruškus (2004), persons in special needs are educated in two ways: they are either integrated into general education groups, or education is organised in special groups. Upon the successful completion of school, persons acquire a certificate of a qualified worker, whereas the ones who complete secondary education programme alongside with vocational training get a diploma.

In specialised vocational schools, persons in special needs develop skills of independent life alongside with the main aim – training for career, and the state takes care of its partial maintenance.

Training for career learners in special education needs remains one of the problem areas of the Lithuanian system of education. Referring to and applying the experience of other countries in the practice of Lithuanian education could improve readiness of learners for life and possibilities of acquiring professional skills. Transition from school to adult life frequently poses challenges for young persons in special education needs.

According to R. Laužackas, E. Danilavičius, O. Guskienė (2004). high requirements are set for vocational training in our society: it should provide with professional and general education knowledge compliant with the level of modern science and technologies, general cultural values, as well as professional competences in the selected field. Vocational training should also provide conditions essential for the development and renewal of the acquired knowledge enabling a worker to adapt to the constantly changing conditions on the labour market.

Having completed an exhaustive analysis of scholarly literature, I. Baranauskienė, J. Ruškus (2004) distinguish four models of vocational training of the disabled: socio-professional inclusion (liberal market), professional competitiveness or dual, professional segregation (from work simulation to narrow specialisation), and vocational training model.

Every model of the vocational training of the disabled has its advantages and disadvantages, yet neither of them guarantees the success in professional integration of learners with mild intellectual disabilities. One of the conditions of successful transition of learners in special education needs from school to working activity is purposeful planning of their career. Preparation of an individual plan of transition would help a learner, his/her family and teachers to achieve the general aims of the transition process. Upon the implementation of these aims, young people would become economically active citizens having acquired professional training and skills compliant with the expectations and requirements set by adults.

Lithuanian researchers have conducted research in the readiness of learners with mild intellectual disabilities to enter adult life, professional opportunities and choice and claim that a frequent obstacle preventing MID learners from employment is the lack of communication skills, irresponsibility, insufficient psychological and physical readiness, lack of literacy and mathematical skills, appearance and influence of other people I. Baranauskienė, J. Ruškus, (2004). These learners are often unable to assess own possibilities and situation on the labour market, which frequently leads to disappointment with own professional abilities, insufficient readiness to work, unfavourable attitude of employers, and

emotional difficulties when integrating into the labour market. Insufficient thinking abilities of these learners frequently become reasons of employers' disappointment, underestimation of a worker and doubts; employers tend to choose other employees rather than those with MID I. Baranauskienė, A. Juodraitis, (2008). MID persons painfully put up with colleagues' negligence; they are often made to do worse paid jobs, and therefore, they frequently balance on the verge of poverty. Young people with MID have difficulties to apply to working conditions, and their career is often accompanied with alcohol consumption, dissatisfaction with own profession, work and salary. MID persons often experience social exclusion due to the inability to perform the roles imposed by the society, whereas social benefits become the main source of income I. Baranauskienė, J. Ruškus, (2004).

Career is lifelong learning, cognition of oneself, self-expression and working experience. Due to the changes in the society, culture, economy and technologies, the conception of career has changed from the conception that the state is responsible for career, nowadays a person his/herself is responsible for own career and its management. Therefore, it is important that modern school educates a responsible person seeking for career, which is quite difficult for a person with mild intellectual disability.

Conclusions

Young people with mild intellectual disabilities should be supported in understanding own wishes and possibilities. It is important that they start preparing for professional activity in early childhood, since it continues until a person becomes an adult. In the childhood, children should be introduced with different professions and encouraged to take interest in them. They should be encouraged to think about their future work, what they are successful at, as well as about the advantages of different activities.

One of the conditions of the transition of learners in special education needs from school to working activity is purposeful planning of learners' career. A good transition plan would enable a MID learner, his/her family and teachers to achieve the general aims of the transition process. Upon the implementation of these aims, young people would become economically active citizens having acquired professional training and skills compliant with the expectations and requirements set for adults. Close cooperation between parents and teachers helps to create favourable conditions for the social maturity of the disabled.

In scholarly literature, training for career is considered as a continuous process of educating learners with mild intellectual disabilities in which they acquire and develop their competences. Referring to the theoretical analysis, it is possible to claim that the main obstacle of the integration of the disabled into the

labour market and their professional adaptation are: negative attitude of the society and employers towards disability, lack of motivation and initiative of the disabled, lack of willingness to work, and unfair evaluation of own situation. A systemic programme of vocational training is essential for the integration of the disabled.

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Rita Virbaliienė, Ingrida Baranauskienė. Peculiarities of Training for Career of Learners with Mild Intellectual Disabilities

Laužackas, R., Danilevičius, E., & Gurskienė, O. (2004). *Profesinio rengimo reforma Lietuvoje. Parametrai ir rezultai*. Vytauto Didžiojo universiteto leidykla.

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OPPORTUNITIES OF SOCIO-EDUCATIONAL ASSISTANCE TO INDIVIDUALS SERVING ALTERNATIVE TO IMPRISONMENT SENTENCES: THE PROGRAMME *BEHAVIOUR-CONVERSATION- CHANGE* APPLICATION ANALYSIS

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Abstract. *The paper focuses on the issue of socio-educational assistance to alcohol addicts serving non-custodial sentences in the Probation Department of Klaipėda Regional Probation Service. It comments on the results of the behavioural correction programme Behaviour-Conversation-Change (BCC), applied to the individuals serving non-custodial sentences. The research was based on the qualitative research strategy. The conducting of the research was underpinned by the works of W. R. Miller, S. Rollnick (1991, 2002) and numerous other authors on a motivational interview, as well as on a motivational interview-based programme Behaviour-Conversation-Change to be used by the penal system institutions (Farbring & Berge, 2004). The participants of the research were individuals with alcohol addicts, serving non-custodial sentences in the Probation Department of Klaipėda Regional Probation Service. In the period 2012 to 2017, 160 respondents took part in the research (accordingly, the sample was 151 respondents). The changes in the respondents' behaviour were recorded by means of the SOCRATES 8A 19 question- scale (The Stages of Change Readiness and Treatment Eagerness Scale), designed to evaluate three key components: problem recognition, ambivalence, and the steps taken (Miller & Tonigan, 1996). The changes were evaluated at the beginning and at the end of the Behaviour-Conversation-Change programme. As proved by the findings, the impact of the Behaviour-Conversation-Change programme was positive at the recognition and the step taking stages. The results achieved in the application of the Behaviour-Conversation-Change programme meaningfully differed, given the officers approach to the programme.*

Keywords: *Socio-educational assistance, individuals with alcohol addicts serving non-custodial sentences, the behavioural correction programme Behaviour-Conversation-Change (BCC), motivational interview.*

Introduction

Crime is a pressing social problem for most countries in the world, including Lithuania. Its identification and search for the ways of problem solution have received considerable attention both from researchers and practitioners who work with convicted individuals. The findings of research (Lipsey et al., 2000; Chui, Nellis, 2003; Sherman, Farrington et. al., 2006; Scott et al., 2007; kt.) proved that the forms of alternative criminal liability implementation (the forms of probation) are more effective than imprisonment. The United Nations Organisation and the Council of Europe (UNGA Resolution No. 45/110, 1990; Council of Europe Recommendations No. R (99) 22, 1999) also promoted alternatives to confinement.

In *The Concept of Probation System in Lithuania* (2007) and the Republic of Lithuania *Law on Probation* (2011), in terms of an individual's positive socialisation, that form of punishment was considered to be more effective than isolation from society, as convicts remained in their living environment and could work, study, live in the family, and acquire a profession.

As witnessed by statistical data, over the last three years, the indicators of criminal offenses committed in Lithuania have been declining (from 84, 715 criminal offences in 2013 to 72, 343 in 2015). Over the last four years, the number of imprisoned persons has also been consistently declining (from 9,920 prisoners in 2011 to 7,355 in 2015). One can believe the declining crime trend is related to the efforts of probation services to find and apply efficient measures of legal, social, psychological, and educational assistance that promote positive changes in the convicts' behaviour.

Research (Žukauskienė & Viršilas, 2013) revealed that probation officer, next to the functions of supervision, control, and social assistance mandatory to a law enforcement professional, can also perform the functions of *social support, social education, and assistance in health care*. Those are the functions of social education that ensure convicts' social resocialisation, promote their awareness of responsibility for their behaviour and actions, and teach them to coordinate their needs with the law. In the area of *social support*, officers can perform their direct functions of mediation, information, communication, prevention, evaluation, organisation, and counselling, as well as ancillary ones: educational, recreational, diagnostic, and preventive.

In the area of *social self-education*, officers can perform the direct functions of prevention, evaluation, organisation, counselling, education, and recreation, as well as the ancillary functions of mediation, communication, information, diagnosis, and correction. *In the area of health care*, officers can perform the principal counselling, recreational, diagnostic, evaluation, corrective, and mediation functions and the ancillary communication, information, preventive,

organisational, training, and educational functions (Žukauskienė & Viršilas, 2013, p. 109).

Probation officer's individual work with offenders, behavioural correction programmes carried out in probation, and other activities have elements of psychological (Rugevičius et al., 2008) and socio-educational (Žukauskienė & Viršilas, 2013) assistance. The main principles of individual work with convict include confidentiality, empathy, tolerance, and respect.

When working with offenders, it is important to take the following principles into account:

- *risk*: intensive interventions must be targeted to high-risk offenders;
- *needs*: the needs of some offenders are related to their crime, therefore, the intervention is to be directed to the meeting of those needs (e.g., unemployment or addiction);
- *response*: it means that offenders will only benefit from the intervention in case it is meaningful for them and presented in a way acceptable to them and complying with their learning style. The principle includes several constructs, however, motivation is the essential element (Howells & Day, 2007).

W. R. Miller and S. Rollnick (1991, 2002) conducted research in the area of convict motivation and proposed the application of motivational interviews in penal system institutions and in the work with alcohol addicts (Miller et al., 1988; Miller et al., 1995; Figlie, Dunn, & Laranjeira, 2005; Vasilaki et al., 2006). In the conceptualisation of motivation (Miller & Rose, 2009) as an interpersonal process, it was identified as an important factor in the improvement of the results of resocialisation (McMurrin, 2009; Austin et al., 2011). B. Lundahl and B. L. Burke (2009) carried out a review of four meta-analyses of the effectiveness and practical applicability of a motivational interview. As proved by the findings, MI significantly (10 to 20 %) increased the effectiveness of the treatment of addicts (of alcohol, tobacco, or drugs) and reduced the cases of risky behaviour. The interest in a motivational interview as a method of work with offenders (McMurrin, 2009) revealed the awareness, and simultaneously the efforts, to increase their low motivation (Anstiss, Polaschek, & Wilson, 2011).

A motivational interview-based programme *Behaviour-Conversation-Change* (Farbring & Berge, 2004) was developed on the commission No. 4751, 4752 of the Swedish Prison and Probation Department (Kriminalvårdsstyrelse) and was intended for individuals serving their sentences in prison or probation.

The problem of the research. Currently, in the penal system of Lithuania, 5 adapted and accredited convicts' behaviour correction programmes have been implemented. One of them, *Behaviour-Conversation-Change* (hereinafter: BCC), has been designed to increase offenders' intrinsic motivation for pro-social

behaviour (*Valstybės žinios*, 2012). The BCC is to be applied to all the groups of individuals in the penal system institutions, and especially to those who have addictions and long criminal life experience. Lately, work in the penal system has been based on the hypothesis that for the majority of people it is important to learn to solve their own problems, to acquire cognitive and social skills, and *to be willing to use them*.

One can expect that individuals having alcohol addiction and serving non-custodial sentences in the probation service can be helped by the BCC to make the decision to seek to live a sober life, to overcome the addiction, and to develop social, problem solution, reasoning, and self-control skills. However, so far, the efficiency of work with offenders by means of the BCC method has not been justified by scientific research. The *motivation* of individuals who have alcohol addiction and are serving non-custodial sentences *to change and the desire to make up their minds to actually apply the acquired skills to practice* has received little attention from researchers.

The aim of the research was to evaluate the motivation of people, serving non-custodial sentences and addicted to alcohol, to live a sober life by means of the behavioural correction programme *BCC (Behaviour-Conversation-Change)*.

Empirical research

Methodology. The research is based of Farington's (Farington, 2003, p. 1) criminal justice, as well as the situational, community, and development prevention, ideas which are significant for the change in individuals' antisocial behaviour, the reduction in risk factors, and the increase in protective ones. The correctional philosophy (*probation* and *parole*) is based on the principle of Beccaria's punishment theory: not to punish, but to prevent crime (Bekarija, 1992). The research is also based on the provisions of a representative of humanistic psychology Maslow (Maslow, 2009) on human autonomy, uniqueness, value, and the yearning to constantly improve. Human spiritual nature which manifests itself through inner wisdom, goodwill, and love is the essence of personality. For the research, a *quantitative research strategy* was chosen, in accordance with which the knowledge that develops through the prism of positivist philosophy is based on the observation and measurement of objective reality with the aim of understanding of the phenomenon in question (Creswell, 2013, p. 36).

The research participants. The participants of the research were individuals serving non-custodial sentences in the Probation Department of Klaipėda, Regional Probation Service. For the research, one of the convict groups was selected: those were individuals who had alcohol addiction. In the period of

2012 to 2017, 151 individuals took part in the research. The figure accounts for the research sample.

The research instrument. The research was conducted, based on foreign researcher works (Miller & Rollnick, 1991, 2002; Burke et. al., 2003; kt.) and the BCC programme (Farbring & Berge, 2004) intended for penal system institutions. A motivational interview was defined as a way of communication and a method of conversation, based on psycho-social and educational knowledge. The programme *Behaviour-Conversation-Change* consisted of five semi-structured interviews based on the method of a motivational interview and an introduction, aiming to:

- provide offender with an opportunity to analyse his own situation;
- help offender to form a vision of the motivation to change;
- increase the probability that offender will make up his mind to change;
- encourage his participation in a longer crime and addiction-coping programme;
- provide contact persons/officers with an opportunity to develop their motivational interview skills;
- for probation officers, be a penal system tool in the execution of the Government directives to increase offenders' motivation to change and to cope with addiction (Farbring & Berge, 2004).

The changes in the behaviour of individuals who served non-custodial sentences and had alcohol addiction were recorded by means of the SOCRATES 8A 19 question-scale (*The Stages of Change Readiness and Treatment Eagerness Scale*), designed to evaluate three key components: **problem recognition**, **ambivalence**, and **action** (Miller & Tonigan, 1996). The changes were evaluated in the introductory and final meetings of the *Behaviour-Conversation-Change* programme.

The methods of statistical analysis: the statistical data analysis was performed using the statistical data processing software IBM SPSS (Statistical Package for the Social Sciences), version 20. To process the data, the ordinal and nominal measurement scales were used, therefore, the following statistical procedures were applied: *on the nominal scale*, percentage frequencies were calculated in the data distribution; *on the ordinal scale*, the t-test of two dependent (paired) samples was calculated in the data distribution, and to establish the relationships between variables, *the correlation coefficient after Spearman* was calculated (Vaitkevičius & Saudargienė, 2006).

The research participants. The participants of the research were individuals serving non-custodial sentences in the Probation Department of Klaipėda Regional Probation Service and the officers of the Probation Department who carried out the BCC programme. For the research, one of the convict groups was chosen: individuals addicted to alcohol. In the period from 2012 to 2017, 151

individuals serving con-custodial sentences took part in the research, and they accounted for the sample of the research. The BCC programme was carried out by 23 officers of the Probation Department.

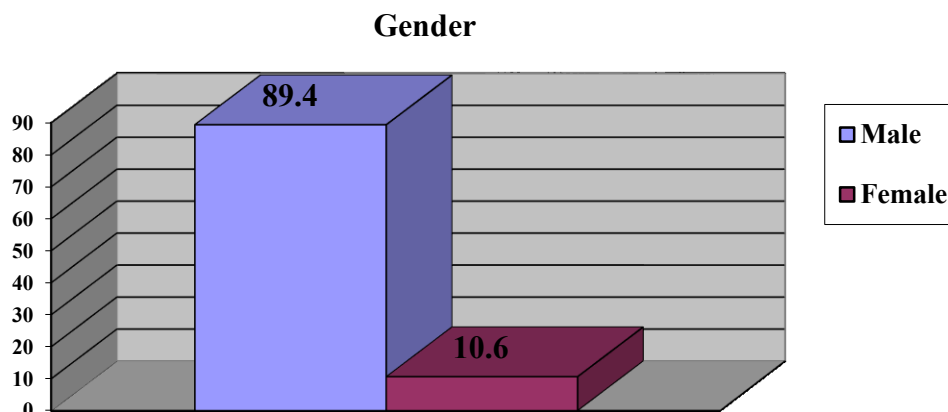


Fig.1 The characteristics of the respondents by gender N=151

As proved by the research data analysis (Fig. 1), the distribution of the respondents (N=151) by gender was as follows: the majority (89,4 %) were male, and the minority (10,6 %) were female. Thus, the majority of alcohol addicts were male. However, given the fact that in the territory of the Probation Department of Klaipėda Regional Probation Service women accounted for 10,96 % of the total number (304 out of 2773) of the convicts, one can state that addiction to alcohol was characteristic of the representatives of both sexes.

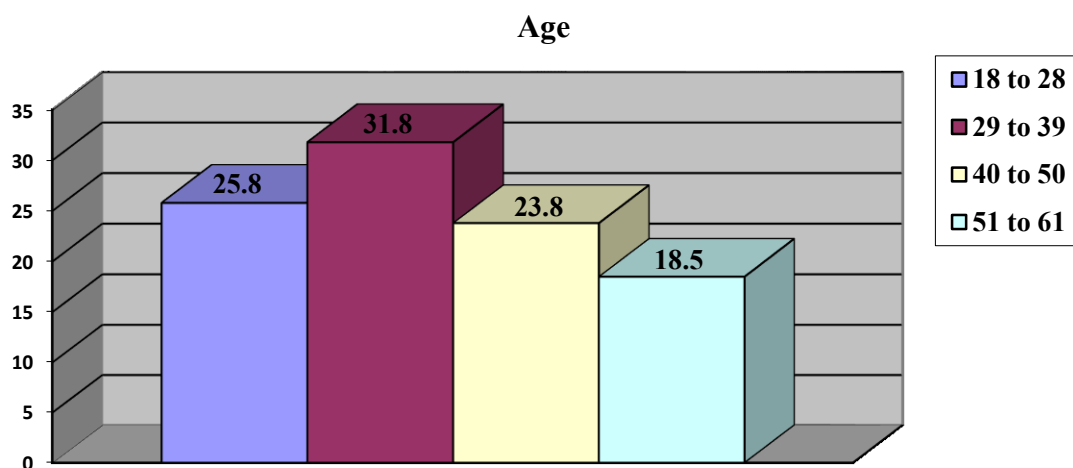


Fig.2 The characteristics of the respondents by age N=151

As proved by the research data analysis (Fig. 2), the vast majority of the respondents (31,8 %) were 29 to 39-year-old, slightly over a quarter (25,8 %), 18 to 28-year-old, almost a quarter of them (23,8 %), 40 to 50-year-old, and the remaining (18,5 %), 51 to 61-year-old. Thus, most frequently, non-custodial

sentences were served by alcohol addicts who were 29 to 39 year-old, and least frequently, by senior citizens (51 to 61 year old).

The BCC programme was carried out by officers of the Probation Department (N=23), therefore, it would be reasonable to identify their education and work experience, i.e. the factors that could have had an impact on the convicts-alcohol addicts' motivation to change.

Education. By education, the officers of the Probation Department who carried out the BCC programme could be divided into five groups (see Fig. 3):

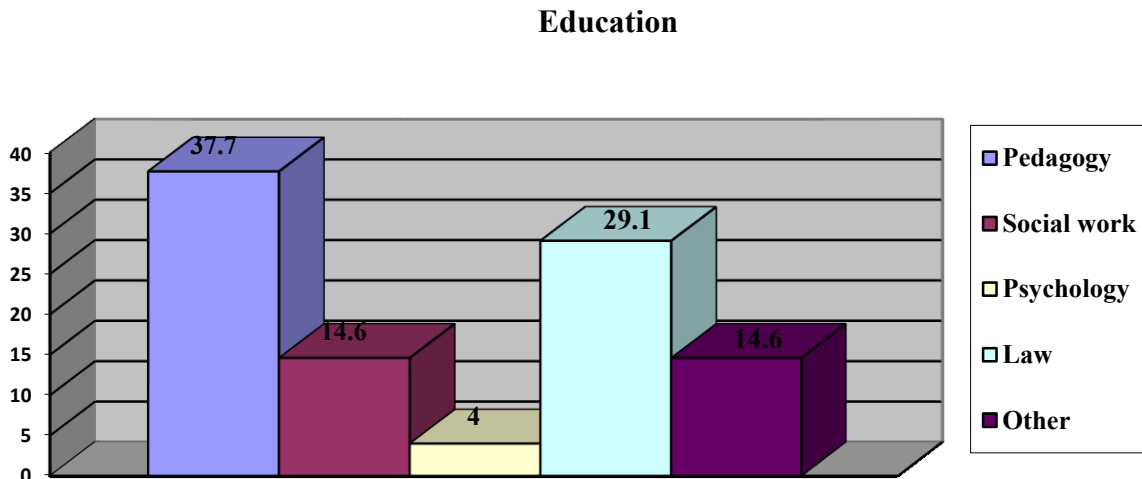


Fig.3 Officers by education N=23

As proved by the research data analysis (Fig. 3), the majority of the officers (37,7 %) have acquired pedagogical education, a slightly smaller part (29,1 %), legal education, and almost one seventh (14,6 %) have acquired the education in the field of social work or other fields (management, business administration, etc). Only a minor part of the officers (4 %) have acquired education in psychology. The officers of the Probation Department mainly have had either pedagogical or legal education, which means they are prepared and able to provide diverse socio-educational assistance to offenders (in our case, to carry out the BCC programme) and to evaluate the changes in the motivation of individuals, serving sentences and having addiction to alcohol, to live a sober life.

Work experience of the probation officers. By the number of years served in the Probation Department, the officers carrying out the BCC programme could be divided into five groups (see Fig. 4):

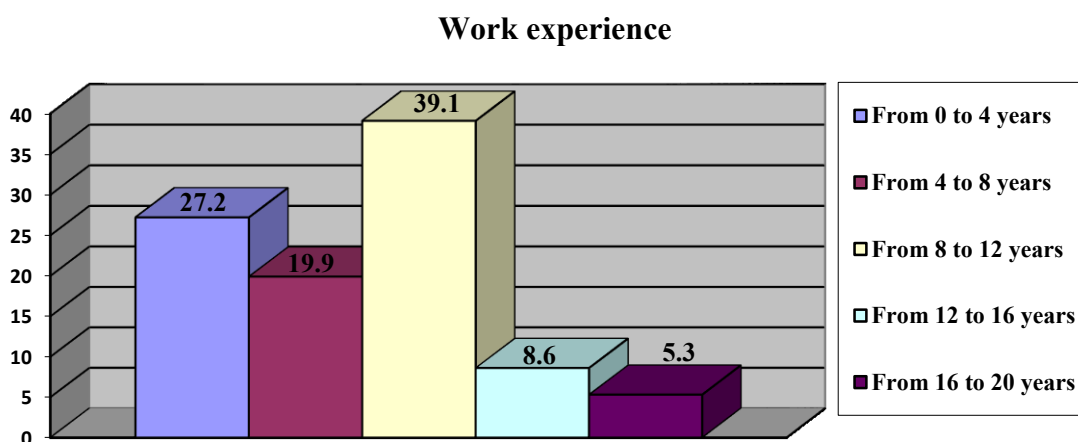


Fig.4 Officers by the length of work experience N=23

As proved by the research data analysis, the majority (39,1 %) of the probation system officers had work experience of 8 to 12 years, slightly more than a quarter (27,2 %), up to four years, almost one fifth (19,9 %), from 4 to 8 years, almost one tenth (8,6 %), from 12 to 16 years, and a small part (5,3 %), from 16 to 20 years. Thus, the probation system mainly employed officers with the work experience of around 12 years, and only a small part of the officers in the probation system had substantially more extensive work experience. One can argue that for probation officers, such experience of work with convicts was sufficient to be able to carry out different programmes in the probation system and to evaluate behavioural changes of their participants.

The research findings. To assess the changes in the respondents' behaviour, the SOCRATES 8A 19 question-scale of the preparedness to change and the wish to receive treatment (*The Stages of Change Readiness and Treatment Eagerness Scale*) was used, and it was filled up by 151 respondents. The changes in the motivation were evaluated in accordance with three key components: **problem recognition**, **ambivalence** (of feelings), and **action**. To establish how the BCC programme changed the respondents' motivation, two measurements were performed (during the introductory and the final sessions).

First of all, we tried to establish *how the motivation of the respondents changed in the recognition of the addiction problem*. The comparison of the means of the two measurements is presented in Table 1.

Table 1 Comparison of the problem recognition before and after BCC

No.	Characteristic	Assessment mean	N	t	df	p
1.	Problem recognition 1	2,84	151	-3,954	150	0,000
2.	Problem recognition 2	3,46	151			

Upon analysis of the data in Table 1 and the performance of t-test of two dependent (paired) variables, it was established that the respondents' problem recognition assessment mean was 2,84 at the beginning of the programme and 3,46 at the end of the programme. That proves that the difference between the means was statistically significant ($t=-3954$; $df-150$; $p=0,000$).

The high scores in the problem recognition show that the client admits having problems with the addiction to alcohol and is inclined to express a wish to change. He understands that, if nothing changes, further consumption of alcohol will cause more serious problems (Farbring, 2014, p. 180). One can argue that individuals, after the completion of the BCC programme, are more inclined to admit that they have problems with the consumption of alcohol. The recognition of the problem at the end of the programme is one of the key symptoms witnessing the growth of the respondents' motivation to change. Graphically, the change is shown in Figure 5.

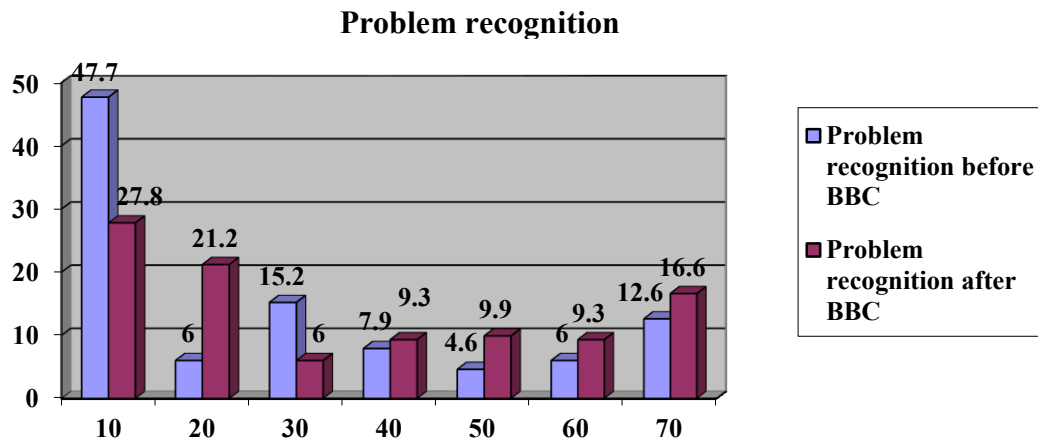


Fig.5 Change in the recognition of the respondents' problem N=151

The research also sought to assess *how the motivation of the respondents changed with respect to ambivalence*. The comparison of the two means of ambivalence measurements is presented in Table 3.

Table 2 Comparison of ambivalence before and after BCC

No.	Characteristic	Assessment mean	N	t	df	p
1.	Ambivalence 1	5,46	151	-1,347	150	0,180
2.	Ambivalence 2	5,73	151			

Upon analysis of the data of Table 2 and the performance of two dependent (paired) samples t-test, it was established that the respondents' ambivalence assessment mean at the beginning of the BCC was 5,46, and during the final

session, 5,73. The difference between the means was not statistically significant ($t=-1,347$; $df-150$; $p=0,180$), therefore, one can argue that the ambivalence of the individuals who completed the BCC programme did not meaningfully change. In the context of an individual's motivation, the change in ambivalence did not have uniform assessment. As noted by Farbring (2014, p. 181), high scores in ambivalence meant the client's *wish to know* whether he really controlled the consumption of alcohol and whether he drank too much and thus harmed other people. High scores meant being not sure and the ambivalence (of feelings).

They could also show client's preparedness to consider the problem in the way indicated by Prochaska and DiClemente (1984) in the model of consideration studies. Low scores in ambivalence meant that the client was not interested in whether he consumed too much alcohol and that he did not care about being able to control its consumption. Thus, low scores appeared in two cases: when an individual "knew" that alcohol caused serious problems and when he "knew" that alcohol caused no problems (Farbring, 2014, p.181). When recording and assessing low scores for ambivalence, attention was to be paid to the score in the problem recognition measurement. As proved by our research data, at the end of the BCC programme, the score of the problem recognition grew, therefore, the non-growing ambivalence witnessed the *knowledge of the research respondents that alcohol tended to cause serious problems for them*. Graphically, the change in ambivalence is shown in Figure 7.

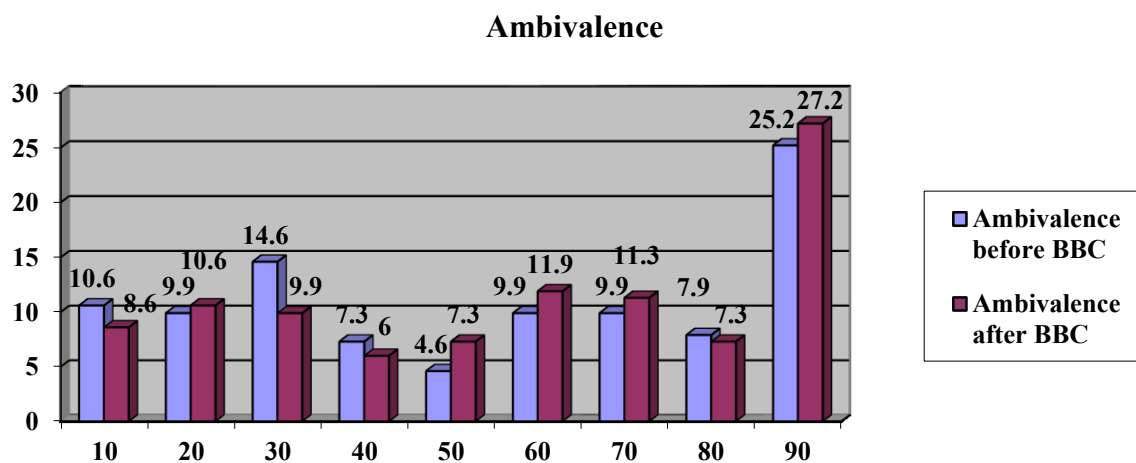


Fig.6 Change in the respondents' ambivalence N=151

The research tried to establish how the respondents' motivation changed *at the level of their actions/steps*. The comparison of the two means of action measurement is presented in Table 3.

Table 3 Comparison of actions before and after BCC

No.	Characteristic	Assessment mean	N	t	df	p
1.	Actions 1	4,93	151	-4,731	150	0,000
2.	Actions 2	5,93	151			

Upon the analysis of the data of Table 3 and the performance of two dependent (paired) samples t-test, it was established that the respondents' action assessment mean at the beginning of the BCC programme was 4,93, and during the final session, 5,93. Thus, the difference between the means was statistically meaningful ($t=-4,731$; $df-150$; $p=0,000$).

High scores in the action assessment proved that the client was already solving his problems and could already have felt the positive consequences of the change. The changes were taking place, and the client was likely to want help in order to reinforce the change and to avoid relapse. High scores in the field meant high probability of the success of the change (Farbring & Berge, 2004 p. 51; Farbring, 2014, p. 181).

One can argue that the respondents addicted to alcohol achieved positive changes due to the BCC programme and undertook actions in order to live a sober life (coding against alcohol, treatment in the addiction centre hospital, attending of AA groups, participation in the Minnesota programme, etc.).

Graphically, the change is shown in Figure 7.

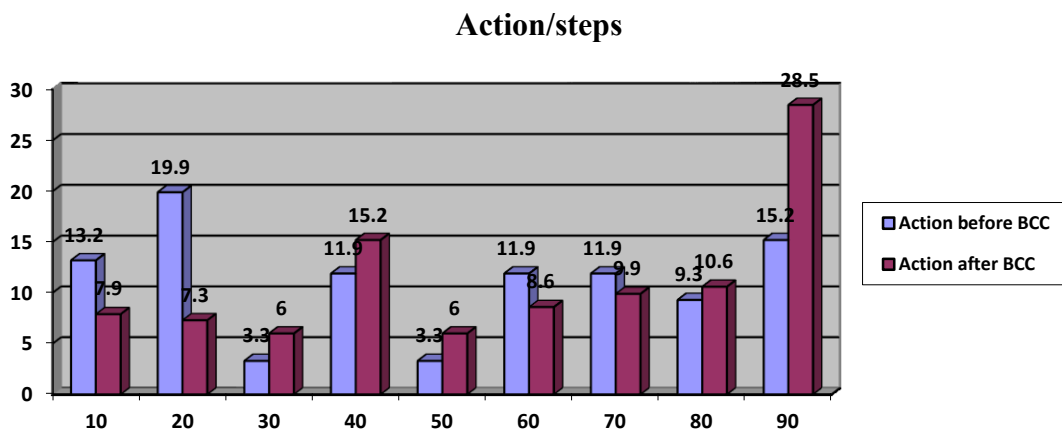


Fig.7 Change in the respondents' actions/ steps N=151

The research sought to establish the changes in the motivation of the offenders- alcohol addicts during the BCC programme and simultaneously to find out the impact made on them by the officers of the Probation Department who carried out the programme. At the beginning of the research, a hypothesis was made that the officers' education, the length of their work experience, and their attitude towards the programme could have an impact on the respondents.

As revealed by the research findings, the education of the Probation Department officers or the length of their work experience with convicts did not have a decisive /significant impact on the changes in the respondents' motivation, however, the factor of the recognition of the BCC programme efficiency by the officers was highlighted. The officers' view on the efficiency of the programme is presented in Figure 8.

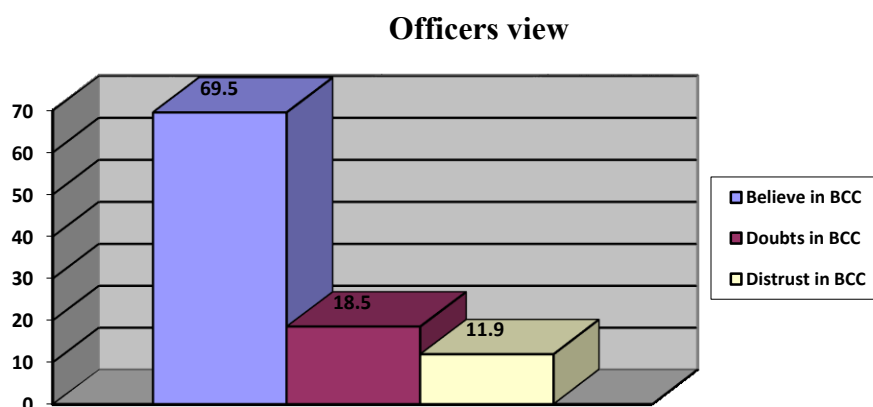


Fig.8 Officers in accordance with their view on BCC N=23

As proved by the research findings, the answers of the Probation Department officers could be divided into three groups: the majority of the officers (69,5 %) believed in the efficiency of the programme; slightly less than one fifth (18,5 %) had doubts about its efficiency; and more than one tenth (11,9 %) did not believe in the programme. One can argue that the vast majority of the probation officers believed in the efficiency of the BCC programme in changing the motivation of alcohol addicts to live a sober life. The officers who did not believe in the efficiency of the BCC programme might have been not totally familiar with its aims, content, and the opportunities of application or not have mastered efficient methods for the work with convicts.

Table 4 **Correlation between the indications of the respondents' problem recognition and the officers' view on the BCC programme efficiency**

	The Probation Department officers' view on the BCC programme efficiency
The respondents' problem (alcohol) recognition 2	0,206*

* The correlation is significant at 0,05

Upon the correlation analysis of the data, a *weak positive correlation* ($r = 0,206$) ($p < 0,05$) was established between the belief of the probation officers in the BCC programme efficiency and the programme participants' actions at the end

of the programme, i.e. the more probation officer believed in the efficiency of the BCC programme, the more the programme participants, i.e. the convicts, were inclined to take action to live soberly at its end. Thus, the belief of the officers in the BCC programme efficiency had a decisive impact on the positive changes in the motivation and behaviour of the convicts with addiction to alcohol. Our research confirmed the conclusions made by T. B. Moyers (2003) about there being no correlation between the counsellor's education, experience, and the efficiency of his assistance when encouraging clients to change.

C. A. Farbring (2014) presumed that the changes in the convict motivation depended not only on the ways the motivational interviews were applied, but also on the counsellors' body language, voice, and smile, on whether the client smiled or looked worried when telling some sad story, and on whether the desire to help the client was shown convincingly.

Through the BCC programme, alcohol addicts were motivated to live soberly. One can argue that further implementation of the programme can produce positive results in increasing the efficiency of the social-educational and psychological activities in the probation system.

Conclusions

In the probation system, the positive impact of the BCC (*Behaviour-Conversation-Change*) programme on alcohol addicts was highlighted on the stages of the problem recognition and the actions/steps taken by themselves.

The recognition of the dependence on alcohol-problem by the convicts serving non-custodial sentences grew in the final stage of the BCC programme. That was one of the essential indications witnessing the growth of the convicts' motivation to live a sober life.

The ambivalence (of the feelings) of the convicts-alcohol addicts serving non-custodial sentences did not increase at the end of the BCC programme, however, high scores in the field showed that the convicts were considering their problem and expected assistance in the reinforcement of changes.

At the end of the BCC programme, the convicts addicted to alcohol achieved positive changes in coping with alcohol addiction, as they took action with the aim of sober life (coding against alcohol, treatment in the addiction centre hospital, attendance of AA groups, participation in the Minnesota programme, etc.).

The greatest impact on the change in the motivation of offenders-alcohol addicts to live a sober life through the BCC (*Behaviour-Conversation-Change*) programme was made by the belief of the Probation Department Officers in the efficiency of the programme.

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SPORTS UN VESELĪBA
SPORTS AND HEALTH

THE EFFECT OF LOCAL VIBROSTIMULATION ON ELECTROMYOGRAPHY PARAMETERS IN ROWERS

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Abstract. Local vibrostimulation (further in text - LV) is innovation as a part of training method that helps athletes to regain the power and get ready for next training faster. There are many discussions about how to increase moving speed in rowers. Many scientists research the possibilities of increasing moving speed in this sport. The following methods were used in the study: tests – Concept-2, LV manipulations, electromyography and mathematical statistics. The electromyography was made with Biometric LTD. LV manipulations were done to the muscles erector spinae, latisimus dorsi, teres major, teres minor, trapezius, infraspinatus, deltoideus, slenius capitis, triceps brachii, gluteus maximus, semitendinosus, biceps femoris, semimembranosus, gastrocnemius, tendo calcaneus, rectus femoris, vastus lateralis, tensor fascia latae, vastus medialis, sartorius, ligamentum patellae, tibialis anterior, rectus abdominis, pectoralis major and biceps brachii. We using 100 Hz frequency, 2 – 4 mm amplitude and different pressure on the muscles. The total LV application time was 5 to 20 min. The obtained data were processed using mathematical statistics. The results: having stated the result difference before LV and after it. The results testify significant improvement of Concept-2 tests results and electromyography results, what is showed by the difference of the mean results. Comparing the results of the rowers of EG and CG they have differences in the left side muscle latisimus dorsi after the t-test where $p > 0.05$, but stating the percentage of the mean result difference of this muscle it was found out that $p > 0.05$ what also shows significant changes in the muscle biopotential (mV).

Keywords: electromyography, local vibrostimulation, rowers.

Introduction

In rowing, as in any sport, dominant physical abilities, necessary for the definite sport, are emphasized. In rowing the basic physical abilities are endurance and strength. It is much spoken about and researched how to increase the speed of moving in rowing. As one of the ways how to solve the problem the local vibration application before and after competitions, as well as during training sessions, is offered. Many scientists as (Kleshnev, 2010a; 2011., Hawkins, 2000., Hofmijster, 2010., Nolte, 2011., Nilsson, 1977), a.o. have researched the possibilities of increasing the speed of moving in rowing. Most part of researches is based on oxygen maximal consumption and other physiological changes during a load. Although there are various researches, stating the technical nuances of leg and arm work, comparatively little attention is paid to the role of the arm work. The cycle length in different distances and having different water flow – before the wind, against the wind and with the side wind is stated. Aim of the research – the development of local vibration training application methodology and its approbation, the study of its effect on the muscle electromyography parameters. Hypothesis of the research - as a result of long-term local vibration (during three months), but of short-term impact, more effective muscle biopotential (mV) dynamics. The attempts to combine vibration loads with traditional strength trainings with the purpose to achieve greater increase of the work capacity of the neuro - muscular system than only using classical strength trainings have already been carried out comparatively long ago. Recent research gives notion about the fact that vibration trainings both in acute or chronic form have explicitly positive effect on strength and power expressions in athlete whole preparation process. It is considered that it is possible to excellently observe muscle biopotential (mV) at different loads by the electromyograph, as well as to observe muscle fatigue after loads (Knipše, 2009; Kleshnev, 2010b). To state the training process and its usefulness for top rowers it is necessary to state muscle biopotential (mV) and frequency (Hz) during a stroke and relaxation what is essential precondition for renewal between the strokes (Nowicky, 2005, Schaar, 2010). The epidermal electrodes were used in the research which registered muscle biopotential (mV) and frequency (Hz).

Methodology

To state the effectiveness of the local vibration on rowers' muscles biopotentials the experimental group (further in text - EG) and the control group (further in text - CG) were form including the students of Murjani Sport Gymnasium (further in text - MSG) in the period of November 13, 2010 up to March, 2011. MSG students were chosen because they all train according to the

similar system, as well as their daily routine is similar, too. 15 MSG students were chosen in the experimental group and 12 MSG students in the control group, the age was 18 – 24, on average 19.6 ± 1.45 years (EG) and 19.3 ± 1.72 years (CG), having different experience in rowing. The height of the participants of EG was on average 190.7 ± 3.4 cm, but of CG 189.0 ± 2.7 cm, but the weight of the participants of EG was on average 88.0 ± 5.0 kg and of CG it was 88.3 ± 3.4 kg. Performing of the first test on the stationary ergometer Concept-2 and additionally stating of electromyography (EMG) (figure 1) what was held from 13.11.2010 up to 30.11.2010. And restarting second tests 08.03.2011 up to 11.03.2011 on the stationary ergometer Concept-2 and making of electromyography after LV. The methodology of local vibration trainings was developed for the following muscles: *erector spinae, latissimus dorsi, teres major, teres minor, trapezius, infraspinatus, deltoideus, splenius capitis, triceps brachii, gluteus maximus, semitendinosus, biceps femoris, semimembranosus, gastrocnemius, tendo calcaneus, rectus femoris, vastus lateralis, tensor fascia latae, vastus medialis, sartorius, ligamentum patellae, tibialis anterior, rectus abdominis, pectoralis major un biceps brachii.*

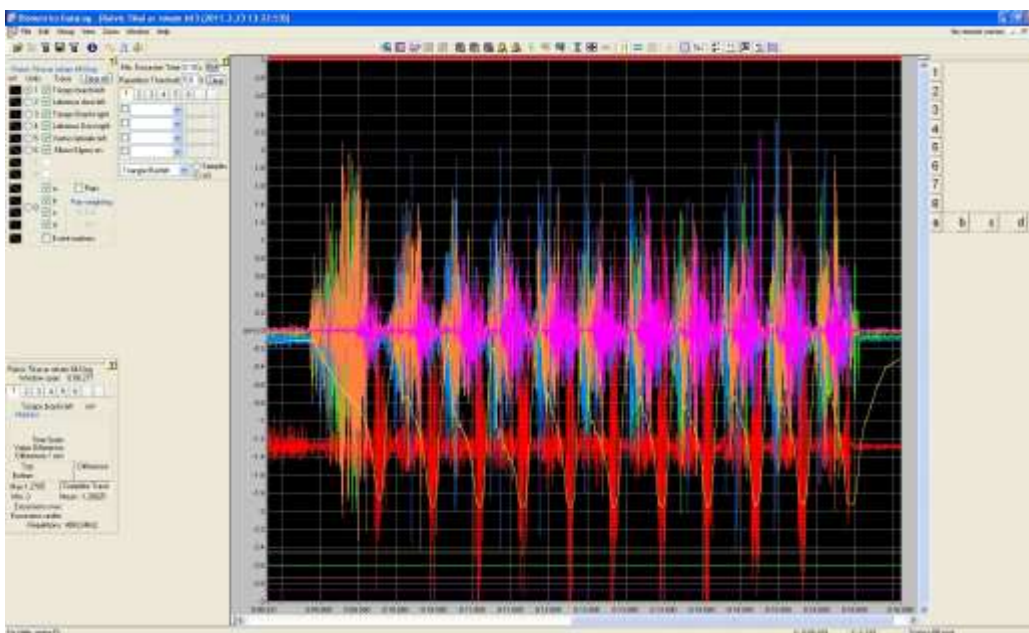


Figure 1 **Electromyography in anaerobic power test**

The trainings of local vibration to the whole body applied on the experimental group participants were held. The sessions of local vibration (Table 1) were held according to the methodology developed together with Prof. V. Krauksts.

Table 1 Scheme of local vibration for Murjani Gymnasium athletes

Week	Vibration frequency	Vibration amplitude	Vibration length in minutes	Vibration times a week
Week 1	100Hz	2mm	5min	2
Week 2	100Hz	2mm	5min	3
Week 3	100Hz	2mm	10min	2
Week 4	100Hz	2mm	10min	3
Week 5	100Hz	4mm	12min	2
Week 6	100Hz	4mm	12min	3
Week 7	100Hz	4mm	15min	2
Week 8	100Hz	4mm	15min	3
Week 9	100Hz	4mm	20min	2
Week 10	100Hz	4mm	20min	3
Week 11	100Hz	4mm	15min	3
Week 12	100Hz	4mm	15min	4

Results of research

Anaerobic power was stated in watts (W) according to the indicators of the digital monitor of Concept-2. But the changes of EMG (electromyography) activity or electric impulse amplitude changes were stated in millivolts (muscle biopotential (mV)). With the help of goniometre the movement beginning of the brace phase was fixed when stating the muscle *triceps brachi* and *latissimus dorsi* biopotentials (mV) before flexing the arm in the elbow and also during the flexion time. For both EG and CG t-test ($p = 0.802$) was stated, where the results of the group means were for EG – 610.8W and for CG – 621.8W, what proved that both groups are similar. Stating the reached maximal anaerobic power in the test, it was found that on average the rowers reached after 6.2s what is actually identical with the rowing results on water where maximal anaerobic power or the maximal moving speed of a boat is shown 5 – 7 s (Kleshnev, 2011).

Analysing EMG (electromyography) data with the *Independent Samples test* it was found out that only in one case the data of EG and CG are different (Table 2) where the impulse frequency (Hz) of the left side muscle *latissimus dorsi* was recorded lower than 0.05, respectively t-test $p = 0.007$. In other cases the results of both groups are similar, thus, also when analysing the data of the means, proving that the groups are similar. To state the result differences between EG and CG *t-test Independent Samples Test* was carried out which confirms the result differences between shown results on the stationary rowing ergometer Concept-2 where $p = 0.003$ (Table 3). Stating the difference of percentage relation it was found out that the differences were observed for the muscle *latissimus dorsi* of the left side of the body where before the beginning of the movement $p = 0.015$, but

during the execution of the movement $p = 0.000$, but researching other muscles the differences of percentage relation were not observed.

Table 2 T-test Independent Samples test p-values in the 1st anaerobic power test

Muscle	Frequency Hz before beginning of movement	Frequency Hz during movement execution	Biopotential mV before beginning of movement	Biopotential mV during movement execution
<i>Musculus triceps brachii</i> (LSB)	0.435	0.752	0.568	0.455
			0.436*	0.318*
<i>Musculus latissimus dorsi</i> (RSB)	0.203	0.007	0.554	0.645
			0.317*	0.303*
<i>Musculus triceps brachii</i> (LSB)	0.828	0.870	0.663	0.467
			0.534*	0.280*
<i>Musculus latissimus dorsi</i> (RSB)	0.121	0.101	0.682	0.718
			0.404*	0.358*

(*) – percentage average p – value
(LSB – left side of body, RSB – right side of body)

Table 3 T-test Independent Samples Test p- values in anaerobic power 1st and 2nd test

Muscle	Frequency Hz before beginning of movement	Frequency Hz during movement execution	Biopotential mV before beginning of movement	Biopotential mV during movement execution
<i>Musculus triceps brachii</i> (LSB)	0.008	0.142	0.042	0.178
			0.595*	0.229*
<i>Musculus latissimus dorsi</i> (RSB)	0.003	0.000	0.021	0.016
			0.015*	0.000*
<i>Musculus triceps brachii</i> (LSB)	0.002	0.154	0.151	0.159
			0.913*	0.891*
<i>Musculus latissimus dorsi</i> (RSB)	0.025	0.014	0.086	0.053
			0.284*	0.322*

(*) – percentage average p – value
(LSB – left side of body, RSB – right side of body)

Stating the percentage relation the average p – value, it was concluded that the muscles of the right side of the body *triceps brachii* un *latissimus dorsi* have differences what it shown by *triceps brachii* before the beginning of the movement execution where $p=0.019$ and during the execution of the movement $p= 0.003$ (Table 4), but *latissimus dorsi* before the beginning of the movement execution $p = 0.000$ and during the execution of the movement 0.028. However, changes were not stated for the muscles of the left side of the body. The results testify that significant changes were observed in CG anaerobic power test for both muscles of the right side.

Table 4 CG T-test Paired Samples Test and ANOVA Homogeneity of Variance Test p-values in anaerobic power 1st and 2nd test

Muscle	Frequency Hz before beginning of movement	Frequency Hz during movement execution	Biopotential mV before beginning of movement	Biopotential mV during movement execution
<i>Musculus triceps brachii</i> (LSB)	0.507	0.455	0.929	0.460
			0.627**	0.318**
<i>Musculus triceps brachii</i> (LSB)	0.614*	0.711*	0.940*	0.399*
<i>Musculus latissimus dorsii</i> (LSB)	0.095	0.042	0.098	0.228
			0.313**	0.811**
<i>Musculus latissimus dorsii</i> (LSB)	0.057*	0.133*	0.077*	0.386*
<i>Musculus triceps brachii</i> (RSB)	0.210	0.518	0.647	0.282
			0.019**	0.003**
<i>Musculus triceps brachii</i> (RSB)	0.362*	0.589*	0.761*	0.515*
<i>Musculus latissimus dorsi</i> (RSB)	0.070	0.068	0.078	0.026
			0.000**	0.028**
<i>Musculus latissimus dorsi</i> (RSB)	0.102*	0.215*	0.121*	0.182*

(*) – ANOVA test; (**) – percentage average p – value
(LSB – left side of body, RSB – right side of body)

Table 5 EG T-test Paired Samples Test p- values in anaerobic power 1st and 2nd test

Muscle	Frequency Hz before beginning of movement	Frequency Hz during movement execution	Biopotential mV before beginning of movement	Biopotential mV during movement execution
<i>Musculus triceps brachii</i> (LSB)	0.000	0.000	0.001	0.000
			0.000**	0.001**
<i>Musculus triceps brachii</i> (LSB)	0.006*	0.017*	0.009*	0.019*
<i>Musculus latissimus dorsii</i> (LSB)	0.095	0.067	0.448	0.123
			0.950**	0.003**
<i>Musculus latissimus dorsii</i> (LSB)	0.213*	0.099*	0.412*	0.115*
<i>Musculus triceps brachii</i> (RSB)	0.000	0.015	0.000	0.002
			0.000**	0.000**
<i>Musculus triceps brachii</i> (RSB)	0.000*	0.016*	0.000*	0.003*
<i>Musculus latissimus dorsi</i> (RSB)	0.442	0.139	0.069	0.294
			0.000**	0.097**
<i>Musculus latissimus dorsi</i> (RSB)	0.556*	0.173*	0.052*	0.179*

(*) – ANOVA test (**) – percentage average p – value
LSB – left side of body, RSB – right side of body

However, stating the differences of the percentage relations of biopotentials (mV), they were stated for the left side muscles of the body *latissimus dorsii*. Taking a look at the results obtained from the *t-test Paired Samples Test*, there are can be seen changes in EG between the first and second test for the muscle *triceps brachii* before the beginning of the movement in the impulse frequencies (Hz) field in both the left and right sides where p value is less than 0.05, but in other cases the results were similar and more than 0.05. But for percentage relations in the impulse amplitude (mV) field differences were found out for the right side muscles of the body *latissimus dorsii* before the beginning of the movement. Processing the data with ANOVA it was stated that in only one case the result difference was approved, specifically in *triceps brachii* innervations impulse frequencies (Hz) field before the beginning of the movement $p = 0.002$. But stating CG *t-test Paired Samples Test* it is stated that only for the muscle *latissimus dorsii* of the left side of the body during the execution of the movement the frequency (Hz) $p = 0.042$, but for the muscle *latissimus dorsii* of the right side of the body the impulse amplitude (mV) $p = 0.026$ (Table 4). But stating the percentage differences of the muscles of the right side of the body they are found out in all cases, but are not observed for the muscles of the left side of the body. However, differences were not stated in ANOVA test. Analyzing the obtained data of muscle biopotential amplitude (mV) and impulse frequency (Hz) it is concluded that differences were observed in EG muscle *triceps brachii* both in the left and right side of the body in *t-test Paired* and in the ANOVA test in all cases (Table 5). In the muscle *latissimus dorsii* differences were not observed, although there was a tendency to have differences in *t-test Paired* muscle innervations impulse frequency (Hz) field in the left side of the body both in the beginning of the movement and during the execution of the movement, as well as the ANOVA test showed a tendency in muscle innervations impulse frequency (Hz) field during the execution of the movement. But the results for the muscle *latissimus dorsii* of the right side of the body show only the possible differences of impulse amplitude (mV) before the beginning of the movement both in *t-test Paired* and ANOVA test where the result was close to different $p = 0.052$. Stating the EMG obtained data it was found out that in EG electric activity had improved (mV) in *m. triceps brachii*, but any essential changes were not observed in *m. latissimus dorsi*. In the research about electric activity different muscles have been studied (Kleshnev, 2010b; 2011).

Conclusions

1. In the anaerobic power test comparing the muscle innervations impulse biopotential (mV) and muscle innervations impulse frequency (Hz) the result

- differences of EG and CG rowers have been observed only in one case, but in other cases the result differences were not observed.
2. Stating the changes of the muscle innervations frequency (Hz) and the changes of the biopotential (mV) in the first and second test of EG it is concluded that the differences in the t-test are observed for both the left and right side muscles *triceps brachii* and *latissimus dorsi*. The ANOVA test testifies the result differences only in one muscle – *triceps brachi*.
 3. Stating the credibility of the CG rowers' result difference by the *t-test* it is concluded that there is difference for the muscle *latissimus dorsi* innervations frequency (Hz), but for the muscle biopotential (mV) in the right side.

Summary

Many scientists in their researches have used different vibration frequencies, amplitude and time of vibration to determine the immediate and short term effect. The result analysis of the carried out research shows that the hypothesis forwarded for this research has partially proved to be true as stating the MSG rowers' results in anaerobic power test it is concluded that for the EG rowers the ability of maximal anaerobic power have significantly improved, proved by the results of the *t-test* and ANOVA analysis. The results of the CG rowers have also improved, however, having processed the obtained data using the *t-test* and ANOVA analysis it was stated that the results are similar, but significantly different (lower) in comparison with the dynamics of the EG rowers' results. Thus the positive effect of the local vibration on athletes' anaerobic power ability is proved. LV is effective and applicable in the training process in the strength development stage in winter – preparation period.

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THE DEVELOPMENT OF SOCIAL BELONGING AND CHANGES IN LIFESTYLE FOR WOMEN IN FITNESS: CASE STUDY

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Abstract. *Fitness as a healthy lifestyle implementation helps to improve the social, mental and physical well-being components. Several scientists have indicated that there is a connection between social belonging and physical activity (PA) as the structural component of a healthy lifestyle (Walseth, 2006; Walseth & Fasting, 2004; Antonsich, 2010; Yuval-Davis, 2006; Anthias, 2006; Pinquart & Sorensen, 2001; Everard et al., 2000). That is why the goal of the research is to develop and apply a social belonging promotion programme for women in fitness programme and to determine the changes in the lifestyle structural component health promoting PA. 10 women involved in fitness classes in small groups (2-4 people) participated in the case study, where in addition to PA social belonging promotion events were organized for all women together. In order to evaluate the structural components of social belonging and PA level and type, questionnaires adapted in Latvia and a semi-structured interview was used. Applying the social belonging promotion programme for women in fitness creates statistically significant changes in such structural components as sense of commitment ($p < 0.01$), perception of interpersonal relations ($p < 0.01$). By additionally promoting social belonging in fitness, women perceive the group better, are willing to spend more time with it; that, in turn, positively affects the willingness to be physically and socially active on a daily basis.*

Keywords: *lifestyle changes, social belonging development, women in fitness.*

Introduction

The necessity of social belonging for a person to be physically and mentally healthy has already long been proven in science (Barden et al., 1985; Hagerty et al., 1992; Hale et al., 2005; Leary et al., 1995). The physical health, psychological state, beliefs, social relationships of the person and the most significant factors of the environment affect the quality of life in a complex way (Oort et al., 2005). People need communication and social relationships. They not only live in groups, but also spend most time of their everyday life interacting. Roy F. Baumeister and Mark R. Leary (Baumeister & Leary, 1995) have concluded that the need to

belong is the main motivation for people. There is a correlation between the need to belong and the cognitive abilities, emotions, behaviour, health and quality of life. Researchers explain that much of what we understand as human interpersonal relationships can be integrated in the notion of *belonging*, which is a factor that affects the quality of life (Baumeister & Leary, 1995).

The development of the fitness field as an innovative social practice has contributed to the social changes between people. Attitude towards the body is changing, the role of the functional beauty has become more important, where external attractiveness presents evidence on the internal health and the characteristic properties of the person, as well as promotes the growth of competitiveness in the groups of society. The body becomes not only a fundamental value, but also a condition for achievements, an agent that allows a person to integrate into the part of the society, which he/she prefers. Thanks to the body, the person gives a signal to others in the group that he/she is one of them.

Fitness as a healthy lifestyle implementation helps to improve the social, mental and physical well-being components (Mammen & Faulkner, 2013). Several scientists have indicated that there is a connection between social belonging and the amount of physical activity (Walseth, 2006; Walseth & Fasting, 2004; Antonsich, 2010; Yuval-Davis, 2006; Anthias, 2006; Pinguart & Sorensen, 2001; Everard et al., 2000).

That is why the goal of the research is to develop and apply a social belonging promotion programme for women in fitness programme and to determine the changes in the lifestyle structural component health promoting physical activities.

Theoretical Framework

The general understanding of social belonging means an individual's belonging to a socio-cultural group, allowing to find their place in the socio-cultural environment and to navigate in the surrounding world. Belonging is a person's suitability or compatibility with the environment, in which the person is located (*University of Toronto*, 2012). People need communication and social relationships. One of the most important goals of a person's life is to create as many interpersonal relationships as possible and to belong to several groups (Cosmides & Tooby, 2005). Researchers explain the need for social relationships differently, for example, as a search for love (Murray, 1938), the need for recognition and support (Rogers, 1951), the need for belonging (Baumeister & Leary, 1995; Goodenow, 1993a; Maslow, 1954) and motivation to belong (McClelland, 1987), as well as the need for a sense of commitment (Deci & Ryan, 1991; Ryan, 1993; Vallerand, 1997), which forms from positive interpersonal relationships that are important for the person (Baumeister & Leary, 1995).

An integrated definition has been used in this research: social belonging is a sense of commitment (Deci & Ryan, 1991), a person's perception of interpersonal relationships in the particular social group or environment, an understanding of whether others in this group include, respect and value the person (Baumeister & Leary, 1995).

Social belonging allows the person to make more use of public benefits, to be active in the particular group of the society, to feel themselves associated with the group, to positively perceive relationships with other members of the group, to feel that his/her abilities are valued and he/she is recognized in the particular social group, which will be able to form his/her personal identity and to improve his/her quality of life, thus, positively affecting the promotion of a healthy lifestyle.

Belonging can be strengthened, to support morally and materially, to promote a sense of security, to provide access to information and other resources. The way how a woman feels in the particular social group may affect the fact, whether she will want to spend more time in this environment, to be more socially and physically active to improve her lifestyle.

By voluntarily meeting in fitness classes, women belong to the society by being physically active together, improving their lifestyle. A healthy lifestyle is such behaviour and habits that have a positive impact on health and include the use of a healthy diet (Bailey et al., 2013; Bourdieu, 1980; *WHO Regional Committee for Europe at its forty-eighth session, Copenhagen, September, 1998*), health promoting physical activity (Hutson, 2012; Shilling, 1991; Bourdieu, 1980; *WHO Regional Committee for Europe at its forty-eighth session, Copenhagen, September, 1998*), other social activity in the society (Shilling, 1991), which is an additional indicator of a healthy lifestyle.

Physical activity in fitness as a healthy lifestyle implementation, decreasing the risk of health problems, provides several advantages for the quality of life of people in general (Hills et al., 2013; Haskell et al., 2007). The research explores in depth health promoting physical activity as a health promoting structural component of a healthy lifestyle and other social activities in the society, during which the social belonging to a group will be additionally promoted.

Methods

A case study was selected for the organization of the research, in which voluntarily participated 10 socially and physically active women in the age range of 21 to 35, who already had been engaged in individual physical activities for some time with a trainer before the research. In order to promote social belonging, further increase the physical activity level and use a personalized approach during the research, the respondents were engaged in classes in small groups (2–4

people). During the research the respondents had the opportunity to also attend other small groups involved in the research, if they were not able to attend the class in their usual time. Social belonging promotion events were also included in the experiment in the 6-month fitness programme for women. Mostly the respondents attended the organized physical activities at least 2 times a week. In addition to the physical activities, theoretical interactive lectures and offsite events were organised for all respondents together 2 times a month on Saturdays. Discussions and observations were carried out during the whole implementation of the fitness programme to determine the reaction of the respondents towards the activity and to solve problems in a timely manner.

A survey method – questionnaire – was used to determine social belonging. During the procedure, the respondents had to answer all questions of the questionnaires (see Table 1), from which selected and grouped were those that meet the social belonging components *sense of commitment*, *perception of interpersonal relationships* and *understanding of whether I am included, respected, valued in this group* and which, based on previous research, have determined connections to physical activity (Cuprika et al., 2015a).

Table 1 Questions in the Questionnaires Characterizing the Structural Components of Social Belonging

Structural Component	Statement/Question	Title of the Questionnaire
Sense of Commitment	For me, this group is one of the most important social groups, to which I belong	<i>The Group Environment Questionnaire</i> (Widmeyer et al., 1985; Carron et al., 1997), adapted in Latvian (Vazne, 2008)
	Do you feel as a part of society? Do you have a sense of belonging to a group, team, etc.?	<i>The Personal Gain Index</i> (Schalock et al., 2007), adapted in Latvian (Vahļina, 2012)
Perception of Interpersonal Relationships	Are you satisfied with the class group, in which you are involved?	<i>The Quality of Life Questionnaire</i> (Schalock & Keith 1993), adapted in Latvian (Vahļina, 2012)
	Do your family members help you feel like a full-fledged member of the family?	
	How satisfied are you with belonging to the class group?	<i>The Personal Wellbeing Index</i> (International Wellbeing Group, 2006), adapted in Latvian (Šķestere, 2012)
	How satisfied are you with the relationships in the family and among friends?	<i>The A Scale of the Comprehensive Quality of Life Questionnaire</i> (Cummins, 1997),

Structural Component	Statement/Question	Title of the Questionnaire
	How important it is for you to have a close relationship with family and friends?	adapted in Latvian (Vahļina, 2012)
	How important it is for you to do something outside the house together with other people?	
	The members of our group would gladly participate in joint events outside the classes as well	<i>The Group Environment Questionnaire</i> (Widmeyer et al., 1985; Carron et al., 1997), adapted in Latvian (Vazne, 2008)
Understanding of Whether I am Included, Respected, Valued in this Group	Do you have a feeling that the people in the class group know you?	<i>The Personal Gain Index</i> (Schalock et al., 2007), adapted in Latvian (Vahļina, 2012)
	How often do you leave the house together with friends or attend events?	
	Do you feel that you are an important part of the surrounding society?	<i>The General Health Questionnaire (GHQ-12)</i> (Goldberg & Hillier, 1979), adapted in Latvian (Cekule et al., 2006)
	Do you sometimes feel redundant in social situations?	<i>The Quality of Life Questionnaire</i> (Schalock & Keith 1993), adapted in Latvian (Vahļina, 2012)
	How often do you attend entertainment events in your social group?	
	Do you actively participate in events?	

The short version (7 questions) of the *IPAQ* questionnaire (Craig et al., 2003) in Latvian (Kaupuzs & Larins, 2010) was used for the assessment of the amount of physical activities. In addition, a semi-structured interview was used to determine the subjective lifestyle characteristics of the respondents and their attitude towards the group.

The *SPSS 17.0* data processing programme (the Kolmogorov–Smirnov test, the Wilcoxon signed-rank test) was used for the data analysis. The qualitative data analysis was carried out with the *QSR NVivo10* processing software.

Results

In order to implement the promotion of social belonging in the fitness programme, an event programme was developed, which was organized for all the respondents together in one group. The goal of the additional event programme was to deepen the understanding of a healthy lifestyle implementation (see Table 2), but an additional goal was the promotion of the social belonging structural components sense of commitment, positive perception of interpersonal

relationships and understanding of whether the woman is included, respected, valued in the group. The tasks of the programme were to promote friendly relations within the group and to increase the social interest, allowing the women to feel safe in the environment of the group to form a desire to belong, which, in turn, would improve women's physical activity. Sports, psychology, nutrition and beauty specialists were invited to the additional events, their attendance was voluntary.

Table 2 Social Belonging Promotion Events in the Fitness Programme

Educational Lecture Plan	Methods	Number of Hours	Planned Results
I. A healthy diet and its use in everyday life	A lecture, a discussion, negotiations, brainstorming	6 hours	A deeper understanding of nutritional balance and diversity as a component of healthy lifestyle implementation
II. A woman's health and the impact of physical activity on a woman	A lecture, negotiations, a discussion	2 hours	An in-depth understanding of the impact of a lifestyle on a woman's reproductive health, hormonal state and the implementation of a healthy lifestyle
III. Joy hormones and physical activity	A lecture, negotiations, a discussion	2 hours	A deeper understanding of the impact of physical activity on the regulation of women's emotional state, balancing, of physical load adaptation to improve the emotional state
IV. Fitness and women	A lecture, negotiations, a discussion	2 hours	A deeper understanding of the connection between different types of physical activity and physical fitness components
V. Active lifestyle opportunities in your everyday life	A lecture, negotiations, a discussion	2 hours	An in-depth practical knowledge of back pain relief, when working at a computer for a long time, of physical activity types and the necessary daily amount, of opportunities to spend working days actively, of family involvement in physical activity
Joint Events			Methods
I. A master class on creating one's image, daily facial and hair care			A master class, negotiations, a discussion
II. One's self-image analysis, improvement and self-love			A lecture, a discussion, negotiations, brainstorming
III. A master class with a psychologist – emotions, their control or acceptance			A master class, negotiations, a discussion

IV. Beauty care day – holistic body care, self-love	A discussion, negotiations
V. A master class with a personal growth specialist – goal setting and achievement	A discussion, negotiations
VI. An event „Body Ritual” – <i>pirts</i> procedures for harmony and relaxation	A leisure event in the group
A camp „3 Days Together by the Sea”	A leisure event in the group

By developing and applying the social belonging promotion events in the fitness programme and analysing the changes of the structural component *sense of commitment* (see Table 3), it can be concluded that statistically significant changes are found in only one statement: *for me, this group is one of the most important social groups, to which I belong* ($p < 0.01$).

Table 3 Analysis of the Social Belonging Component *Sense of Commitment* before and after the Social Belonging Promotion Events in the Fitness Programme

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
before	2	3	5	9	5	1	7	4	1	7
after	6	9	7	9	8	3	9	8	6	8
p < 0.01	The changes are statistically significant									
	1	2	3	4	5	6	7	8	9	
	strongly disagree								absolutely agree	
	For me, this group is one of the most important social groups, to which I belong									

This means that currently the class group is more important to the respondents than it has been before, and they fill a connection with the group. However, by analysing the questions of the social belonging structural component *perception of interpersonal relationships* (see Table 4), it is concluded that statistically significant changes are in the question: *how satisfied are you with the relationships in the family and among friends?* ($p < 0.01$).

Table 4 Analysis of the Social Belonging Component *Perception of Interpersonal Relationships* before and after the Social Belonging Promotion Events in the Fitness Programme

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
before	3	3	2	2	2	3	2	3	2	3
after	2	2	1	1	1	1	1	1	1	1
p < 0.01	The changes are statistically significant									
	(1)very satisfied – (2)satisfied – (3)partially satisfied – (4)not too satisfied – (5)unsatisfied									
	How satisfied are you with the relationships in the family and among friends?									
before	3	3	2	3	2	3	2	3	3	3
after	2	1	1	1	1	1	2	1	1	1

better, are willing to spend more time with it, which confirms the data obtained in the interview on friendly relationships and pleasant communication between the group members, as well as that the group is a healthy lifestyle promoting condition that affects the desire of the respondents to be physically and socially more active.

By analysing the questions of the social belonging structural component *understanding of whether I am included, respected, valued in this group*, for which a connection to physical activity has been found, it can be concluded that there are no statistically significant changes ($p > 0.05$); however, there are several improvements, for instance, the respondents emphasize that now they attend events more often, actively participate in them, leave the house more often and less often feel redundant on social situations.

By analysing the number of physical activities in the last 7 days before and after the experiment, it can be concluded that all indicators have increased (see Table 5).

Table 5 Number of Physical Activities in the Last 7 Days – the Average Indicator in the Group Before and After the Experiment (based on the IPAQ questionnaire)

Physical Activity Type	The Average Indicator in the Group Before the Experiment	The Average Indicator in the Group After the Experiment
spends time sitting per day min	462 ± 109	360 ± 109*
number of high intensity PA days	2 ± 1.3	2.6 ± 0.8
total minutes of high intensity PA	57 ± 33	88.5 ± 32*
number of moderate intensity PA days	2 ± 1.5	3.3 ± 1.2 *
total minutes of moderate intensity PA	54 ± 39	120 ± 37**
walks – number of days	3.5 ± 2.5	4.9 ± 1.8*
walks – total minutes	18.5 ± 18.5	83 ± 44 **
PA level	1966.2 ± 1025	4862.8 ± 1427 **
<i>Wilcoxon Signed Ranks Test Asymp. Sig. (2-tailed) 0,01**; 0,05*</i>		

For a more detailed assessment of the lifestyle structural component physical activity of the respondents and its changes in the last 6 months and to additionally determine the changes of social belonging, the semi-structured interview was repeated (see Table 6).

Table 6 Evaluation of Lifestyle Changes and Social Belonging Based on a Semi-Structured Interview

Women	Lifestyle Changes (before/after)	Social Belonging
A1	organized PA/ organized PA	likes the group, but sometimes hindered the concentration
A2	organized PA/ organized PA + is walking more + sometimes exercises with her husband	likes the communication with the group, that it is possible to make friends during physical activities and it is a reason to leave the house and spend time together
A3	organized PA/ organized PA + is walking more + leisure time PA	likes the communication with the group, that it is possible to make friends during physical activities and it is a reason to leave the house and spend time together
A4	organized PA/ organized PA + is walking more + also exercises at home	the relationship is very friendly, the members of the group are united and support each other.
A5	organized PA/ organized PA + is walking more + leisure time PA	the relationship is very friendly, the members of the group are united and support each other.
A6	organized PA/ organized PA + is walking more	likes the communication in the group, but sometimes are bothered by other members and they have not fit into the group.
A7	organized PA/ organized PA + is walking more + leisure time PA	the relationship is very friendly, the members of the group are united and support each other.
A8	organized PA/ regular organized PA + independent PA	the particular group has become very important to her, close contacts have developed.
A9	organized PA/ organized PA + is walking more + leisure time PA	likes the communication in the group, but sometimes are bothered by other members and they have not fit into the group.
A10	organized PA/ organized PA + is walking more	likes the communication with the group, that it is possible to make friends during physical activities and it is a reason to leave the house and spend time together

By expressing their opinion on the time spent in the group and analysing the subjective opinion on belonging, it can be concluded that 7 women assess the process positively and admit that the group has become important and that the communication has been positive. However, 3 respondents did not fit into the group. By analysing the changes in the lifestyles of the respondents, it can be concluded that all have regular organized physical activities, the respondents are now more trying to move around by walking and for 7 respondents unorganized physical activities have appeared. On average the physical activity level of the

group has increased from health promoting to training, which are statistically significant changes.

Discussion

By communicating and creating positive social contacts in fitness, a woman feels belonging to the particular group and spends more time, engaging in physical activities (Yuval-Davis, 2006; Anthias, 2006), which contributes to the improvement of psychological processes, reduces stress, improves the mood (McAuley & Rudolph, 1995). Several researchers have pointed out that there is a connection between social belonging and physical activity (Walseth, 2006; Walseth & Fasting, 2004; Antonsich, 2010; Yuval-Davis, 2006; Pinquart & Sorensen, 2001; Everard et al., 2000). These data confirm the results obtained in the research as well: if a woman feels a greater commitment to the group, she will engage in more physical activities and is socially more active, which improves her lifestyle.

Some researchers also note that, by forming friendly relationships with other women in fitness classes, it is possible to receive emotional support, which has a positive impact on the women's health (Everard et al., 2000); it is also confirmed by the results obtained in the research on social belonging promoting environment during physical activities and organizing additional social belonging promoting activities in the group. Fitness classes in small groups positively affect the socialization of women of all ages (Pinquart & Sorensen, 2001). The research results also indicate that, if a person has a greater satisfaction with the social contacts ($p < 0.05$) and he/she feels a greater sense of commitment to the group ($p < 0.05$), feels included, supported and valued ($p < 0.05$), his/her lifestyle improves in everyday life.

By analysing the limitations of the research, it can be concluded that the number of participants is very low, which limits the ability to compare the obtained data with the results of other research. The research has been carried out, involving participants of individual classes of a one fitness club. The research results cannot be considered as representative of the state in general.

Conclusions

By developing and applying the social belonging promotion events in the fitness programme for women in fitness, it can be concluded that there are determined several statistically significant improvements in social belonging, it is also confirmed by the data obtained during the semi-structured interviews. The respondents feel more connection with other members of the class group, they would like to spend time with them outside the physical activities and other

research events as well. Having close relationship with family and friends has become more important to the respondents, they have become more satisfied with the relationships in their family and with their friends, now they leave the house more, actively participate in different events and feel less redundant in social situations, which indicates that the respondents have become more socially active and it has a positive effect on their willingness to further improve their lifestyle and to achieve even better results.

By determining the changes in the lifestyle structural component health promoting physical activity and analysing the dynamics of the amount of individual physical activities of each respondent, it can be concluded that all have improved their physical activity level and now it is above the highest one. A very positive factor is that all respondents are now walking more often and longer and spend less time sitting. Mostly all respondents after the experiment also have independent physical activities on a daily basis.

The creation of social belonging promoting environment in fitness allows to better perceive the group, women want to spend more time with it; this, in turn, positively affects the desire to be physically and socially active on a daily basis. It is important for women to be both physically and socially active to be able to keep up with a healthy lifestyle together with someone who also does it, because the surrounding environment, the people who do not support and live differently, can be a serious obstacle in the achievement of the goal.

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MEDICĪNAS KOLEDŽĀ STUDĒJOŠO VESELĪBAS IZMAIŅAS STUDIJU LAIKĀ

Medical College Students Health Changes During The Study Period

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Abstract. *The goal of this research is to analyze the change of students' physical health during the one year of studies in context of lifestyle. The research participants were 103 Medical College's students aged 19 to 56 years. All tests, measurements and questionnaires were done at falls of 2015 and 2016. Students' physical health was evaluated in accordance with Apanasenko's methods based on investigative anthropometric and functional testing measurements. These measurements included body mass index, lungs vital capacity, strength index, Robinson index and Recovery Heart Rate. Students' lifestyle habits were determined with the help of questionnaire that included question groups regarding the self-evaluation of health status, health problems and illnesses, eating habits, and physical activities. During the research, lipid parameters in blood were also measured determining the total cholesterol (TC), high-density lipoprotein (HDL) and low-density lipoprotein (LDL).*

Keywords: *body mass index, BMI, lifestyle, lipid parameters, medical college students, physical health, eating habits.*

Ievads

Introduction

Studijas koledžā ir saistītas ar intensīvu intelektuālo darbību un pielāgošanos jaunām prasībām sociālajā, akadēmiskajā un finanšu jomā. Daudzi studenti paralēli studijām strādā arī algotu darbu. Tas nozīmē, ka studentiem ir jābūt augstam pašorganizētības līmenim un labai veselībai. Studijas rada dzīvesveida izmaiņas. Studentiem tas ir kritisks periods viņu dzīvesveida pilnveidošanai, kas nākotnē var būtiski ietekmēt viņu veselību.

Veselība ir viena no cilvēka pamatvērtībām. Tā ir cilvēka pašsajūtas stāvoklis. Vesels cilvēks ir tāds, kuram ir laba fiziskā pašsajūta, teicams mentāls un garīgais līdzsvars (Ribinska, 2008). Veselības saglabāšanā un uzlabošanā

būtiska loma ir veselīgam dzīvesveidam. Pēc Pasaules veselības organizācijas skatījuma cilvēka veselību vairāk nekā iedzimtība (20 %), veselības aprūpe (10 %) un vide (20 %), nosaka viņa dzīvesveids (50 %) (Robbins, Powers, & Burges, 2011). Cilvēks pats ir atbildīgs par savu veselību, pieņemot veselībai labvēlīgus lēmumus. Veselības vērtība saistīta ar to, cik lielā mērā cilvēks vēlas un ir gatavs saglabāt labu veselību (Ribinska, 2008).

Dzīvesveids saistīts ar indivīda personību, tās radītajām emocijām, motīviem, vajadzībām un vērtībām, ar cilvēka kultūru un sociālo statusu, ar uzziņu grupām, saimniecību un individualitātes attīstīšanos, ko ietekmē indivīda ikdienā pieņemtie lēmumi. Dzīvesveids ir ilgstošs un savā attīstībā mainīgs process (Danilāne & Ļubkina, 2009). Tātad savu dzīvesveidu cilvēks pats izvēlas un pats var mainīt jebkurā savas dzīves posmā. Dzīvesveida paradumi var būt gan veselīgi, gan neveselīgi. Veselīgi paradumi nodrošina teicamu fizisko un psihisko formu.

Latvijas Nacionālajā attīstības plānā (2014.–2020. gadam) iekļauts rīcības virziens „Vesels un darbaspējīgs cilvēks.” Tajā ir akcentēts, ka neveselīgi ieradumi, tādi kā smēķēšana, riskanta alkohola lietošana, fizisko aktivitāšu trūkums un nepilnvērtīgs uzturs, rada būtiskas veselības aprūpes un sociālās izmaksas, tādēļ viena no prioritātēm ir veselīga un aktīva dzīvesveida paradumu nostiprināšana sabiedrībā kopumā (Latvijas Nacionālais attīstības... , 2012.). Mūsdienās saistībā ar neveselīgu dzīvesveida paradumu izvēli palielinās saslimstība ar neinfekciozām saslimšanām, kuru vidū vadošo vietu pasaulē un arī Latvijā ieņem kardiovaskulārās slimības. Tiek prognozēts, ka attīstītajās valstīs 2020. gadā no sirds asinsvadu slimībām nomirs katrs septītais iedzīvotājs (Boutayeb, 2006).

Medicīnas koledžas studentu apgūstāmās profesijas ir saistītas ar pacientu veselības aprūpi un izglītošanu, tajā nozīmīga loma ir pašu studentu izpratnei par veselīgu dzīvesveidu. Ārstniecības personām ir liela loma veselībai kaitīgo dzīves ieradumu mazināšanā sabiedrībā. Svarīgi ir sadarboties ar studentiem, lai viņi būtu informēti par savu veselību un slimību riska faktoriem. Studiju laikā būtu jāmazinās studentu neveselīgajiem paradumiem, ko sekmētu gan studijās iegūtās zināšanas, gan pati vide koledžā un prakšu vietās, kā arī docētāju attieksme pret tiem. Atbalstot veselīgu dzīvesveidu, koledža sekmētu arī akadēmisko sasniegumu uzlabošanu (DeBerard et al., 2004).

Šī longitūdinālā pētījuma mērķis ir noskaidrot studentu veselības un veselību ietekmējošo paradumu izmaiņas viena mācību gada laikā. Iegūtie rezultāti ļaus izstrādāt ieteikumus koledžas administrācijai, docētājiem un pašiem studentiem veselības paradumu pilnveidošanai.

Metodes

Methods

Studentu veselības stāvoklis un izmaiņas studiju laikā tika noteiktas pirmkārt, izvērtējot studentu aptaujas, otrkārt, nosakot fizisko veselību pēc G. Apanasenko metodes (Клочко, 2012), treškārt, nosakot ķermeņa kompozīciju ar bioimpedances metodi, ceturtkārt, nosakot lipīdu parametrus asinīs. Aptauja un mērījumi tika veikti medicīnas koledžas pirmā kursa studentiem 2015.gada rudens semestrī un atkārtoti tiem pašiem studentiem 2016.gada rudens semestrī.

Studentu dzīvesveida paradumi tika noteikti ar autoru izstrādātās anketas palīdzību, kurā bija jautājumu grupas par veselības pašvērtējumu, veselības problēmām un slimībām, ēšanas paradumiem, kaitīgiem ieradumiem, atpūtu, miegu un fiziskām aktivitātēm. Studentu fiziskās aktivitātes tika novērtētas ar Starptautisko fizisko aktivitāšu aptaujas (*International Physical Activity Questionnaire*) īso formu (Craig, 2003), kuru autori tulkoja un pārbaudīja nelielā pilotpētījumā. Tulkojums nenozīmīgi atšķiras no A. Kaupuža un V. Lāriņa adaptētā varianta (Kaupužs & Lāriņš, 2009). Aptaujā tika vaicāts, cik dienas nedēļā un cik minūtes dienā studenti veic ar smagu fizisku piepūli saistītas augstas intensitātes aktivitātes, vidējas intensitātes aktivitātes, staigā un sēž. No aptaujas var iegūt fiziskās aktivitātes novērtējumu punktus un novērtējumu trīs līmeņos. Uztura veselīguma vērtējumam tika izveidota skala, balstoties uz 2008. gada Latvijas Veselības ministrijas uztura ieteikumiem pieaugušajiem (2008). Skalā no 0 līdz 10 ballēm tika iekļauti 10 parametri, kas atspoguļo uztura veselīgumu, to skaitā, augļu un dārzeņu patēriņu ikdienā, šķidrumu patēriņu ikdienā, graudaugu patēriņu ikdienā, piena un piena produktu patēriņu ikdienā, liesas gaļas un zivju daudzumu nedēļā, zivju lietošanas biežumu, produktu ar augstu piesātināto tauku saturu lietošanas biežumu, produktu ar augstu cukura saturu lietošanas biežumu, uztura daudzveidību, kā arī sāls lietošanu uzturā.

Apanasenko metode ir ekspresmetode, kura balstās uz organisma fiziskās attīstības un izturības novērtēšanu, kuru lieto, lai novērtētu lielas cilvēku grupas (Kapyševa, Makashev, & Bakhtiyarova, 2013). Metode dod fiziskās veselības novērtējuma piecus līmeņus: zems, zem vidējā, vidējs, virs vidējā, augsts. Apanasenko metodē tiek novērtēti pieci salīdzinoši vienkārši indikatori, kuri ranžēti, katram rangam piešķirot noteiktu ballu skaitu. Četri indikatori tiek iegūti miera stāvoklī, bet piektais pēc fiziskas slodzes. Indikatori sievietēm un vīriešiem tiek rēķināti pēc atšķirīgiem algoritmiem. Summējot iegūtās balle, tiek iegūts veselības novērtējums. Šie pieci indikatori ir: (1) ķermeņa masas indekss (KMI) un tā novērtējums; (2) dzīvības indekss – plaušu vitālais tilpums, kurš raksturo elpošanas sistēmas funkcionālās spējas nodrošināt organismu ar skābekli; un kuru noteica ar spirogrāfu, (3) spēka indekss (SI), ko nosaka ar plaukstas dinamometru vadošajai rokai; plaukstas dinamometrija tiek plaši izmantota veselības stāvokļa

noteikšanā (Bohannon, 2008), jo pastāv korelācija starp sirds muskuļa spēku un plaukstas muskuļu spēku; (4) Robinsona indekss (RI), kurš norāda uz miokarda funkciju; tas ir integrālais sirds asinsvadu sistēmas stāvokļa un organisma trenētības rādītājs, (5) sirdsdarbības biežuma atjaunošanās laiks; šis indikators raksturo kardiorespiratorās sistēmas darba spējas, organisma trenētību, kas ietekmē kopējo izturību un aerobo kapacitāti.

Svarīgi cilvēka fiziskās veselības rādītāji ir viņa ķermeņa sastāva proporcijas – ķermeņa beztauku masa (kauli, muskuļi, ūdens) un ķermeņa tauku masa (Kyle et al., 2004). Studentiem ķermeņa kompozīciju noteica ar bioimpedances metodi pielietojot *Tanitas* firmas analizatoru SC-330. Mērījumos tika ņemts vērā katra respondenta dzimums, vecums, auguma uzbūves tips un garums. Tika noteikti un izvērtēti sekojoši parametri: svars, ķermeņa masas indekss, ķermeņa tauku masas procentuālā attiecība pret ķermeni (%), tauku masa (kg), viscerālie tauki, no taukiem brīvā masa (kg), muskuļu masa (kg), kopējais ķermeņa ūdens daudzums (kg), ūdens procentuālā attiecība pret ķermeņa masu (%), kaulu masa (kg), bazālais metabolisms (kcal), metabolais vecums (TANITA Corporation, 2008).

ĶMI novērtēšanā pielietoja *Tanitas* piedāvāto ĶMI vērtējuma algoritmu, kas atbilda Pasaules veselības organizācija (World Health Organisation, 2000) algoritmam un kuru plaši pielieto arī Latvijā (Rubana, 2010). Šajā algoritmā sieviešu un vīriešu vērtējums neatšķiras: nepietiekama ķermeņa masa, ja ĶMI ir mazāks par 18,5; normāla ķermeņa masa ja ĶMI ir no 18,5 līdz 24,9; lieka ķermeņa masa, ja ĶMI ir no 25 līdz 29,9; aptaukošanās ja ĶMI virs 30 (TANITA Corporation, 2008). Palielināts svars un aptaukošanās ir uzskatāmi par etioloģiskiem faktoriem dažādām hroniskām slimībām, kas izraisa 60 % nāves gadījumu pasaules mērogā (Gielen, 2015). TANITA analizatora SC-330 instrukcijā tika uzrādītas sekojošas nosakāmo parametru novērtējuma normas: ķermeņa tauku masas procentuālā attiecība pret ķermeni 8,0-19,9 %, tauku masa 4,4-12,5 %, ķermeņa viscerālie tauki no 1 līdz 13, kaulu masa atkarībā no svara sievietēm 1,97 – 2,95 kg, vīriešiem 2,66 – 3,69 kg, kopējais ūdens daudzums sievietēm 45-60 %, vīriešiem 50-65 % (TANITA Corporation, 2008).

Bioķīmiskās analīzēm no katra studenta pēc 12 stundu neēšanas (tukšā dūšā) sēdus stāvoklī tika paņemtas kapilārās asinis. Ar „SD Lipido Care” analizatoru tika noteikti šādi rādītāji – glikoze (GLU) mmol/l; kopējais holesterīns (KH) mmol/l; augsta blīvuma holesterīns (ABL) mmol/l; zema blīvuma holesterīns (ZBL) mmol/l; triglicerīdi (TG) mmol/l. Izejot no noteiktiem referentiem lielumiem par paaugstinātu KH tika uzskatīts līmenis ≥ 5 mmol/l, par paaugstinātu TG līmeni tika uzskatīts līmenis $\geq 1,7$ mol/l, par paaugstinātu ZBL līmeni $\geq 2,5$ mmol/L. Par pazeminātu ABL tika uzskatīts līmenis ≤ 1 mmol/l. Glikozes referentie lielumi ir 3,3-5,9 mmol/l. Augsts kopējā holesterīna,

triglicerīdu un zema blīvuma lipoproteīdu līmenis asinīs ir nopietni riska faktori kardiovaskulārajām slimībām. Augsta blīvuma lipoproteīdi kavē aterosģenģzi un norāda uz samazinātu kardiovaskulāru risku (Gielen, 2015).

2015. gada pirmajā semestrģ tika aptaujāti pirmā kursa studenti, bet 2016. gada pirmajā semestrģ – tie paši studenti, kuri mācģjās jau otrajā kursā. Abos pģtģjuma ciklos piedalģjās 103 studenti vecumā no 19 līdz 56 gadiem, no kuriem 95 bija sievietes. Vidģjais studentu vecums 2016. gadā bija 28,8 gadi ar standartnovirzi 10,8. 75 % studentu bija vecumā līdz 35 gadiem.

Rezultāti un diskusģja *Results and discussion*

Studentu veselģbas pašnovģrtģjums pģc aptaujas rezultātiem parādģts 1. tab. Kā labu vai diezgan labu savu veselģbu 2015.g. novģrtģja 57 % studentu, 2016.g. – 63 %. Nedaudz augstāks studentu veselģbas pašvģrtģjums – laba veselģba vai diezgan laba (81,9 %) minģts H. Vecenānes pģtģjumā (Vecenāne, 2016). Pozitģvākas veselģbas vģrtģjuma izmaiņas bija studentiem vecumā no 26 gadiem. Kopumā šie veselģbas pašvģrtģjumi ir augstāki nekā vidģji Latvģjas iedzģvotāģjiem. 2014. gadā tikai 49 % iedzģvotāģju savu veselģbu vģrtģja kā labu un ļoti labu (Iedzģvotāģju veselģbas apsekojuma..., 2016).

1.tab. **Studentu veselģbas pašvģrtģjums (procentos)**
Table 1 Students' self-assessment of health (percentage)

Veselģbas pašvģrtģjums	Visi respondenti		Respondenti līdz 25 gadiem		Respondenti no 26 gadiem	
	2015.g.	2016.g.	2015.g.	2016.g.	2015.g.	2016.g.
Labu	27	29	26	26	29	33
Diezgan laba	30	34	35	39	24	29
Vidģja	38	31	35	30	43	33
Diezgan slikti	4	5	4	6	5	5
Slikti	0	0	0	0	0	0

Kā visbiežāko veselģbas problģmu pģdģjā gada laikā studenti min lokalģzģtas sāpes (2015.g – 67 %, 2016.g. – 71 %). Visbiežāk studentiem sāpģja galva un spranda. Tāpat bieži studenti kā problģmu minģja garģgā stāvokļa pasliktģnāšanos, ko raksturoja slikts garastāvoklis un nervozģtāte (2015.g. – 54 %, 2016.g. – 55 %), kā arī nomāktģba (2015.g. – 33 %, 2016% – 43 %). No aptaujā minģtajām devģņām veselģbas problģmām vidģji studentiem katrā gadā bija trģs. Daļa studentu (2015.g. – 8 %, 2016.g. – 12 %) neminģja nevienu veselģbas problģmu. Studenti pģdģjā gada laikā visbiežāk slimoja ar elpošanas ceļu saslimģšanām (2015.g. – 33 %, 2016.g. – 23 %) un sirds asinsvadu saslimģšanām (abos gados 21 %). Pieauga

saslimušo studentu skaits ar centrālās nervu sistēmas slimībām – no 7 % līdz 11 %, no kurām studenti visbiežāk minēja angioveģetatīvo distoniju. Latvijas statistikas apkopojumā minēts, ka biežākās iedzīvotāju slimības ir paaugstināts asinsspiediens (37,6 %), muguras sāpes (77,5 %), galvas sāpes (21,8 %) (Iedzīvotāju veselības apsekojuma..., 2016).

Pētījuma gaitā tika noteikta ķermeņa kompozīcija ar *Tanitas* firmas analizatoru SC-330. 2. tab. Kopumā ĶMI izmaiņas varam vērtēt kā pozitīvas – samazinājies studentu skaits ar nepietiekamu un palielinātu masu, palielinājies studentu skaits ar normālu masu. Tomēr jāatzīmē, ka ir neliels studentu ar aptaukošanos skaita pieaugums. Tikai divi studenti samazināja savu masu no kategorijas *aptaukošanās* uz kategoriju *palielināta*, bet pieciem studentiem masa mainījās no *palielinātas* uz *aptaukošanos*. Lietuvas medicīnas studentiem tikai 14,5 % bija palielināta ķermeņa masa (Škēmienē, Ustinavičienē, Piešinē, & Radišauskas, 2007). Paši studenti savu svaru vērtē kritiski attiecībā uz palielinātu ķermeņa svaru, bet nenovērtē, ka svars ir samazināts. 2016.g. vairāk studentu nekā 2015.g. seko sava svara izmaiņām – attiecīgi 62 % un 47 %.

2.tab. Studentu ķermeņa masas indekss un studentu svara pašvērtējums (procentos)
Table 2 Student body mass index and students' self-esteem of weight (percentage)

Studentu masas / svara vērtējums	ĶMI		Pašvērtējums	
	2015.g.	2016.g.	2015.g.	2016.g.
Samazināts	8	5	2	4
Norma	61	65	49	49
Palielināts	24	20	35	33
Aptaukošanās	7	10	14	14

Mazākas vai lielākas muskuļu masas izmaiņas bija gandrīz visiem studentiem – 46 % tā palielinājās, bet 52 % samazinājās. Vidēji pētījumu grupai muskuļu masa nemainījās. Tomēr būtiski muskuļu masa samazinājās 24 %, palielinājās – 19 %. Normāla ķermeņu tauku attiecība pret kopēju masu 2015. gadā bija 55 % studentu, 2016.g. – 53 %. 2016.g. pieauga to studentu skaits, kuriem ķermeņa tauku daudzums bija samazināts. Viscerālie tauki 99.4 % studentu bija normas robežās. Kaulu masa lielai daļai studentu bija nepietiekama, tikai 51 % 2015.g. un 53 % 2016.g. tā bija normāla.

Studentiem tika noteikti un novērtēti asins lipīdu parametri, jo tie ir būtiski, izvērtējot sirds asinsvadu slimību risku. Lielā mērā tie atspoguļo studentu veselības paradumus – uzturu un fiziskās aktivitātes. 3. tab. parādīts studentu skaits procentos, kuru lipīdu parametri neatbilst normām. Redzams, ka kopumā gada laikā šie studentu veselības rādītāji ir uzlabojušies. Vislielākās pozitīvās izmaiņas vērojamas attiecībā uz zema blīvuma holesterīna atbilstību normai – divas reizes samazinājies studentu skaits ar paaugstinātu ZBL. Paaugstināts

glikozes līmenis asinīs bija tikai vienam studentam pirmajā pētījuma gadā. Studenti aptaujas anketā atzina, ka pēdējā gada laikā biežāk uzmanību pievērš holesterīna un cukura līmenim asinīs, veicot to pārbaudes.

3.tab. **Studentu skaits procentos ar normām neatbilstošiem asins lipīdu parametriem**
Table 3 The percentage of students with abnormal blood lipid parameters

Lipīdu parametrs	2015. gads	2016. gads
Kopējais holesterīns (KH)	29	21
Triglicerīdi (TG)	4	10
Augsta blīvuma holesterīns (ABL)	21	19
Zema blīvuma holesterīns (ZBL)	42	21

Lielākai daļai studentu fiziskās veselības vērtējums ir zems un zem vidējā (skat. 4. tab.). Tomēr ir redzamas pozitīvas tendences – ja 2015.g. šādu studentu bija 96 %, tad 2016.g. – 86. Lielākās izmaiņas ir studentu skaita samazinājums grupā *zems* – no 81 % uz 50 %. Ja salīdzina ar Ukrainā 2011. gadā veiktu pētījumu, kurā arī tika izmantots Apanasenko algoritms, var saskatīt līdzīgus rezultātus. Apskatītajā pētījumā piedalījās medicīnas studenti vecumā no 17 līdz 23 gadiem. Iegūtie rezultāti liecināja, ka lielākai daļai studentu (76 %) veselības novērtējums bija zems un zem vidējā, tomēr bija arī studenti ar vidēju vērtējumu (9 %) un virs vidējā (14 %) (Михалюк, Малахова, & Левченко, 2012).

4.tab. **Pētījumā noteiktie studentu fiziskās veselības līmeņi**
Table 4 Students' physical health levels determined in the study

Indekss	Studentu skaits procentos fiziskās veselības novērtējuma līmeņos									
	Zems		Zem vidējā		Vidējs		Virš vidējā		Augsts	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Ķermeņa masas indeksa novērtējums	24	21	22	23	53	56	N	N	N	N
Dzīvības indeksa novērtējums	5	5	7	8	6	6	11	11	71	71
Spēka indeksa novērtējums	96	96	4	4	0	0	0	0	0	0
Robinsona indeksa novērtējums	28	20	32	26	21	26	19	22	0	5
Sirdsdarbības biežuma atjaunošanās laika novērtējums	40	17	41	33	9	31	8	18	3	2
Kopējais vērtējums pēc Apanasenko	81	50	15	36	5	14	0	1	0	0

N – netiek noteikts

Medicīnas koledžas studentiem veselības paradumu pilnveidošana studiju laikā ir būtiska. Uzsākot studijas, vairāk nekā puse studentu (54 %) uzskatīja, ka viņi ēd veselīgi. Otrajā kursā šādu studentu skaits pieauga līdz 68%. Studenti uzskata, ka viņu uzturs ir daudzveidīgs (2015.g. – 65 %, 2016.g. – 71 %).

Tomēr aplūkojot studentu atbildes par uztura paradumiem, redzams, ka tikai nelielai daļai tie ir veselīgi. Studenti zina un ievēro, ka veselīgi nav produkti ar augstu piesātināto tauku saturu (2015.g. – 70 %, 2016.g. – 75 %), augstu cukura saturu (2015.g. – 58 %, 2016.g. – 57 %) un augstu sāls saturu (2015.g. – 56 %, 2016.g. – 61 %). Tikai nedaudz studentu pietiekami ēd augļus un dārzeņus (abos mērījumos – 8 %), graudaugus (2015.g. – 3 %, 2016.g. – 2 %), pienu un piena produktus (2015.g. – 18 %, 2016.g. – 16 %), gaļu un zivis (2015.g. – 19 %, 2016.g. – 17 %). Studentu augļu un dārzeņu patēriņš ir vēl mazāks nekā kopumā Latvijā, kur pietiekamā daudzumā tos ēd tikai 11,4 % iedzīvotāju (Iedzīvotāju veselības apsekojuma..., 2016). Uztura veselīguma vērtējumam tika izveidota skala, balstoties uz 2008. gada Veselības ministrijas uztura ieteikumiem pieaugušajiem. Skalā no 0 līdz 10 ballēm tika iekļauti 10 parametri, kas atspoguļo uztura veselīgumu, piem., augļu un dārzeņu lietošanu ikdienā, ūdens patēriņu, u.c. Tikai 16 % studentu ieguva 5 un vairāk balles, lielākā daļa studentu ieguva 2–4 balles (78 %). Ikdienas uztura izvēli pēc studentu viedokļiem pamatā nosaka trīs faktori – pieejamie naudas līdzekļi (85 %), ģimenes tradīcijas (80 %) un studiju laikā iegūtās zināšanas (72 %). Pētījumā Lietuvā arī tika konstatēts, ka medicīnas studentu uzturs nav veselīgs un sabalansēts – studenti par daudz lieto dzīvnieku tauku, maz zivju un graudaugu, 80 % nepietiekami ēd dārzeņus un augļus (Škēmienē, Ustinavičienē, Piešinē, & Radišauskas, 2007).

Liela nozīme ir alkohola lietošanas paradumiem. Regulāra alkohola lietošana mazās devās tiek uzskatīta par profilaktisku, kamēr pārmērīga alkohola lietošana ir saistīta ar lieku risku daudzu slimību attīstībā. Studenti alkoholu lieto reti – pārsvarā vienu līdz trīs reizes mēnesī, iecienītākais dzēriens ir vīns. 2015.g. nemaz alkoholu nelietoja 11 % studentu, 2016.g. – 14 %.

Nopietns dažādu saslimšanu riska faktors ir smēķēšana. Jākonstatē, ka trešā daļa studentu smēķē (2015.g. – 35 %, 2016.g. – 36 %). Smēķēšanas intensitāte ir ļoti atšķirīga – no 2 cigaretēm dienā līdz 40, vidēji 9,5 cigaretes dienā. Tajā pašā laikā 2016. gadā 95 % studentu apgalvoja, ka viņi ir pietiekami informēti par smēķēšanas kaitīgumu. Jāatzīst, ka medicīnas koledžas studenti smēķē vairāk nekā vidēji iedzīvotāji vidēji Latvijā vecumā virs 15 gadiem – 37 % vīriešu un 15 % sievietes (Iedzīvotāju veselības apsekojuma..., 2016) un kā H. Vecenānes un A. Fernātes pētījumā par studentu dzīvesveidu konstatēts (Vecenāne & Fernāte, 2012). Smēķēšana medicīnas studentu vidū ir populāra arī citās valstīs, tika atrasts, ka Eiropā smēķē 23 % medicīnas studentu (Mamo & Fenech, 2012).

Veselības uzturēšanai svarīgas ir augstas intensitātes fiziskas aktivitātes. Gada laikā studenti tajās ir iesaistījušies vairāk – no 23 % līdz 36 %, 22 % studentu šīs aktivitātes ir sākuši no jauna, bet 9 % atmetuši. Tomēr studentu dalība fiziskās aktivitātēs vērtējama kā zema. Zema fiziskā aktivitāte ir arī studentiem LU medicīnas fakultātē (37,5 %) un Medicīnas koledžā (43,7 %) (Pļaviņa, 2014).

Mazas fiziskās aktivitātes un hipodinamisks dzīves veids novērots 49 % Krievijas medicīnas studentiem. (Саидюсупова, 2008). Lietuvā 50 % medicīnas studentu neveic fiziskas aktivitātes (Škémienė, Ustinavičienė, Piešinė, & Radišauskas, 2007). Daudz labāka situācija ir Rietumeiropā. Starptautiskā Eiropas studentu aptaujā tika konstatēts, ka tikai 4,5 % tās neveic vispār un 2,7 % veic neregulāri (Mamo & Fenech, 2012).

Secinājumi **Conclusions**

Studentu fiziskā veselība studiju laikā viena gada ietvaros ir uzlabojusies. Tas tika konstatēts, izvērtējot studentu veselību pēc Apanasenko metodes, pēc ķermeņa kompozīcijas izvērtējuma un pēc asins lipīdu analīzēm. Par fiziskā veselības stāvokļa uzlabošanos liecina arī studentu pašvērtējums. Neskatoties uz fiziskā stāvokļa uzlabošanos, palielinās to studentu skaits, kas sūdzās par nomāktību.

Fiziskā stāvokļa uzlabošanās ir saistāma ar veselību veicinošu paradumu pilnveidošanos. Studenti izvēlas mazāk uzturēt lietot produktus ar augstu tauku, cukuru un sāls daudzumu. Vērojams arī neliels augstas intensitātes fizisko aktivitāšu pieaugums. Tomēr lielākai daļai studentu dalība fiziskās aktivitātēs vērtējama kā zema. Kopumā studenti vairāk interesējās par savu veselību – seko savam svaram, pārbauda holesterīna un cukura līmeni asinīs, ņem vērā medicīnas koledžā iegūtās zināšanas.

Summary

The goal of this research is to analyze the change of students' physical health during the one year of studies in context of lifestyle. The research participants were 103 Medical College's students aged 19 to 56 years. All tests, measurements and questionnaires were done at falls of 2015 and 2016. Students' physical health was evaluated in accordance with Apanasenko's methods based on investigative anthropometric and functional testing measurements. These measurements included body mass index, lungs vital capacity, strength index, Robinson index and Recovery Heart Rate. Students' lifestyle habits were determined with the help of questionnaire that included question groups regarding the self-evaluation of health status, health problems and illnesses, eating habits, bad habits, rest, and physical activities.

Students' physical health during their studies within one year has improved. This is stated on the students' health assessment with Apanasenko method, on the body composition assessment, and blood lipid analysis. Also students' self-esteem shows the physical

improvement in health outcomes. Despite the improvement of the physical condition, increase students' complaints of depression, nervousness and bad mood.

Physical improvement is attributed to the development of health-promoting habits. Fewer students choose to consume products high in fat, sugar and salt. There is also a small increase of high-intensity physical activity. In general, students are more interested in their own health - followed by their weight, examine the cholesterol and blood sugar levels, take into account in the medical college acquired knowledge.

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RELATIONSHIP BETWEEN POSTURAL ALIGNMENT IN STANDING BY PHOTOGRAMMETRY AND STATIC BALANCE IN CHILDREN WITH DISABILITIES

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Abstract. *This study was executed to explore correlation between postural alignment in standing measured through photogrammetry and static balance in children with visual, hearing, intellectual and physical disability. METHODS: Participants were 34 children (age 7-12 years) including 8 children with hearing, 8 with visual, 6 with physical, and 12 children with intellectual disabilities. Postural alignment in standing was measured through photogrammetry. Static balance data were obtained in 15 s bipedal stance with eyes open and eyes closed, and also in 10 s unipedal stance. A force plate was used to collect data of Centre of Pressure amplitude in anterior-posterior, medio-lateral directions and velocity. Correlation was obtained using Spearman's Rank Correlation co-efficient in SPSS software (version 19.0). RESULTS: Moderate positive correlation ($r = 0.338$ to $r = 0.425$; $p \leq 0.05$) was found between angle of head position and angle of frontal and sagittal ASIS and PSIS level. Also, moderate positive correlation was found between angles in shoulder level and angles of the head ($r = 0.365$ to $r = 0.453$, $p < 0.05$). In assessing the static balance outcomes between the four groups, results presented significant differences in results during bipedal stance with eyes open. CONCLUSION: Degree of forward head posture correlates directly with hip and shoulder anatomical placement. Children with intellectual disability presented larger displacement of the center of pressure with more body sway observed during eyes open condition.*

Keywords: *children with disability, posture, static balance.*

Introduction

Posture indicates the relationship between spinal segments and the environmental factors. The upright posture is considered important indicator of musculoskeletal health, particularly in children. Therefore, prevention and screening for risk factors of postural deviation in childhood is important. Moreover, the results of previous studies indicated that disability increases risk of postural deformations in children with hearing and visual impairments (Zwierzchowska & Gawlik, 2007; Ray, Horvat, Croce, Mason, & Wolf, 2008) and intellectual disability (Hill & Goldsmith, 2010). There is no standard

approach to measuring posture. Photographic observation is one of the most frequently used clinical assessment of postural alignment based on non invasive techniques that is cost effective and appropriate for screening evaluations (Lafond, Descarreaux, Normand, & Harrison, 2007; McEvoy & Grimmer, 2005).

Development of postural control is an important prerequisite for the performance of movement maturation. Different motor tasks require a person to maintain his or her center of gravity over the base of support (Rain & Twomey, 1994). Fundamental changes take place in postural control during child development. While young children show large and fast alterations of the center of pressure (COP), around 7 to 8-years of age the COP shows smaller and slower deviations during standing. This postural improvement has been linked to improvement of reception of proprioceptive, visual, vestibular information and to maturation of sensorimotor integration (Kirshenbaum, Riach, & Starkes, 2001).

Postural characteristics and the development of balance associated with the motor control theory have been explored for many decades in healthy children (Assiante, 1998; Kohen – Raz, 1970; Woollacott & Shumway – Cook, 1990). In special population the quantitative analyses of posture has been generally exploited on children with musculoskeletal pathologies (Dewar, Love, & Johnston, 2014; Ribot – Cisacar, Trefouret, Aimonetti, Attarian, & Poget, 2004). However, few researchers have extended the application of quantitative posturography in children with cognitive challenges (e.g., Geuze, 2003; Poblano et al. 2002). While postural rehabilitation often plays an important role in contemporary clinical management in of postural problems in pediatric population, there is still paucity of studies investigating postural correlations in children with variety of health pathologies. Despite the documentation, assessment of posture, balance and motor deficits of children with mild and moderate disabilities (Gheysen et al., 2008; Pavao et al, 2013; Poliszczuk & Rutkowska, 2006; Sharon et al., 2008), they are not included in therapeutically directed physical activity sessions unless obvious neurological or orthopedic disorders are diagnosed. Physical education teachers and parents of children with mild visual, hearing and/or physical disabilities often report impaired coordination and balance that may hinder the child's optimal growth and maturation in future. Moreover, more frequently researchers have examined either the motor skill performance or body composition, or posture and postural control in single disability group, while the associations among the different body systems across variety of disability groups have not been investigated in elementary school age children population. This study aimed to complement previous studies on relationship between posture alignment and postural control function that in turn can affect movement potential, health and wellbeing of children with different disabilities. Furthermore, the results of such research can help to target health promotion and physical activity intervention programs to this population.

Methods

Participants were 34 children (15 girls, 19 boys) representing four subgroups of mild to moderate functional impairments: (1) 8 with visual impairment (VI) of whom none was blind, (2) 12 with mild intellectual disability (ID), (3) 6 with physical impairment (PI) of whom five with cerebral palsy (GMFCS Level I-II) and one with musculoskeletal deformation, and (4) 8 with hearing impairment (HI). Participants mean age was 10 years 5 months (SD= 1.2). Two children had obesity (BMI was 20.0 and 27.0) and one had overweight (BMI was 19.8), all boys - with ID, HI and PD, respectively. Two girls with HI had underweight (BMI 14.5 and 12.9). All participants were selected from special education schools in Latvia and met following criteria: (1) age between 7-11 years old, (2) ability to follow verbal or visual (for hearing impaired) instructions; (3) ability to demonstrate locomotor and manipulative skills from the TGMD-2, however, the results of the TGMD will not be analyzed in this manuscript. The exclusion criteria included any accompanying health problems that might influence physical activities (e.g., severe intellectual disability, severe autism, seizures, diabetes, asthma, cardiopulmonary disease).

The study was approved by the Ethical Committee of the Latvian Academy of Sport Education and confirmed to the Helsinki Declaration (1964). All participants and/or their parents/guardians provided written consent prior to the study.

For postural alignment, in total, 102 pictures were taken from the anterior, and posterior directions (frontal plane) as well as from both sides (sagittal plane). A digital camera (Nikon D5000) was positioned at a standard distance of 5.00 m from the platform at a height of 1.20 m. The subjects wore bathing clothes and/or shorts and top. Pictures were taken with subjects in the standing position to allow the visualization of 15 anatomic points: (1) cansus; (2) glabella; (3) mental protuberance; (4) tragus of the ear; (5) medium point, acromion; (6) sternoclavicular joints; (7) iliac crest; (8) anterior-superior iliac spine (ASIS); (9) femur, greater trochanter; (10) patella, medium point; (11) tibia tuberosity; (12) spinal process of C7 and T3; (13) scapula, inferior angle; (14) seventh thoracic vertebrae; (15) posterior-superior iliac spine (PSIS) (Kendall, 1994). The software ArchiCAD program was used to analyse data.

Postural control / static balance measurements were collected with two force plates, wireless EMG and two Vixta cameras (25 fps, BTS, Italy), all devices were synchronized. All children performed postural balance tests under two conditions: (1) bipedal standing with eyes open, and (2) bipedal standing with eyes closed. Each condition had 1 practice and 2 recording trials of 15 s. Children were asked to stand as still as possible with their arms comfortably at their side.

Trials where voluntary movements were observed or children started talking were rejected and additional trials were performed.

Postural sway data were registered with two force plates (BTS P-6000, 60 x 40 cm, BTS, Italy). Data were sampled out at 200 Hz and the plates were calibrated before each test. For each test condition the mean amplitude of anterior-posterior (AP) and of medio-lateral (ML) displacement of the center of pressure (COP) was calculated using the Sway software (BTS, Italy). Ground reaction forces (GRF) collected from the force plates were processed and, the location of the COP was determined. The greatest displacements of the COP (cm) in the mediolateral (COP_{ML}) and anteroposterior (COP_{AP}) directions were subsequently calculated.

Statistical calculations were performed with SPSS 19.0. First, the data was checked for normal distribution with a Kolomogorov- Smirnov Z test. Hence, further analysis was done with nonparametric statistics. For each measure, posture, postural stability and postural sway differences across the four groups (ID, HI, VI and PI) were tested with the Kruskal-Wallis test. Post hoc analysis with Bonferroni adjustment was used for multiple comparisons. To calculate correlation between postural alignment and static balance measures across the four groups the Spearman' s correlation coefficients (ρ). The correlations were interpreted as follows: $r < 0.20$, poor relationship; 0.21-0.40, fair; 0.41-0.60, moderate; 0.61-0.80, good and 0.81-1.00 values very good to excellent. Alpha was set at .05.

Results

The mean age of participants was 10.5 ± 1.2 years. There was no difference in the mean age across the four subgroups ($p > .05$). The averaged weight of the group was 30.5 ± 7.4 kg and height was 138.0 ± 10.4 cm (Table 1). Children with HI were significantly higher than children with PI and ID ($p < .05$), while there were not significant differences in weight results of participants (Table 1). Also, there was no significant deference in the mean height and weight data between boys and girls.

Results of postural alignment measures in sagittal plane indicated significant differences across the fours groups in vertical alignment of the body (mean range from .93 to 3.31, $p < .05$) and ASIS/PSIS level (mean range from 10.20 to 17.55, $p < .05$). Children with PI had major deteriorations in vertical body alignment (3.31 ± 1.68) as well as largest asymmetry in ASIS/PSIS alignment (13.53 ± 5.81). In addition, majority of participants presented winged scapulae (33 children), shoulder protraction (32 children). In frontal plane significant differences were found only in vertical alignment of the body across the four subgroups where children with PI presented largest asymmetry (1.85 ± 1.13).

Table 1 Mean age, weight and height of participants

Disability	Age (years, months)	Height (cm)	Weight (kg)
Intellectual disability (n=12)	9.2 (± 1.0)	134.0 (± 6.8)	27.6 (± 4.9)
Physical disability (n= 6)	9.0 (± .6)	132.1 (±9.1)	30.7 (± 11.1)
Hearing impairment (n = 8)	10.3 (± .9)	147.7 (± 13.7)	34.6 (± 8.7)
Visual impairment (n = 8)	11.3 (± 4.9)	138.4 (± 4.7)	30.4 (± 4.9)
Mean (SD)	9.3 (± 1.2)	138.0 (± 10.4)	30.5 (±7.4)

Moderate positive correlation ($r = 0.338$ to $r = .425$; $p \leq 0.05$) was found between angle of head position and angle of frontal and sagittal ASIS and PSIS level. Also, moderate positive correlation was found between angles in shoulder level and angles of the head ($r = .365$ to $r = .453$, $p < .05$).

Postural control analysis of mean results during bipedal stance revealed only two significant differences across the four subgroups in two conditions. During eyes open children with ID presented larger displacement of COP_{AP} than children with VI ($p = .047$). Also, children with ID had significantly higher value of COP_{ML} sway than children with HI with EC condition ($p = .009$) ($p > .05$) (Figure 1).

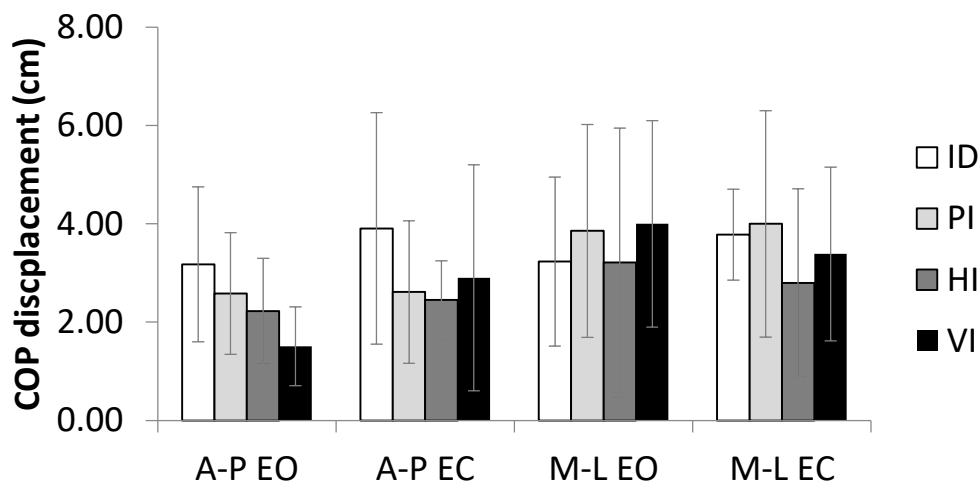


Figure 1 COP_{AP} and COP_{ML} mean results during bipedal stance (EO- eyes open, EC - eyes closed)

Discussion

While primary school age children might have temporary postural deviations of body alignment, the musculoskeletal pathologies related to disability can adversely impact the body function in adulthood. This study explored postural

alignment deviations of children with mild to moderate visual, hearing, intellectual and physical impairments of verifying possible differences between the four subgroups with respect to the postural stability aspects. The most frequent postural deviation was winged scapulae and shoulder protraction across the four subgroups of children. Our findings were in line with other authors (Domagalska et al., 2011; Domagalska-Szopa & Szopa, 2013). According to Kendall et al., (1993) winged scapula is common during childhood due to poor scapulothoracic fixation. In the current study, the finding of forward displacement of the vertical alignment of the body must be coupled with rearward displacement of the center of mass in order to maintain an adequate sagittal balance. On other hand, the observed postural variations can be the result of normal musculoskeletal maturation throughout childhood. The obtained results in this study might reflect an adaptation process aimed at maintaining an adequate sagittal balance and appropriate configuration in terms of musculoskeletal loads and sagittal plane curvature development (Mac-Thion et al., 2004; Cil et al., 2005). Also, several authors have suggested that postural habits and other environmental factors could influence postural development (Black, McClure, & Polansky, 1996; Murphy, Buckle, & Stubbs, 2004). School age children spend over 95 % of their school time in a static sitting position and an average of 1.5 hours a day playing video games and using computers (Cardon, De Clercq, De Bourdeaudhuij, & Breithecker, 2004; Marshall, Gorely, & Biddle, 2006). According more recent data in Latvia about 23 % of school age children spent more than 4 hours watching TV during working days, while 41 % during weekends. Also, the time spent at the TV and computer increases with an age of children (The Center of Disease Prevention and Control of Latvia, 2013).

Thus, with the increasing time periods spent in the sitting position at home and at school, sagittal plane postural translations may increase with age throughout childhood. However, there was no strong relationship found between segmental sagittal plane analysis that was different outcome from other studies on children. The increase in sagittal ASIS/PSIS axis result in leaning forward that was found only for children with ID in our results (Cil et al., 2005). While previous studies have attempted to explore sagittal spinal and sacropelvic alignment during growth, the conclusions remain limited.

Compared to previous studies regarding postural control in children with disabilities, in general, our results did not show significant differences in displacement of the COP in the anteroposterior and/or mediolateral direction across the four groups and two conditions (EO/EC). Only two measures of children with ID were significantly different from other subgroups: between ID and VI $COP_{AP}EO$ and between ID–HI $COP_{ML}EC$ ($p < .05$). The fact that no many significant differences of $COP_{AP,ML}$ displacement measures were detected can be explained by the relatively small sample size and inherent variability in this

population. Interestingly, all subgroups, but not ID, presented slightly larger body sway with EC condition (Figure 1). This is similar to what is observed in typically developing children. These findings extend prior observations showing that children, also those with disabilities, are more dependent visual stimuli (Shumway – Cook et al., 1985, 2001).

Limitations and Future Implications

The measures in this study were narrowly focused on relationship between posture assessment and postural control variables during quite stance. Also, the sample of children with disabilities was rather small and heterogenous, by including different types of functional limitations. Further studies should involve more participants and also include other variables that are thought to impact physical activity levels and movement proficiency. Also, further controlled longitudinal studies are necessary to understand deviations of spinal alignment and development in children with different disabilities. The non-invasive method for postural assessment should allow the selection of children in a longitudinal study to accurately define the association between age, functional limitation and postural variables. The relationship between balance and dynamic postural adjustment to task difficulty in children with functional limitations should be explored.

Conclusions

The degree of forward head posture correlates directly with hip and shoulder anatomical placement. Results indicated that distinct changes in sagittal alignment of a child's posture occur during growth, in order to accommodate for physiological and morphological changes. Children with intellectual disability presented larger displacement of the center of pressure with more body sway observed during eyes open condition. The findings of this study strengthen the perspective that the detailed assessment of body posture and balance should be included as part of routine clinical evaluation as well as educational programs in all children, including those with functional limitations.

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MANAGEMENT OF AND POTENTIAL RETURN ON PRIVATE INVESTMENTS IN LATVIAN SPORTS

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Abstract. *Latvian sports authorities under the Ministry of Education and Science are the main organisers of the sports life in Latvia. However, they have not been successful in providing equally good support to all athletes who need it. It is especially difficult to receive support for improving skills of individual athletes engaged in team sports. Often it is the individual mastery of an athlete that prohibits them from moving on to the adult level of sports of high achievement, even if the athlete was very talented and one of the best in the country, when he/she was young. The descriptive statistical method and content analysis were used to assess shortcomings in the allocation of finances in the Latvian sports industry. The study demonstrated that a successful process of private investments ensures a positive return on the investments, as well as the development of athletes. One way to build successful cooperation is by creating high-quality sports development centres or sports investment management companies, which will efficiently contribute to the athletes' transition from youth to professional sports. The efficiency of the methodology developed can be demonstrated by creating a company, which would act as an example for attracting private investments in the development of athletes.*

Keywords: *efficient investment management, high-class sports, investment criteria, Latvian sports, private investments, sports development, sports funding, sports system mass.*

Introduction

Latvian sports authorities are the main organisers and maintainers of the sports life in Latvia. However, they are not able to successfully provide equally good support to all athletes who need it. Some gaps can be observed in the distribution of funding, which may affect the quality of high-achievement sports in the country.

High-achievement sports in Latvia can be divided into individual and team sports, which might make it easier to demonstrate the shortcomings of the state funding for equal development of athletes. Latvia has created a quality system for the support of Olympic individual sports through the Latvian Olympic Team. The Latvian Olympic Team provides great support to the individual athletes of Olympic sports and sports involving small teams, such as bobsleigh, luge, beach

volleyball and the like. State authorities provide funding to these, so that athletes can be successful in raising their individual mastery levels and receive the best possible instruction, equipment, medicine and training infrastructure on a high level during the entire season. At the same time, Latvia offers neither state, nor municipal funding, which would provide systematic support for high-achievement team sport athletes to build their individual capacity. There are some youth academies under a few sports clubs, but it must be admitted that their existence is merely formal, and currently there are no world-class athletes prepared by these academies. Another thing to mention is the fact that the majority of team sports clubs are funded through private sponsorship and donations.

Taking into account the objective constraints of the state budget, it is impossible to expect state funding for special youth high-achievement sports development programmes in order to produce world-class professionals in adult sports. This is the main reason why Latvian youth sports teams enjoy brilliant success until the athletes turn eighteen to twenty years old, but after that, upon entering or trying to enter adult sport, the athletes' mastery starts lagging behind that of other athletes, although at eighteen years old they were better.

World experience shows that such shortages in public funding can be successfully filled with private funding. This is usually done within team sports club youth academies, while sports management companies usually invest in tennis, golf, auto racing, or football. These companies use investment agreements and hope to recover the invested funds from professional contracts of athletes. In Latvia, also, private investment is currently the only way to ensure systematic preparation of high-achievement athletes in football, ice hockey, basketball and tennis. In Latvia this is done in the form of social support. World experience shows that direct investments in young athletes and proper management thereof can provide investors with positive return on their investments, as well as ensure enhanced overall mastery of athletes to promote the development of sports in the country as a whole.

The issue which has been reviewed in this article is related to the lack of funding and professional career support needed for young Latvian athletes, and the one-sided support from Latvian sports supporters unable to attract investors, who would be willing to make large investments. According to the hypothesis of the study, by investing private financial resources to ensure high-achievement sports conditions for individual Latvian athletes in certain sports from the age of 14 and ensuring adequate investment management, it is possible to achieve a positive return on investment. The goal of the study is to show the importance of private investments in Latvian sports, the opportunities to address current issues related to the development of youth sports and the entire sports industry by attracting private investors, develop innovative methodologies for private

investment management in sports, while at the same time ensuring a positive investment balance of the investor and high achievement in sports.

To achieve this goal, the following tasks have been defined:

- Examine public investments in sports;
- Identify gaps in the public funding;
- Develop a solution to the funding gaps;
- Develop innovative methodologies for a more efficient investment management in Latvian sports;
- Check the efficiency of these methodologies.

The investment management processes and the general management processes are widely described in the literature throughout the world. John Maynard Keynes was one of the first to define investments in his book “General Theory of Employment, Interest, and Money” (Keynes, 1997). Obviously, the investment processes and management have been covered in countless works. On the other hand, sports investment management and sports management in general has not been a subject of much scientific research. As the sports industry realises the importance of successful sports management, the development of a successful sports management strategy is highlighted increasingly often. ‘Principles and Practice of Sport Management’ (Masteralexs & Barr, 2011) are being defined and established more widely. Descriptions of ‘Sports Management and Administration’ and ‘Financial Management in the Sport Industry’ have been issued (Brown, 2010). Although there is a wide spectrum of research and descriptions on sports investment management processes and investment management to increase the mastery of athletes in the world, after analysing the available information in major scientific databases, it may be concluded that the investment management for increasing the mastery of athletes has not been previously described or studied scientifically (Foster et al., 2005).

Data and methodology

A. Analysed indicators.

The paper analyses indicators that affect the allocation of public funds in the sports sector, as well as the statistical indicators on youth sports system mass and the availability of sports infrastructure necessary to define the investment objects.

1. Sports industry structure of the Ministry of Education and Science.
 2. State budget for 2015.
 3. Student statistics of professional sport education institutions.
 4. Sports facilities.
 5. Present value of the experimental company at the end of period.
- #### **B. Data set.**

The study used publicly available data from the database of the Central Statistical Bureau of Latvia, information provided by the Latvian Olympic Unit, information available on the website of the Latvian Ministry of Education and Science, database of the Sports Facilities' register, as well as unpublished data from the Ministry of Education and Science on the number of students and rates at professional sports education institutions. Analysed was data for the year 2015. Also, the financial indicators of the experimental company engaged in the management of private investments in Latvian athletes were used.

C. Methods.

The descriptive statistical method and content analysis were used to assess shortcomings in the allocation of finances in the Latvian sports sector. By analysing data on sports funding in Latvia and especially the funding to increase individual mastery of athletes, conclusions were reached on the shortcomings in the promotion of successful activities of all athletes in the country and the common flaws in the development of high-class athletes. After analysing the data on funding, an innovative methodology was developed to remedy the shortcomings of funding, and a company was established to deal with private investments in sports, in order to prove the hypothesis. (Bauer, 2007) The return on investments made by the experimental company was calculated by using the future profit calculation formula and investment return coefficient formula (University of Latvia, 2015).

Results

To show the shortcomings of state funding in the Latvian sports industry, the study investigated the state budget funds allocated to sporting bodies, and the sports industry structure as a whole. The breakdown is shown in Figure 1, providing a clear overview of how much funding has been allocated to each public institution.

It may be concluded that the main organiser of the sports life in Latvia is the Ministry of Education and Science. The Ministry of Education and Science is responsible for the allocation of funding between sporting bodies (On State Budget, 2015), and the key authority that has the greatest effect on the allocation of funding in the sports sector is the National Sports Council.

By analysing and drawing conclusions about sporting bodies, it may be concluded that almost all sports organisations are engaged in the mastery training, promotion of development and ensuring the activities of individual sports athletes. It should be noted that the state provides funding to sports federations that organise sports competitions both in team and individual sports, while the main task of the federations is to organise local championships. Also, the majority of

these institutions have been established primarily to ensure the participation of athletes in international competitions.

The country has an efficient system of preparation of young athletes, but there is a lack of support of individual development, which is required in perhaps the most important stage of an athlete’s career – the transition from youth to adult sport.

These deficiencies in the country’s sports sector indicate that there is a need to attract private investor resources in the development of young athletes, especially in team sports.

Table 1 contains summary information on the most popular sports among young people in Latvia (Ministry of Education and Science) and the resources available to sports facilities (Sports Facilities Register), by type of sport. Table 1 can serve as the basis for the successful attraction of investors in different types of sports.

Table 1 The most popular types of sport among youth in Latvia and the available resources of sports facilities

Type of sport	Participants in state sport schools	Facilities
Basketball	6753	710
Volleyball	5307	658
Football	4646	591
Track and Field	2902	425
Floorball	2527	288
Handball	1572	85
Swimming	995	63
Ice-hockey	916	54
Chess	797	48
Freestyle wrestling	712	31
Gymnastics	655	27
Judo	597	23
Gymnastics	494	22
Kayak and Canoe	433	8

After analysing the data in Table 1 on the most popular sports among young people in Latvia, it may be concluded that the easiest would be to attract investors for the types of sport such as basketball, football, ice-hockey, and maybe also volleyball and handball. Although relatively few young people engage in ice-hockey, it is still a likely investment object, because Latvia has strong ice-hockey traditions and probably the most professional hockey players per number of youth engaged in this sport, which might be an important aspect for potential investors (Ministry of Education and Science; Central Statistical Bureau).

Private investors must be able to cooperate with the state, thus developing a successfully functioning high-class athlete preparation centre, as depicted in Figure 1.

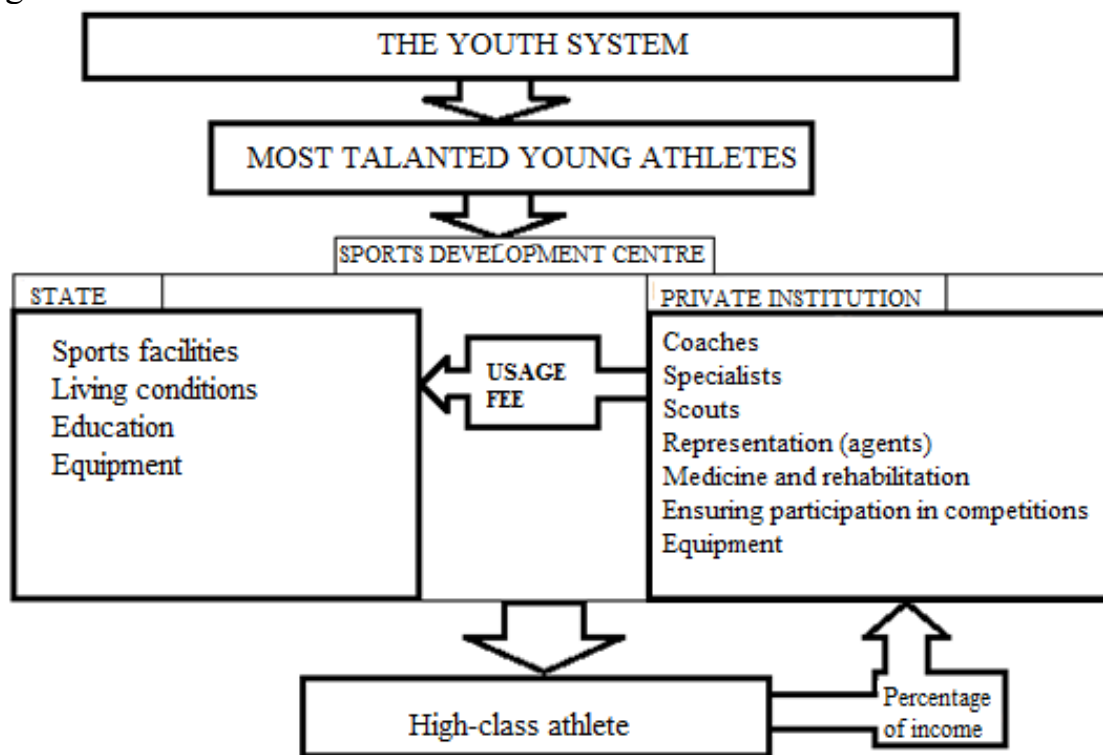


Figure 1 **High-achievement sports development centre operation model**

In order for the cooperation to run smoothly, state institutions must provide sports infrastructure, while private investors provide many components related to athletes' career development, which will help ensure a successful development of team sports in the country as a whole.

To demonstrate the efficiency of the innovative method in furthering the achievements of athletes, an experiment was carried out, in which a company was established engaged in the preparation of athletes for professional sports. Basketball was selected as the focus, because it is the most popular sport among young people in the country, and the Latvian Basketball League has the most professional athletes from all sports leagues in the country. The company operated in accordance with the diagram depicted in Figure 1 and provided all liabilities pertaining to the private partner as described in the diagram, thus maximising the career opportunities of athletes and facilitating their transition from youth to adult sport (Latvian Basketball Association; Central Statistical Bureau). Table 2 shows the company's performance over the years. The table also shows the company's ability to function and operate continuously, as well as investment project and management performance indicators and their development.

Table 2 Profit/loss of BAA Riga Ltd, per year, EUR

Year	Profit / Loss
2008	(- 1,917)
2009	(- 5,867)
2010	(- 3,024)
2011	16,433
2012	3,939.80
2013	6,958
2014	19,808

In order to properly evaluate the success of the experiment and validate the hypothesis, calculations were made to estimate the future value of resources invested and the return on investment coefficient. The return on investment was calculated as 2.12, from which it could be concluded that the investment project works and is able to sustain its future operation, which proves that it is possible to attract private investments in the development of athletes in Latvia and ensure their management.

Discussion

It is also important to understand that in most team sports adult athletes engage in sports for a certain fee and are able to sustain themselves and improve their mastery. Therefore, it is essential for the state to support the many individual types of sport, where athletes are not able to fund their own training from their professional sports activities. Although many team sport athletes are able to fund their own development, the vast majority of athletes fail to build a professional athlete's career due to the difficult transition from youth to adult sport.

Funds for training are provided only from the Latvian Olympic Unit, and these funds are allocated according to the criteria for individual sports. Although Latvian team sport athletes achieve equally good results, it is virtually impossible for them to receive state funding for training. It goes without saying that the state does not have enough resources to support athletes of all types of team sports (Latvian Olympic Unit).

The main drawback of state funding is the insufficient funding of team sport athletes to prepare them for adult sport, which can become an obstacle in the careers of many athletes. When making conclusions on the practice and the development of athletes in other countries, one can develop a successful model where private investors support young athletes. The country has a successfully functioning selection process of athletes for the allocation of funding to individual sport athletes. A similar system with strict selection criteria can also be used by

private investors in order to increase effective operation of their investment projects and evaluate investment objects.

It is important to note that private investors and the state share the risks in case of a failed athlete's career, which might allow to maximise the return from a youth system in the country, and to raise high-achievement sport results in the country as a whole, and in particular in those sports that require large investments in early stages of athletes' careers.

In order to successfully attract private investors in the development of athletes, it is necessary to identify the types of sports that have the required base of young athletes and who can provide the investor with sufficient return on investment for the management project to be profitable and sustainable in the long term. Another thing to be understood is that it is virtually impossible for private investors to create new sports facilities for the development of athletes, which are vital for the development of young athletes.

Looking at the company's operating results, it can be concluded that, as in other investment management projects, the beginning is associated with selecting the right investment and the right investment objects, while further steps are related to successful product development and promotion. For an investment project to function properly, a legal relationship was established between the investor and the athlete, so that in case of a successful activity of the investor, the athlete would pay back the support provided in his/her career development.

The analysis showed that private investors are much better equipped to prepare athletes for adult team sports. One of the main factors is certainly the fact that private investors have a personal interest in raising the mastery of the athlete. Also, private investors have much better opportunities of attracting foreign specialists to raise the mastery of young athletes.

The weakest link of private investments in sports is the necessary sports infrastructure to ensure one's own operations, which requires large investments. That is why public and private investors need to build successful partnership from which both parties will benefit.

Conclusion

1. The state provides funding to ensure sports activities in the country. The main organ for the organisation of the national sports life is the Ministry of Education and Science. The institution, which influences the distribution of sports funding the most, is the National Sports Council. Several state institutions provide development of individual athletes.
2. The main problem of state funding is the inability to ensure sufficient funds for the individual development of team sports athletes in accordance with high-achievement sport requirements.

3. The problem described above can be solved by attracting private investments to ensure efficient development of athletes, where the return will be produced by direct payments of the athletes upon reaching a certain level of mastery.
4. After verifying the efficiency of the method – i.e., the development of sports investment management centres and companies – by using the experimental method, as well as analysing the financial indicators of the established company, it may be concluded that the method works in the development of athletes and that it is a successful investment opportunity.

The study has led to the conclusion that, in order to improve the efficiency of investment management methods, research should be performed on topics such as the development of criteria for a successful selection of young athletes, factors contributing to the development of athletes, circumstances promoting the cooperation between state institutions and private entrepreneurs, legal and psychological aspects of the cooperation between investors and athletes, and the connection between risk capital investment management and investments in athletes. Further studies must be conducted on the role of private investment management in the development of athletes.

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HEALTH PROMOTION IN OLDER AGE GROUPS AS AN OBJECTIVE OF THE SENIOR POLICY: EUROPEAN CHALLENGES

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Abstract. *Successful ageing is understood to mean a satisfactory health status, high level of financial independence, firm family and social ties and opportunities for self-realization. The best form of health promotion among the elderly is to promote physical activity. Physical and recreational health-oriented activity and prevention of diseases helps improve physical endurance and strength, and increase muscle mass, flexibility and overall motor coordination. Adequate level of physical exercise at older age effectively prevents ageing processes and ensures maintaining good psychophysical fitness, thus stimulating social integration. The study presents selected forms of recreational forms of physical activity of older adults in local environments resulting from the needs of this group of people and initiatives of local self-governments to promote health.*

Keywords: *activity, senior policy, health promotion, physical recreation, older adults, sport, ageing, health.*

Introduction

The number of people in the retirement age is on the increase in all the European states, with these tendencies being also noticeable in Poland. According to the WHO, the number of adults at the age of over 60 years by 2050 will reach 22 % of general population and the number of people aged 80, 90 or 100 will be rising (<http://www.zycie.senior.pl/swiat-się-starzeje-8211-nowe-statystyki-WHO2016>). This phenomenon also concerns Polish society and it is expected that, compared to Europe in total, the ageing process should occur the fastest. In 2000, the percentage of people aged 65+ in the general number of citizens was ca. 13 %, whereas it is estimated that this number will have accounted for over 30 % by 2050 (Henzel, 2014). The projections of the population growth presented by the Central Statistical Office of Poland (GUS) showed that the Polish population of people aged 80+ will increase substantially (to ca. 2.57 million), with three times more people aged 100+ than today (GUS, 2008).

One of the characteristics of the ageing society is singularization and feminization of the old age, i.e. high percentage of older adults with single-person

households and the fact that around 33 % of women over 75 years of age live alone and this percentage increases gradually in older age groups (Szatur-Jaworska, 2012).

Health prevention and conditions of treatment of older adults seems to be worse than in other EU countries, whereas poverty continues to be a serious problem in this age group. One of the nagging problems is insufficient number of geriatricians and geriatric wards as well as other specialists in the field of care for older adults. In terms of mental health, Polish older adults differ from those living in other European countries and often complain about being sad and depressed, without pleasant life, tired and hopeless. Apart from poor health, the phenomenon of social marginalization of older and disabled people is being observed, followed by poor family, neighbourhood and social ties, e-exclusion (digital exclusion) connected with lack of access to the Internet or insufficient computer use skills (Błędowski et al., 2012).

WHO experts are warning that in the countries with low and medium incomes, older adults experience difficulties with the access to long-term care and rehabilitation, which leads to the changes in the systems of health care and adjustment to the needs of this population.

The problem of old age is of both individual and social character, which means the need for purposive and long-term initiatives of the organizations of public administration and social services and non-governmental institutions and organizations in terms of the improvement in the quality of life of older adults. Population ageing have become the economic and social problem. Therefore, the EU and its member states attempt to minimize the effects of this phenomenon and take measures to make society younger (the 500+ governmental support program was implemented in 2015 in Poland to improve vocational and social activity of older adults).

In Poland, activity of older adults in the labour market continues to be low. Therefore, the aim of the current senior policy is to start initiatives to stimulate the activity of older adults and, consequently, to enhance their psychophysical fitness, with particular focus on physical recreation, which has the most beneficial effect on their mood and health status (Założenia Długoterminowej Polityki Senioralnej w Polsce, 2014).

This problem is very topical and important from both the individual and social standpoints. Therefore, local communities implement programs to support older adults and improve the quality of living of the oldest generation of Poles (Program działań na rzecz seniorów na lata 2014 – 2020, 2014). The focus of this study is on the needs of older adults and opportunities for meeting these needs in the large urban environment of the city of Częstochowa in Poland, with particular emphasis on the initiatives to promote health and physical activity.

The study was conducted in 2016 in a group of 210 older people who participated in the University of the Third Age (116 women and 94 men) and participants of sports and recreation classes in the area of the city by the City's Sports and Leisure Centre (Miejski Ośrodek Sportu i Rekreacji, MOSiR), including „Zumba Gold” classes. The method of the diagnostic survey and the questionnaire technique was used. The main technique was survey and the tool was provided by the questionnaire oriented towards older adults (citizens of the city). The study presented certain initiatives of local communities aimed at promotion of healthy lifestyles among the oldest age groups.

Health promotion through recreation and sport of older adults

Health promotion in all age groups represents the pillar of health policies implemented by the WHO and consists in activities aimed at improving health status and social awareness in this field. Health promotion has been implemented not only in schools but also among adults, older adults in media and social institutions and organizations. Modern societies tend to reject the stereotypes concerning the old age and present older adults as vulnerable, ill, poor, isolated and excluded from social life (Szarota, 2000). These views have been transforming while more and more seniors understand that physical activity, rational nutrition, sleeping, safe behaviours and no addictions lead to the improved health and enhanced psychophysical fitness. With respect to the activity theory, one can conclude that each human, even at older age, needs to be active and to feel needed and helpful while the lost social roles can be compensated by various forms of activity and involvement (Dzięgielewska, 2006).

According to gerontologists, activity and sense of belonging are the best solution for the problem of old age and offer opportunities for successful ageing. Contemporary people live in the reality that requires frequent changes in the system of values, thinking and political solutions. The ability to function in the world with other people and for other people is one of the most important challenges contemporary humans have to face. Treating older adults and disabled with respect, tolerance, dignity and sympathy are the most important values of the democratic country (Marzec, 2003). Changes that occur in the process of ageing can be considered in several aspects:

- biological: natural, irreversible physicochemical and metabolic changes, leading to self-regulatory and adaptive disturbances and morphological and functional changes.
- psychological: reduced psychophysical activity due to losing neurotransmitters, worse cortical conduction and disturbances in functioning of senses,

- social: losing the autonomy, changes in social roles, the need for care, social marginalization.

Contemporary position of older people in society depends on the decisions made by public and self-government institutions, especially on the subjective factors i.e. personality, health status and family environment. Numerous publications concerning these problems help raise awareness that the social situation of older adults in Poland is difficult.

With current demographic situation in the EU, the member states have to face the challenges of planning and implementation of the policies towards active and healthy ageing. Active Ageing Index (AAI) proposed in 2012 by the European Commission is used to evaluate the potential of older adults in terms of employment, social participation, independence, health, safety and conditions of active ageing. This index for Poland is 27.3, with 100 representing the perfect situation i.e. 100 % of task achievement. In the general ranking of the EU countries, Poland is on the 27th (last) place (the index concerns people over 55 years of age).

The concept of active ageing assumes that the person can be socially productive as long as possible i.e. produce the goods and services regardless of whether they are paid or not, including home and family activity, care for grandchildren, voluntary work and help for the neighbours (Szukalski, 2012).

The prerequisite for good functioning of a person is to meet his or her needs. Older people also have their individual needs and right to satisfy them. Regardless of the age, people feel the need for being accepted, respected and loved. The needs older adults have include participation in socially useful activities, feeling of association to a social group, performing specific roles, maintaining interpersonal contacts, the use of leisure time in a satisfactory manner, maintaining adequate mental and psychical status, health protection, access to health care maintaining good relations with the family (Strzelec, 2008). „Adequately organized sport or recreation may in many cases replace the currently popular psychotherapy, affect physical and mental health of a person and stimulate development of satisfactory relationships with the community” (Karpuszenko, 2008, 277).

The most important factor that determines good ageing is human activity i.e. participation of older adults in family, social, cultural, recreational or political life, which allows for meeting many needs.

The effect of physical activity on brain function has been examined by many American scientists, with their findings supporting the notion of neurobiological effects of physical activity (Ericksenn, Hillman et al., 2015). From the physiological standpoint, human brain is the most active during physical exercise and releases endorphins and serotonin, which are chemical compounds that reduce stress, improve mood and act as antidepressants (Kramer, Erickson et al., 2006).

Moderate-intensity aerobic exercise such as fast walk, Nordic walking, swimming or cycling help produce proteins which have a repairing effect, help restore nervous cells in the brain, strengthen nervous connections, thus leading to the improved intellectual abilities. These exercises are recommended as a means of preventive and therapeutic treatment in the Parkinson's and Alzheimer's diseases (Morgan, Gallacher et al., 2012).

A particularly recommended form of physical activity for older adults is Nordic walking, which consists in walking with special poles. The sport dates back to the twenties of the 20th century in Finland and was initially used among cross-country skiers. In Poland, the sport has grown in popularity in the last decade. It can be practised by each person regardless of the age and in different weather conditions. The specific movement technique helps improve strength and endurance of arms, reduces pressure on lower leg, hips and back, which is recommended to people with weak joints and muscles. Compared to the normal gait, this method is a good fat-burning workout whereas poles help maintain better posture, stability and balance during walking outdoors (Kostka, 2015).

Physical activity in water is very beneficial to older people since exercises in the swimming pool engage the most of muscles while preventing from overload. Aqua aerobics and physical exercise in water performed to the rhythm of the music is an attractive method of relaxing and offers many health benefits.

Water aerobics has a healing effect on the cardiovascular system, whereas the whirling motion massages the tissues thus removing toxins from the body and accelerating fat burning and helping people relax. One of very popular forms of physical recreation is dancing, whereas medicine uses this form of movement as a therapy (choreotherapy). Dancing has a positive effect on the motor, cardiovascular, digestive system, metabolism and the nervous system. It improves oxygen transport, blood circulation, flexibility of joints, pulmonary function and motor coordination. It also acts as an effective antidepressant that helps cope with stress while releasing positive emotions, motivating and helping start interpersonal contacts. The interest in zumba, which is the dance fitness program, has been rising in recent years. Simple dancing steps, various movement combinations and rhythmic music create the atmosphere of playing and relax.

In conclusion, physical activity in older adults should stimulate three basic areas of health: improve aerobic capacity, improve muscle strength, flexibility, balance and motor coordination.

Selected forms of recreational activity in local communities

In 2004, the year of Poland's accession to the EU, over 80 % of older adults positively responded to this fact, since they wanted better life for their children and grandchildren while they did not expect anything from the EU. However,

several years later, they found that EU's programs support both professionally active people and those retired. These programs are aimed to improve the quality of life, reduce morbidity through promotion of prevention of diseases and ensuring medical care. The UE promotes active ageing through preventing isolation and implementation of the projects of intergenerational integration. Polish citizens utilize programs for seniors more and more frequently and are often the members of the European Seniors' Union (ESU). The organization is dedicated to defending rights to living in dignity, improvement of social security and various facilitation for this age group.

(Grabowska, 2009).

The EU's Covenant on Demographic Change signed in January 2016 is aimed at creation of the local community to support active ageing through exchange of best practices across Europe. (Projekt AFE – INNOVNET) (www.senior.pl/tematy/unia+europejska, 2016).

The Ministry of Family, Labour and Social Policy intends to introduce, in 2017, changes in the Senior Wigor program (which will be renamed Senior+), concerning the implementation of a new forms of centres for older adults and funding of e.g. Senior+ day care centres, with professionally inactive people living in these centres for 8 hours a day from Monday to Friday and spending time actively under supervision of qualified employees (1 employee per 15 seniors). (www.opieka.senior.pl/84,0Senior-zastapi-Senior-Wigor,2530.html, 2016)

Table 1 **The needs of seniors surveyed**

Question	Types of needs	Women		Men		Together	
		N	%	N	%	N	%
1	Maintain good health status	91	43	92	44	183	87
2	Improve financial situation	84	40	95	45	179	85
3	Maintain fitness and independence in everyday life	80	38	97	46	177	84
4	Better and faster access to doctors	78	37	81	38	159	75
5	More frequent contacts with friends	79	38	68	32	147	70
6	Not to be lonely	56	27	69	33	125	59
7	Learn and extend knowledge	58	28	41	20	99	48
8	Improve living conditions	50	24	48	23	98	47
9	Be needed and helpful	84	40	13	6	97	46
10	Participate in cultural and recreational events	49	23	44	21	93	44
11	Improve relations with the family (children and grandchildren)	34	16	39	19	76	35
12	Go to a sanatorium	21	10	16	8	37	18
13	Go to a trip	7	3	10	5	17	8
14	Work professionally	4	2	10	5	14	7

Apart from many threats, demographic changes which affect EU changes stimulate the development of new sectors and services. The need arises for the development of a vast array of new technologies that would help older people maintain independence and live longer in their own houses (adaptation of flats to the needs of people with reduced physical abilities, changes in the local infrastructure, technical facilities and transportation adjusted to the disabled).

Analysis of the needs of older adults should be based on their opinions. The answers to the question of "What is the most important to you now?" (multiple choice options).

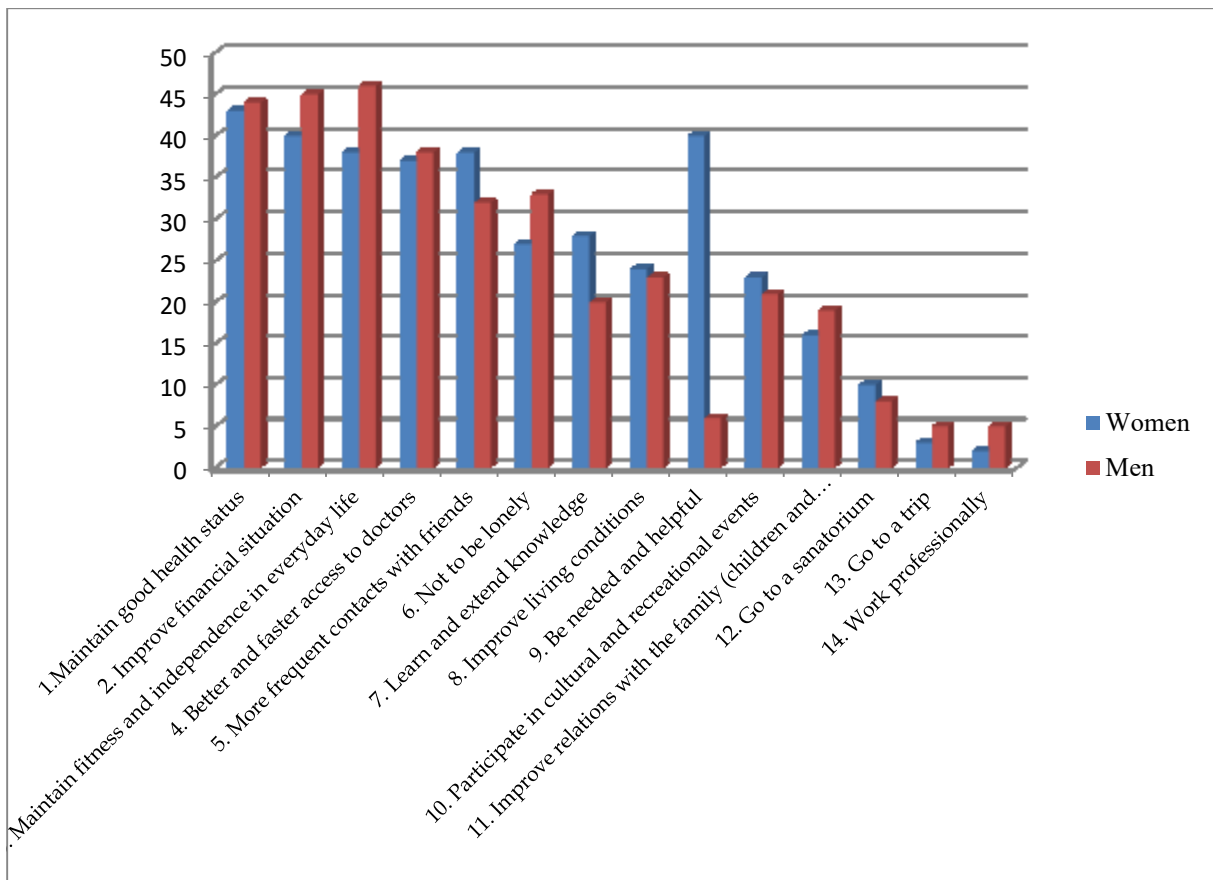


Figure 1 The needs of seniors surveyed

With regards to the question of "Which forms of activity are the most attractive to you?", the answers were: (multiple choice options).

Table 2 **Forms of activity**

Question	Forms of activity	Women		Men		Together	
		N	%	N	%	N	%
1	Socializing	102	49	81	38	183	87
2	Participation in the University of the Third Age program	107	51	58	28	165	79
3	"Zumba Gold" dance fitness classes	109	52	13	6	122	58
4	Group trips in Poland and abroad	84	40	31	15	115	55
5	Going to cinemas and theatres	88	42	21	10	109	52
6	Watching the TV and DVD videos	25	12	81	39	106	51
7	Going with grandchildren to the playground	46	22	54	26	100	48
8	Dancing and games	81	39	6	3	87	42
9	Baking, cooking	63	30	14	7	77	37
10	Walking the dog	29	14	16	8	45	22
11	General fitness gymnastics	21	10	4	2	25	12
12	Using the Internet	4	2	14	7	18	9
13	Voluntary work	14	7	3	1	17	8
14	Going for a walk, Nordic walking	8	4	8	4	16	7

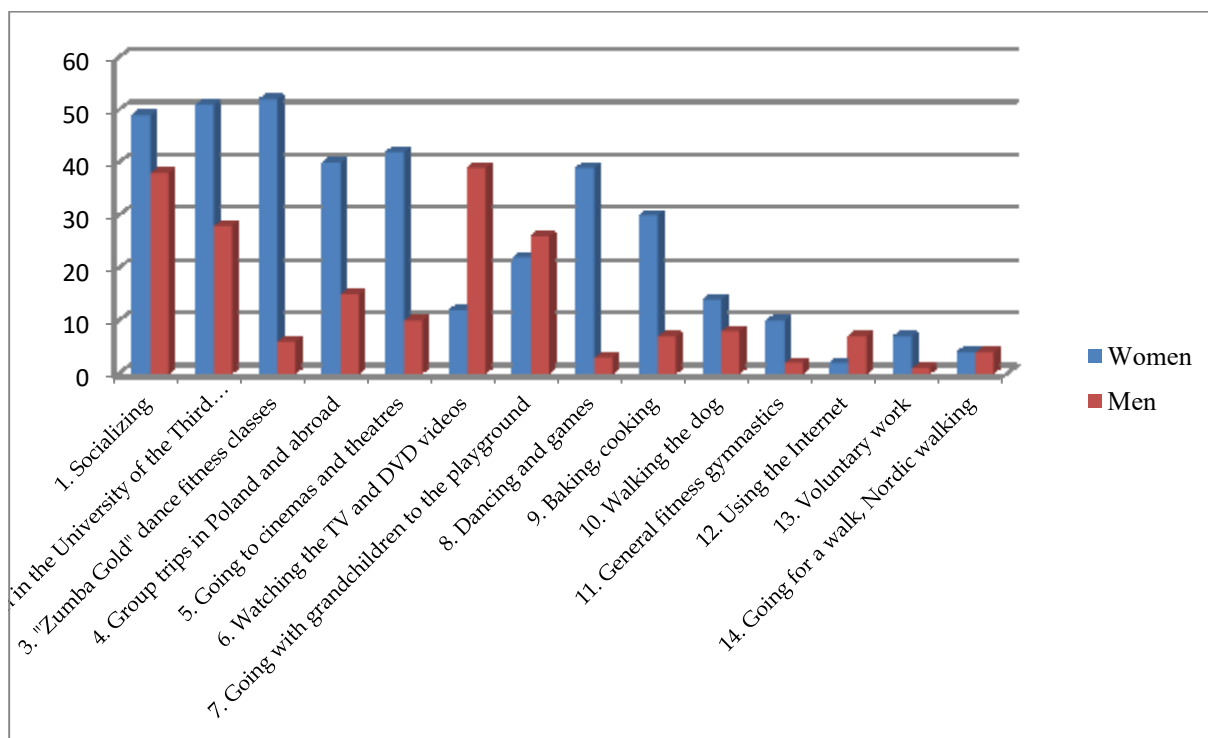


Figure 2 **Forms of activity**

Conclusion

- to the most seniors, the most important thing is to maintain good health status, improve financial status and continue to be independent in everyday life,
- 3/4 people wanted a faster access to medical services and more frequent contacts with friends
- almost half of the respondents want to extend their knowledge and are willing to help other people. Women want to be needed more frequently than men
- older adults need to be involved in cultural, recreational and tourist activity
- several seniors would like to work professionally
- the most attractive social meetings for seniors are organized in nursing homes ("Senior Homes"), the University of the Third Age, dancing classes and trips in Poland and abroad.
- half of seniors like participating in cultural events (theatre, cinema), watch TV, walk with grandparents for a walk and cook
- the fewest people are interested in Nordic walking, using the Internet or charity and voluntary work to help others.
- there are numerous services and classes for older adults in the city.
- Activation Centre, social assistance centres, Town Hall, Municipal Sports and Recreation Centre, cultural centres, non-governmental organizations, hiking, cycling, bus excursions, sight-seeing walks, recreational trips, workouts, orienteering exercises, aerobics, zumba and salsa classes, floor dancing. There are more and more recreation playgrounds dedicated to older citizens.
- an attractive form of physical recreation is swimming and aqua aerobics classes which are organized in indoor swimming pools. The campaign "Pogodna jesień - starzej się zdrowiej" ("Happy autumn: age healthier") includes sports and recreation classes for seniors, such as gymnastics, zumba, aerobics, dancing clinics. The Częstochowa Seniorom program ("Częstochowa for Seniors") for 2014-2020 was comprised of lectures of health prevention e.g. "Adaptation of human body to physical exercise", "Human nutrition", "Obesity and its complications", Yoga and its effect on human body".
- Open Nordic Walking Częstochowa Championships have been organized since 2015, with judges assessing walking technique and race time, whereas walking sections are adequately adjusted to the age groups and abilities of participants.

- The Senior Activity Centre offers a cycle of garden parties, trips for picking up mushrooms, celebration balls, physical exercise classes in the places of recreation and sightseeing excursions.
- "Zumba Gold" classes are organized in a sports hall and are gaining much popularity not only among women as a number of men also participate in these activities.
- „Sports Seniorsympics”, „Regional Senior Olympic Games” are only a few of many sports and recreation events in the city region designed for the oldest citizens.

Summary

Seniors represent the group of people with huge intellectual and social potential that can be utilized in many domains. Contemporary seniors are aware that health and life success largely depend on psychophysical disposition and lifestyles. Many cities are engaged in the initiatives aimed at older adults, focusing on the development of local programs of activation and support for this age group of citizens. These programs are characterized by a wide scope of activities in terms of health protection and social care, including prevention.

These problems are critical from the standpoint of society and individual needs of older adults and result from the rules used in the democratic state, where weaker groups have to be particularly protected.

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MUSIC AND LANGUAGE IN INTERDISCIPLINARY CONNECTION

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Abstract. Nowadays speech and language development is actual problem. This research was conducted to find out how music could help in solving this problem and to find out how connected music and language processes are in our brain. Language and music share a lot of similarities in terms of neurology, Music Therapy, communication and psychology and their interactions are successfully used in these sciences. Aim of this research was to gather data and scientific basis for music's ability to improve speech and language. Main findings indicate that this topic has been studied for decades and still hasn't lost its significance. Music can influence language processes, lessen disorders because it is neurologically and psychologically close to our spoken language.

Keywords: music, music therapy, language, neurology.

Introduction

The question whether music can be used to develop language skills has been occupied scientists and researchers for decades. By now, in the whole world there had been many practical researches on music and language interaction. They try to define detailed similarities and differences in language and music learning, perception and their communicational characteristics.

This is a theoretical research that includes aspects of music therapy, linguistics and neurology and some conclusions acquired during the practical work in Music Therapy. It is based on music therapy findings and researches by Diana Deutsch (2010), Anthony Brandt (2012), Judy Barker (1999) and many other authors.

Goal of this research was to summarize the main discoveries in fields of neurology and neuropsychology, music therapy and linguistics and give an insight in possibilities of music application in stimulating language development and acquisition.

This research first talks about how we learn languages and music, especially in our childhood. Then it looks at which language processes music develops and describes how we perceive music and language. Then article summarizes how

music helps in music therapy and how a person could benefit from musical training in the context of language and brain development.

Information was gathered by summarizing and analyzing information and data from various practical researches.

The main point is that music and language both are deeply connected in human brain, culture, habits and life itself. One can say – music is an artistic and multicultural language, but language is phonemically orchestrated melody.

Learning music and language

Every research (Deutsch, 2010, 2012; Brandt, Gebrian, & Slevc, 2012; McMullen & Saffran, 2004; Hallam, 2009) confirms that child learns language by its musical characteristics. And any person, also adults cannot master language without any kind of musical hearing (Deutsch, 2010). Especially if they do not have experience in learning foreign language phonemes, human brain at first perceives only the melody and rhythm of language, and then with time learns to differentiate the phonemes.

Sensitivity to musical sounds appears since birth. Newborns excel with ability to differentiate and perceive by hearing phonemes of any language, though it is not connected to ability to perceive their contents and lexical meanings (Brandt, Gebrian, & Slevc, 2012).

Words in the language are always unconsciously foreseen and that attaches deeper meaning to them based on experience. These prognoses give general context in language and music. Ability to prognosticate can be developed by learning musical compositions, songs and musical instrument play (Tillmann, 2012).

Children brain is more plastic than adult brain and functional division in structures and hemispheres does not yet exist (McMullen & Saffran, 2004). Till the age of 36 months the development of music and language is united, but at the age of 3, differences in music and language perception appear and they continue to develop in parallel ways maintaining strong connection (Brandt, Gebrian, & Slevc, 2012).

Music develops language

Singing to a child is a prerequisite to communication and dialogue. The first 3 years of life are the most significant in developing communication skills (Mervyn, 2012). The basics for communication skills are developed by parent-child communication through singing and expressive talking even when it still seems one-sided. The skills that develop in such case are: attention to faces, speech and objects; listening and responding or conversation skills; ability to

predict what will happen next; imitation; ability to maintain concentration; ability to understand facial expressions, voice tones and other people actions (Perry & Ri, 2005). Barker, from her own experience with her daughter who has Down syndrome, emphasizes that “singing and music composing is vital for children with learning difficulties” (Barker, 1999).

S. Salmon and K. Schumacher (2001) speak about specific influence mechanisms of music as a media, and also mention that the music speaks in language that can be understood even with cognitive restrictions. Newborns can already perceive and differentiate such phenomenon as: intensity, rhythm and form.

Music and language perception

The music activities especially well develop the ability to perceive emotions in language and use them in speech – fear, anger, joy. Music works on children physically with sound waves and psychologically evoking emotions (Deutsch, 2010). As a result of such interaction the rhythm and tempo of the music improve language fluency and ability to deliberately express oneself in speech.

With the same principle the music can stimulate the reading ability, its speed. Because music can develop ability to decode what is written, improve memory, enrich the active vocabulary and make that intuitive and emotional feel that we all have for the native language (Hallam, 2009; Mervyn, 2012).

Each music component activates different regions of brain, stimulating their simultaneous participation in processes. That improves perception, cognitive and sensomotoric processes and is significant to speech and language development (Harman). They also activate both cerebral hemispheres, especially the Brock and Vernick regions which are vital to processing linguistic information (Lawrence, 2010).

Music as a great help in therapy

Music therapy has become very active in both – Latvia and Liepaja. In its practice it is often seen that speech and language development problems are coexisting with many illnesses and disorders. Since music therapy is a scientific usage of music with therapeutic aims, it includes also actions for speech development. Music therapist works in multidisciplinary team, often cooperating with speech therapists professionally involving music in developing speech.

Singing in foreign languages is easier than speaking, because word fluency is accented by melodic development and basically singing itself, even unknowingly, asks for more expressive mouth movements and better articulation from both – the child and the therapist that works with him.

Relating to the rhythm, music therapy uses a practical method called "speech motoric mapping" – in which to develop and add syllables that child could articulate fluently and without big difficulties in therapeutic work the musical rhythm syllables are used as a great help.

In musical activities, playing music and speaking music therapy uses hand-mouth neurological connection mechanism, which can be seen, for example, in children with cerebral palsy. In such cases, operating with a hand allows to use possibilities to work with speech mechanisms, for example, vocalizing. Finger motoric in other cases (for example, piano playing, scale and other theme playing) influences speech-language fluency.

Songs with repetitions help in learning words, specific speech sounds and basic elements of language. Because lyric adding to the music divides the words in syllables, emphasizes main consonants and in perception seemingly slows down the speech sounds. Repetitive interaction with songs helps children to feel how are functioning the rules of language and develops prediction ability which is necessary in language perception (Barker, 1999; Mervyn, 2012). Melodic intonation therapy (MIT) uses the same principles about repeated song learning help in developing speech and language skills. MIT is successfully used also for aphasia patients after insult.

Rhythm activities help children with reading problems and dyslexia. Overy (Overy, Nicolson, Fawcett, & Clarke, 2003) researching children with dyslexia, has discovered its connection to rhythmic problems. He has learned how rhythmic activities leave positive and visible influence on phonologic and orthographic skills (Hallam, 2009).

Analysis of the reaction to music and the tasks related to it can help to diagnose language problems and disorders. For example, a child who learns everything very slowly – he will usually forget what the given tasks were. A child with dyslexia most likely will mix up the order of tasks, and so on (Barker, 1999).

Since music almost always triggers a reaction in the listener – as wish to clap along the rhythm or sing along the melody, etc, it is very effective for improving the unconscious speech, language and other similar processes. Nordoff/Robbins active music therapy is based on concept that anyone can react to music; in any one of us "sleeps" the musical child. We should correctly wake this "sleeping child" up and use it as resource for self-healing. Active music therapy's humanistic psychology can be used to activate individual resources and give sense of belonging to a child who usually feels impertinent.

Interaction of music and language in our brain and development of skills

Equivalent for musical melody in speech is prosody – natural melody of speech, which is different for each language. Music influences perception of

prosody by harmonizing the structures in brain that receives the signals sent from ears and encodes the sounds of language and music (Deutsch, 2010). Learning to differentiate musical tones and rhythmic phrases and their associating with visual symbols develops in better phonemic conscience (Hallam, 2009).

Actively working with music child's attention and listening skills obviously improves (Hallam, 2009; Barker, 1999). Music provides children an effective experience for developing the listening skills. While listening to speech or music human unconsciously processes a lot of information in a great speed. Music enables a better understanding of one's own affects and helps to feel like their author inviting to become automatically active (Salmon & Schumacher, 2001).

Speech and music share neurological processing systems, which is why music can influence language perception. Learning music trains the sound encoding process in brain and improves its performance, and also the ability to perceive fast changing sounds (Hallam, 2009) – tones, phonemes in speech, which influences the perception of linguistic phrases. Hence, actively working in music improves not only attention, but also develops the regions of the left hemisphere and overall brain process speed and precision. (Harman, 2008)

As for physical skills necessary for both – singing and speech, vocal tract functioning and its conscious using can be developed with resonance or synchronization, entrainment (Gorow, 2000). Musical synchronization is a physical feeling in the whole body. For example, while singing or tapping the rhythm together with a good performer, after some time the performance will unify, in other words – synchronize and improve. With voice it can be achieved by vocalizing along the songs or instrumental pieces. Not only when the goal is to actually learn to sing, but also when any musical instrument playing is being learnt. This method influences functions and all the mechanisms of vocal apparatus.

Conclusions

The interaction between music and language is unquestionably significant in the personal development.

As a result of this correlation:

1. The work of brain speeds up and becomes more efficient than before the involvement of music, which allows to learn new things more quickly and adapt to new circumstances easier and to follow all happenings in nowadays rapid and changing everyday life.
2. More developed hearing and encoding of sounds improves the perception of any language or musical style and lessens the stress in a process of learning foreign languages.

3. Even without any special skills or knowledge in music a person of any age can learn to be more confident in general, more perceptive in both – music and language and more skilled in communication.
4. The memory and all kind of recall skills significantly improves little by little and helps to learn anything that is necessary for surviving in life, presenting own ideas and thoughts and looking for different kind of solutions for any problem.

Playing music has never been only about the music, but also about the connection between it and dance, movements and language. Music that person creates himself becomes understandable, emotionally and psychically closer to that person.

Active work with music unifies all senses, makes the affects audible, respectively, announcements to others hence helping to handle the affect.

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PARTICIPATION AND PERFORMANCES IN COMPETITIONS: LATVIAN ORIENTEERING DEVELOPMENT EVIDENCE

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Abstract. Previous efforts to depict sport development opportunities resulted in a sport development metaphor, the participation pyramid (Sotiriadou, Shilbury, & Quick, 2008). The base of the sport development metaphor represents the relationship between mass and elite participation (Shilbury, Sotiriadou, & Green, 2008) and medals won during the Olympic Games (Sotiriadou & De Bosscher, 2013). The most important international competitions may, therefore, best represent overall sport systems (Sparvero, Chalip, & Green, 2008), but competition opportunities for athletes are the factor contributing to elite success.

The aim of this study is to determine the relationship between mass and elite orienteers' participation and elite orienteers' performances at the most important national and international orienteering competitions. Methods: the official most important orienteering national and international competition results from 2001 to 2016 were obtained from the websites of each annual organizing committee, linked to the International Orienteering Federation website and mathematical statistics was conducted.

The results confirmed a strong, medium and weak relationship between mass and elite orienteers' participation and elite orienteers' performances in the most important national and international orienteering competitions. Orienteers' movement up the participation pyramid is not automatic.

Keywords: participation in orienteering competition, performance in orienteering competition, orienteering development.

Introduction

There are different approaches to the evaluation of sport development. In such a sport development model as a pyramid, the main goal is to organize mass sport and recreational activities, as well as to endure the preparation of future champions. This study will analyse whether the orienteering development is linear and whether it is reflected as a participation pyramid, the basis of which is participation in mass sport and the apex is participation on an elite level, or whether its development is complex (Sotiriadou et al., 2008).

What is the relation between elite and grassroots sport, is sport meant for medals of some elite athletes or for the improvement of human health? The development of elite sport is considered to be dependent on the participant participation in grassroots sport or independent of participant participation in grassroots sport, but in this case an early selection of potential top athletes is carried out, this approach is less supported (Houlihan & Green, 2008).

Research shows that the budding top athletes need to adapt to intensive, sport-specific training programmes to be internationally competitive and to succeed; however, these programmes should be implemented only gradually and at the time appropriate for the development of the new athlete (Côté & Vierimaa, 2014), if these conditions are not taken into consideration, it promotes the drop-outs of new athletes. In many countries, a structured system and a policy related to it is essential for sport development in the sport system. Many countries still specify the system, policy and ways that are necessary for a sustainable development of the sport system (Berger et al., 2008).

This article will explore the orienteering sport development in Latvia, taking into consideration the relationship between high performance sport and participation. The aim of this study is to determine the relationship between mass and elite orienteers' participation and elite orienteers' performances in the most important national and international orienteering competitions.

Theoretical Framework

This subchapter will discuss the understanding of the essence of sport development and its characteristic indicators, such as “participation” and “performance”.

Sport development can be defined as a dynamic, systemic (input-throughput-output) and spiral-type system, in which sport development is a dynamic process, in which the involvement of the parties interested in the sport development provides the necessary strategies and paths of sport development, which promote involvement of sports participants, retention/transition and support (Sotiriadou et al., 2008). Thus, sport development is systemic, its development depends on the set goal to promote mass involvement or to develop talented athletes, i.e. to develop through sport or to develop the sport (Sotiriadou et al., 2016). Sport has three main results – achievements, participation and personal development. Unfortunately, governments usually want to achieve one of them at the expense of another (Côté & Vierimaa, 2014).

Research on participation in sport has established that it is affected by several variables characterizing the participation – cognitive, psycho-social and situational. They can be divided into: socio-individual characteristics (e.g., age, gender and ethnicity); psychological predispositions (e.g., attitudes or

motivations); socio-cultural influences (e.g., household socio-economic status, family support and peer influence); situational or environmental factors (e.g., school size, urban/rural setting, environmental aesthetics and transportation) (Berger et al., 2008).

There is a lot of research done on gender differences in participation in sports that suggest that girls and women participate in sport less, compared to boys and men (Berger et al., 2008; Hébert-Losier et al., 2015).

Participation in sport is associated with several benefits for improving health, but there is very little evidence that improvements of health are a result of participation in sport. The improved health aspects from sport participation were also often associated with recreational play rather than with competition (Eime et al., 2013a; Eime et al., 2013b). It could be possible that sport tried to involve individuals, who were healthy and well-developed. Thus, they are teenagers, who already are physically competent and are happy to engage in sports (Vella et al., 2014). Teenagers in sport often create a self-selected sample.

Participation in sport increases in late childhood and early adolescence, i.e. at the age of 12 for girls, but at the age of 15 boys reaches the maximum in participation in sport. An excessive emphasis on the result promotes sport drop-outs during adolescence (Telama et al., 2006; Telama, 2009).

Unfortunately, youth participation in sport is not always associated with their positive development (Zarrett et al., 2009). Both in the talent development models in sport and the positive youth development model, the longest existing and necessary element is support (Harwood & Johnston, 2016), where, for example, staff supporting elite orienteers see themselves not as providers of a service, but as members of the team (Henriksen, 2015).

Without a deep understanding of grassroot sport in the sport development processes, in particular the understanding of youth and their participation in sport, it is impossible to create an evidence-based policy and the benefits provided by participation in sport cannot be achieved (Berger et al., 2008). Grassroot sporting events can attract individuals to sport development and increase their active participation through targeted training and participation in events (Skinner et al., 2008). If it is desired to involve in sport as many adult participants as possible, alternative involvement points should be created, for instance, from participant motivation, which eliminate the barriers caused by socio-ecological factors (Rowe et al., 2016).

The developmental model of sport participation reflects the three dimensions of participation in sport: participation in recreation through selection, elite achievements through selection and elite achievements through early specialization. Two of these dimensions – participation in recreation through selection, elite achievements through selection – have the same basis – the age of 6-12 years. After this selection age group, the participants in sport can

choose whether to get involved in sport as recreation – the recreational age after 13 years of age, or to focus more on the achievement sport – the specialization period from 13-15 years of age, serious involvement after 16. The final result of these two approaches are different achievements, but they have a similar benefit to the physical health and psycho-socially. The third approach – elite achievements through early specialization, promotes elite achievements, but because of it health may suffer and there may be a loss of happiness (Côté & Fraser-Thomas, 2007). In turn, the age of peak performance for both male and female orienteers ranged from 27 to 31 years (Hébert-Losier et al., 2015).

Seven paths have been identified in sport development, which indicates a non-linear sport development, which allows participants to enter a sport, leave the sport or to repeatedly return to it at different participation levels. The non-linear approach in sport developments shows that many people participate in sports without the wish to reach the highest level. However, others think that the given opportunities and talent promote the transition to the higher levels in championships and people want to become elite athletes that reach the highest achievements in their career. At the end of their careers, some athletes want to leave the sport. In turn, others return to sport at an elite level in another type of sport, while others, after leaving active participation in sport, become coaches, volunteers or work in the media, or leave the elite and participate in championships of a public level (Sotiriadou et al., 2016).

Competitive performance by itself is an inadequate criterion for talent identification because it can be affected by a number of other factors that are obscured when only performances at competitions are taken into account. However, it can be used as a criterion when transitioning from one level to another and it is used in determining talent (Brouwers et al., 2012). The most important international competitions may, therefore, best represent overall sport systems (Sparvero, Chalip, & Green, 2008), but competition opportunities for athletes is the factor contributing to elite success, because the role of competitions increases during specialization, they help to improve skills and provide international experience (Brouwers et al., 2012). We were interested in the opportunity to explore Latvian orienteering development pathway, by determining the relationship between grassroots and elite orienteer's participation and elite orienteer's performances at the most important national and international orienteering competitions.

Methodology of the Research

In order to determine the relationship between grassroots and elite orienteers' participation and elite orienteers' performances in the most important national and international orienteering competitions, the official most important

orienteering national competition (Latvian Cup (LC) – *Latvijas kauss*) participation and international competition (European Youth Orienteering Championship (EYOC)) results from 2001 to 2016 were analysed, which were obtained from the websites of each annual organizing committee, obtained from the websites of each annual organizing committee, most of them linked to the International Orienteering Federation website, were analysed in the period of 2001 to 2016 (youth groups WM12; WM14; WM16; WM18; WM20).

The Latvian Cup (LC) is an orienteering championship series (18-25 championships), in which the best athletes of the year are determined in each Latvian Cup group from WM 12- WM 80. In the LC overall score, the 7-8 best results are summed up. When analysing LC results, those youth participants were selected, who have participated and received a full LC overall score. SPSS Statistics (version 22.0) data processing programme was used for data analysis, where descriptive statistics was carried out. Kolmogorov-Smirnov criterion was used to determine whether the data are parametric or non-parametric. Non-parametric statistics correlation analysis method was used to determine Spearman`s correlation coefficient.

Results

From 2001 till 2016, 5649 young adults have participated in the Latvian Cup (LC) championship series, from which 2168 are female (W=38.3 %) and 3481 - male (M=61.7 %). The average number of participants in each age group during this period was: W12 - 31.50 ± 6.22 ; M12- 50 ± 8.37 ; W14 - 31.75 ± 7.23 ; M14 - 52.56 ± 10.32 ; W16 - 31.31 ± 5.82 ; M16- 50.38 ± 11.89 ; W18 - 25.50 ± 7.16 ; M18- 40 ± 10.19 ; W20 - 15.89 ± 4.45 ; M20- 24.44 ± 7.24 . The total number of participants during this time period in each age group is shown in Figure 1, which also shows that women participate less in the Latvian Cup championships than men in all age groups and the largest number of participants in both the women and the male group is at the age of 14.

Figure 1 illustrates the ratio of the total number of participants in each age group and the selected participants (S) with an overall score in each age group by genders during the researched time period. 956 women, which is 44 % percent of the overall number of participants, and 1507 men (43.3 %) have obtained an overall score in these championships.

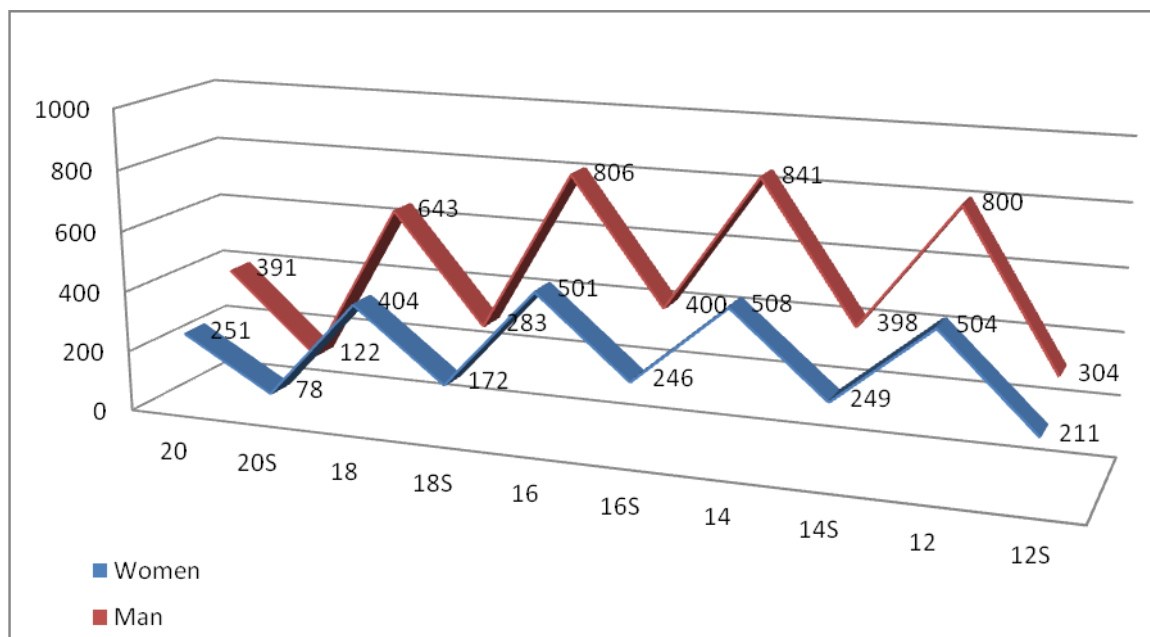


Figure 1 The total number of participants and the selected participants (S) with a overall score in each age group in the Latvian Cup championships from 2001 to 2016

In each age group in the Latvian Cup championships from 2001 to 2016 the relation between the number of selected (S) participants with a overall score and the total number of participants ranges between 1/3.2 - 1/2.03, where the groups have the following proportion: W12 - 41.8 %; M12- 38 %; W14 - 49 %; M14 - 47.3 %; W16 - 49.1 %; M16- 49.6 %; W18 - 42.5 %; M18- 44 %; W20 - 31 %; M20- 31.2 %.

There is a strong and a moderate correlation between the number of selected participants (S) with a overall score and the number of all participants in the W20 group ($r_s = .679$, $p < 0.01$); W18 ($r_s = .699$, $p < 0.01$); W16 ($r_s = .625$, $p < 0.01$); W14 ($r_s = .522$, $p < 0.05$); W12 ($r_s = .563$, $p < 0.05$), as well as a moderate correlation between the number of all participants in the W12 group and the W14 group ($r_s = .529$, $p < 0.05$), but a weak correlation between the number of selected participants with a overall score in the W12 and W14 groups ($r_s = .452$, $p < 0.05$).

The greater the number of participants in the W12S, W16S, W16 groups (LC), the better the results in EYOC W16 individual distance ($r_s = -.603$, $p < 0.01$; $r_s = -.466$, $p < 0.05$; $r_s = -.582$, $p < 0.01$), while the greater the number of participants in the W12 and W16S groups (LC), the better the results in the EYOC W16 sprint distance ($r_s = -.519$, $p < 0.05$; $r_s = -.519$, $p < 0.05$) (Figure 2). There is a moderate positive correlation between the success in the EYOC W16 sprint distance and in the EYOC W16 individual distance ($r_s = .522$, $p < 0.05$).

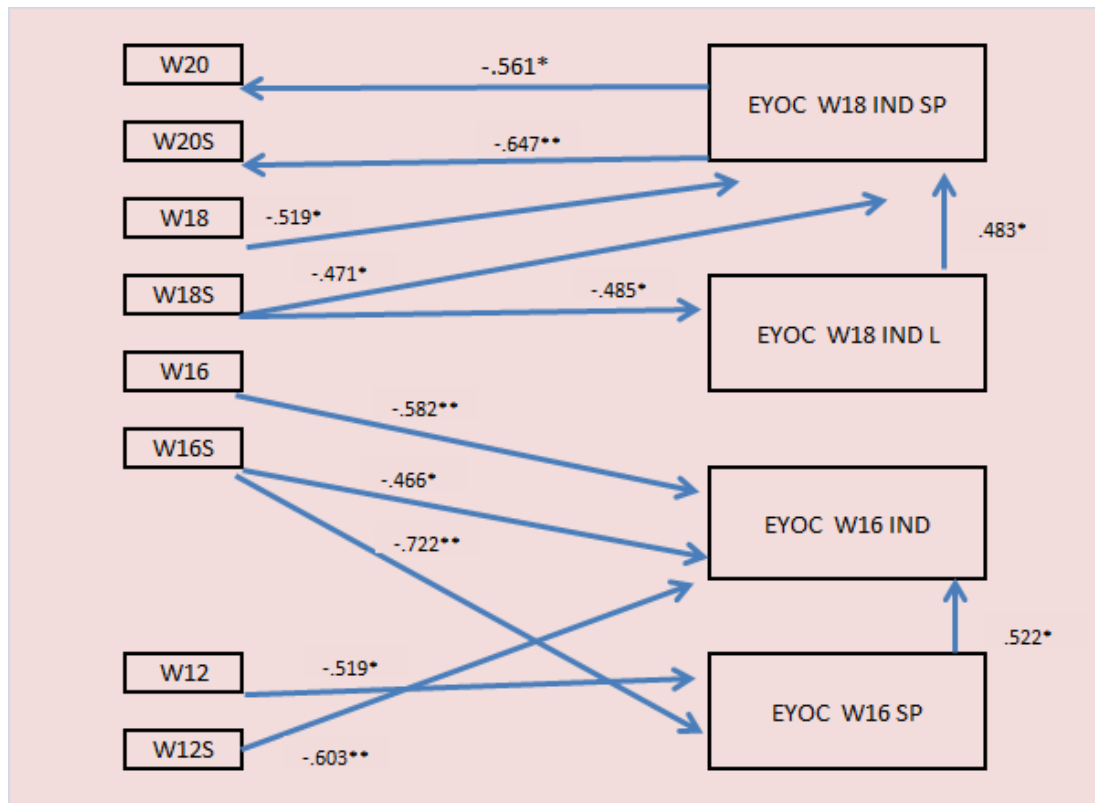


Figure 2 Correlations between the total number of participants, the selected participants (S) with an overall score in each age group in the Latvian Cup championships and the best performance in the EYOC individual and sprint distance (2001-2016)

The larger the number of participants in the W18S group (LC), the better the results in the EYOC W18 individual long distance ($r_s = -.485$, $p < 0.05$) and the sprint distance ($r_s = -.471$, $p < 0.05$), while the larger the number of participants in the W18 group (LC), the better the results in the EYOC W18 sprint distance ($r_s = -.519$, $p < 0.05$) (Figure 2), which, in turn, determines the number of participants in the W20S and W20 ($r_s = -.647$, $p < 0.01$; $r_s = -.561$, $p < 0.05$). There is a weak correlation between the success in the EYOC W18 individual distance and the EYOC W18 sprint distance and ($r_s = .483$, $p < 0.05$).

There is a strong, medium strong and weak correlation between the number of selected participants (S) with an overall score and the number of all participants M18 ($r_s = .958$, $p < 0.01$); M16 ($r_s = .763$, $p < 0.01$); M14 ($r_s = .537$, $p < 0.05$); M12 ($r_s = .477$, $p < 0.05$), as well as a moderate correlation between the total number of participants in the M16 group and M18 group ($r_s = .615$, $p < 0.01$) and the number of selected participants (S) with an overall score ($r_s = .548$, $p < 0.05$), but there is a strong correlation between the number of selected participants with an overall score in M16 and the total number of participants in the M18 group ($r_s = .673$, $p < 0.01$), and also the number of selected participants with an overall score in the M18 group ($r_s = .651$, $p < 0.01$).

There is a moderate positive correlation between the total number of participants in the M14 group and the M18 group ($r_s = .527, p < 0.01$) and the number of selected participants (S) with an overall score ($r_s = .614, p < 0.01$), but a moderate positive and strong correlation between the total number of participants in the M14 group and the M16 group ($r_s = .579, p < 0.01$) and the number of selected participants (S) with an overall score ($r_s = .781, p < 0.01$).

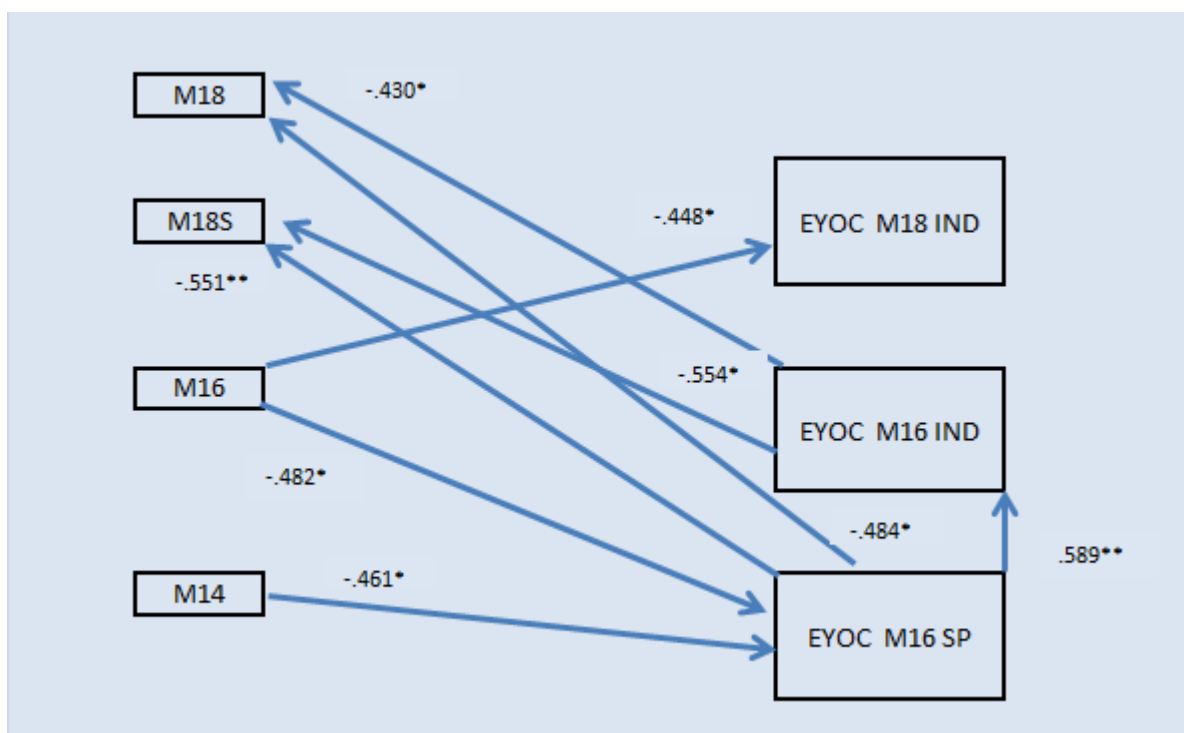


Figure 3 Correlation between the total number of participants, the selected participants (S) with an overall score in each age group in the Latvian Cup championships and the best performance in the EYOC individual and sprint distance (2001-2016)

There is a weak negative correlation between the number of selected participants with an overall score in the M14 group and the number of selected participants with an overall score in the M20 group ($r_s = -.468, p < 0.05$), and also a moderate positive correlation between the number of selected participants with an overall score in the M16 group ($r_s = .547, p < 0.05$). There is a weak correlation between the number of selected participants with an overall score in M12 and the number of selected participants with an overall score in the M14 group ($r_s = .454, p < 0.05$).

However, the best results of individual championships in EYOC M18 has a weak negative correlation with the total number of participants in the M16 group ($r_s = -.448, p < 0.05$), but the best result obtained in the EYOC M16 sprint has a weak negative correlation with the total number of participants in the M16 group

($r_s = -.482$, $p < 0.05$), the total number of participants in the M14 group ($r_s = -.461$, $p < 0.05$), as well as a weak and moderate negative correlation with the total number of participants in the M18 group ($r_s = -.484$, $p < 0.05$) and the number of selected participants with an overall score ($r_s = -.551$, $p < 0.05$) (Figure 3). There is a weak and moderate negative correlation between the individually best result shown in the EYOC M16 and the total number of participants in the M18 group ($r_s = -.430$, $p < 0.05$) and the number of selected participants with an overall score ($r_s = -.554$, $p < 0.05$). There is a moderate positive correlation between the achievements in the EYOC M16 individual distance and in the EYOC M16 sprint distance and ($r_s = .589$, $p < 0.01$).

Discussion

Taking into consideration the total number of participants in each age group in the Latvian Cup championships from 2001 to 2016, it can be concluded that the orienteering development in Latvia is complex (after Sotiriadou et al., 2008), because there is a smaller number of participants in the age group WM12 than in WM14 and it only slightly decreases in the MW16 groups, which is why the orienteering development is not reflected as a participation pyramid, at the basis of which is participation in mass sport and in the apex – participation on an elite level. Participation in sport increases in late childhood and early adolescence, i.e. at 12 for girls, but boys reach the maximum in participation in sport at 15 (Telama et al., 2006; Telama, 2009), while in orienteering girls and boys reach the maximum in participation in LC competitions in the WM14 groups.

A non-linear orienteering development (Sotiriadou et al., 2016) is also shown by the fact that many people participate in the Latvian Cup championships without the desire to reach the highest level, because only 43-44 % of the young participants have participated and received an overall score. According to the developmental model of sport participation (Côté & Fraser-Thomas, 2007), which reflects the three dimensions of participation in sport: participation in recreation through selection, elite achievements through selection and elite achievements through early specialization. Orienteering is characterized more by elite achievements through selection, specialization period from 13-15, but serious involvement after 16.

Conclusions

The study results show that in all age groups both genders have a strong and moderate correlation between the number of selected participants (S) with an overall score (LC) and the total number of participants, as well as the success

obtained in the EYOC WM16 individual and the WM16 sprint distance and between the number of selected participants (S) with an overall score (LC) and the total number of participants and also in the EYOC WM18 individual distance and between the number of selected participants (S) with an overall score (LC) and the total number of participants.

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THE RELATIONSHIP BETWEEN ADOLESCENTS' PHYSICAL INACTIVITY AND HEALTH

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Abstract. *The research aim is to reveal the interrelationship between adolescents' sedentary lifestyle, physical inactivity, and health. The research methods include analysis of scientific literature, questionnaire survey, and mathematical statistical analysis of quantitative data. 528 schoolchildren (aged 13 to 14 years) and 520 parents participated in our survey. Most of the adolescents indicated being healthy or completely healthy, however, about half of the children had some health complaints over the last six months: headache, nervous tension, insomnia, dizziness, or weakness. The adolescents' indispositions could be related to the learning load and long periods of sitting, and especially insufficient physical activity in the fresh air. Nearly half of the parent respondents believed their children did not have enough time due to heavy learning loads at school and at home. The majority of the parents indicated that their children spent a lot of time at the computer. The schoolchildren respondents who attended additional private lessons and non-formal education activities were characterised by a higher level of inactivity. Adolescents' physical inactivity is related to the time spent on ICT (computers, TV), the frequency of their choice, and the duration of doing their homework.*

Keywords: *adolescents, health, physical inactivity.*

Introduction

Scientific and technological achievements improve the quality of human life, reduce the need for manual labour, and predetermine high quality standards for intellectual education. The educational technologies that have existed in schools for centuries are complemented by new information and communication technologies. Currently, schools are rapidly installing educational software programmes, electronic textbooks, and the Internet, allowing access to open learning environments, hypertexts, and microworlds. Changes in the learning environment, new educational technologies in the (self-) education reality, and virtual communication offer new opportunities for effective learning, for the acquisition of new knowledge, and for being in the centre of the current events. The experience is important for the personality maturity. As emphasised by scientists, the media (computer, TV, etc.) have turned into a transforming social

power which preconditions young people's lifestyles. Schoolchildren in particular spend a lot of time sitting in front of the computer and TV screens, writing text messages, and talking on mobile phones (Biddle et al., 2004; Hastings et al., 2009; Patel et al., 2010; Uznieņė, 2010; Andrijauskas & Batutis, 2013; Nedovic & Morrissey, 2013).

In various research studies and recommendations, physical inactivity is frequently defined as a health risk factor. As revealed by recent studies, physical inactivity is considered to be one of the major chronic non-communicable diseases risk factors (WHO, 2002, 2004, 2010; Bouchard et al., 2007; Skurvydas, 2008; Horton, 2009; Dugdill et al., 2009). Long-term sitting activities are related to the imbalance between energy intake and energy expenditure and often become a cause of numerous diseases: cardiovascular (Boreham & Riddoch, 2001; Andriuškienė et al., 2007; Sarradel et al., 2011; Glazer et al., 2013), metabolic syndrome (Healy et al., 2008; Baceviciene et al., 2012), overweight and obesity (Dencker et al., 2006; Stokkenes & Fougner, 2011), or mental health (Bertheussen et al., 2011; Helgadóttir et al., 2015; Brunet et al., 2013). In accordance with research data, the children who spend hours in front of computer and TV screens experience more psychological problems. Compared to their peers, they find it more difficult to communicate and cooperate, they tend to be hyperactive and face psychological problems. As emphasised by D. G. Mayers (2008), the children who spend much time in front of the screens feel anxiety and fear of violence manifestations in the surrounding world. A. Zaborskis, A. Raskilas (2011) argue that the children and adolescents who do not move enough are put at risk of obesity and cardiovascular diseases or can demonstrate symptoms of depression. J. Doveikienė (2011) notes that adolescents are already affected by senile diseases. 12 to 14-year olds are diagnosed with spinal osteochondrosis and disk herniation. Incorrect prolonged sitting without moving, tense eye muscles, and too small distance from the screen cause the computer vision syndrome which manifests itself through symptoms including eye dryness, itching, irritation, and redness, and also disrupts the functions of bones, muscles, and the circulatory system. Immobility has a negative impact on the psyche of such children, their cognitive function becomes worse, and they find it difficult to concentrate during lessons. Because of immobility, their irritability increases and the sleep is disturbed.

Thus, physical inactivity and the lack of exercise in adolescence is harmful to one's health and forms an inactive lifestyle stereotype. The sedentary lifestyle-caused harm is difficult to compensate for even by physical loads, especially if adolescents take part in sporting activities irregularly. All that motivates the search for promising insights related not merely to the correction and management of the media impact, but also to the optimisation of the health-conducive physical

activity, especially during leisure time, and to its integration into the teaching/learning at school and after school.

The object of research is adolescents' sedentary lifestyle, physical inactivity, and health.

The aim of the research is to reveal the interrelationship between adolescents' sedentary lifestyle, physical inactivity, and health.

Research methods: analysis of scientific literature, questionnaire survey, mathematical statistical analysis of quantitative data.

In 2012, opinion surveys of the schoolchildren of Lithuanian comprehensive schools and of their parents were carried out. Two questionnaires were developed: one for schoolchildren who attended lessons of physical education, however, took no part in the process of non-formal physical education, and the other for parents raising 13 to 14-year-old children. The respondents of the survey were 528 schoolchildren (13 to 14-year olds) from 14 comprehensive schools in four Counties of the Republic of Lithuania (those of Klaipėda, Kaunas, Šiauliai, and Tauragė), selected for the survey by means of convenience sampling in different type schools. 520 parents took part in the survey. About half (53,7 %) of the parent respondents had higher university education, 17,3 % were college graduates, 16 % had special secondary education, 9,3 %, secondary education, and 3,7 %, basic education.

The data of the survey were processed by the SPSS software programme (version 22.0), and MS Excel calculator 2007. To determine correlation, Spearman's correlation coefficient (r) was used, whose values ranged from 0 to ± 1 . The evaluations of the empirical r values were: from 0 to + 0,3, a weak direct link; from + 0,3 to + 0,7, a average direct link; from + 0,7 to + 1, a strong direct link; from 0 to -0,3, a weak inverse link; from -0,3 to -0,7, an average inverse link; and from -0,7 to -1, a strong inverse link.

Adolescents' evaluation of their own health and indispositions felt

The majority of adolescents felt quite positive about their health. Through the analysis of 13 and 14-year-old respondents separately, it was established that most (78,3 %) of the 13-year-old adolescents (boys and girls) indicated they were "healthy" or "completely healthy", and among 14-year-old adolescents, the "healthy" ones accounted for 77,4 %, i.e. by 0,9 % less (Fig. 1). When comparing the answers with respect to the gender, it was obvious that more boys than girls both in the group of 13-year-olds ($\chi^2 = 6,07$, $df=4$, $p<0,193$) and of 14-year-olds felt being "healthy" or "completely healthy".

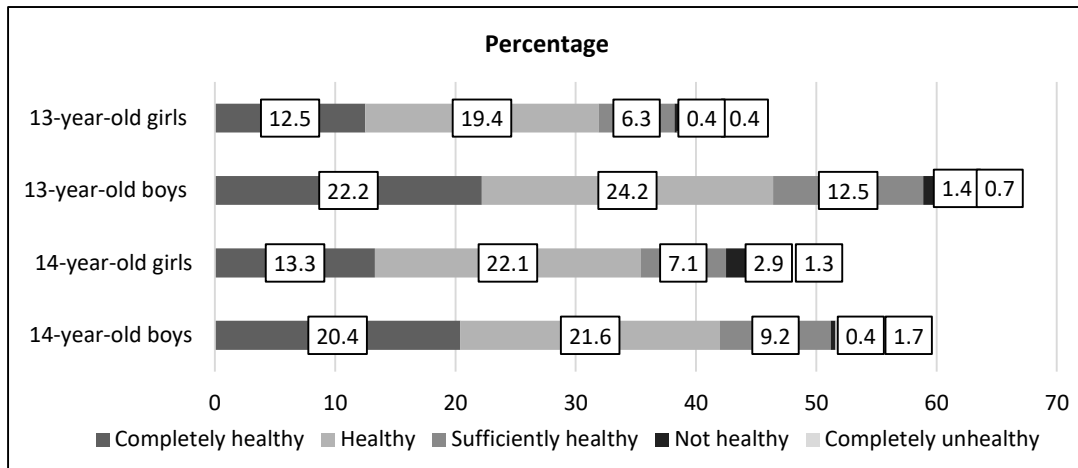


Fig.1 Percentage distribution of schoolchildrens' views of their own health by age and gender

It was noted that the adolescents evaluated their own health more positively than their parents. We sought to find out *what indispositions were experienced by adolescents*. 52,9 % of 13-year-old and 50,1 % of the 14-year-old adolescents said they were not feeling well. The rest stated that over the past six months they did not have any indispositions. A detailed analysis of the data proved that the majority of the respondents complained of headaches: 6,3 % of the 13-year-old girls and 8,7 % of the boys, and respectively 1,3 % of the 14-year-old girls and 7,9 % of the boys (Fig. 2).

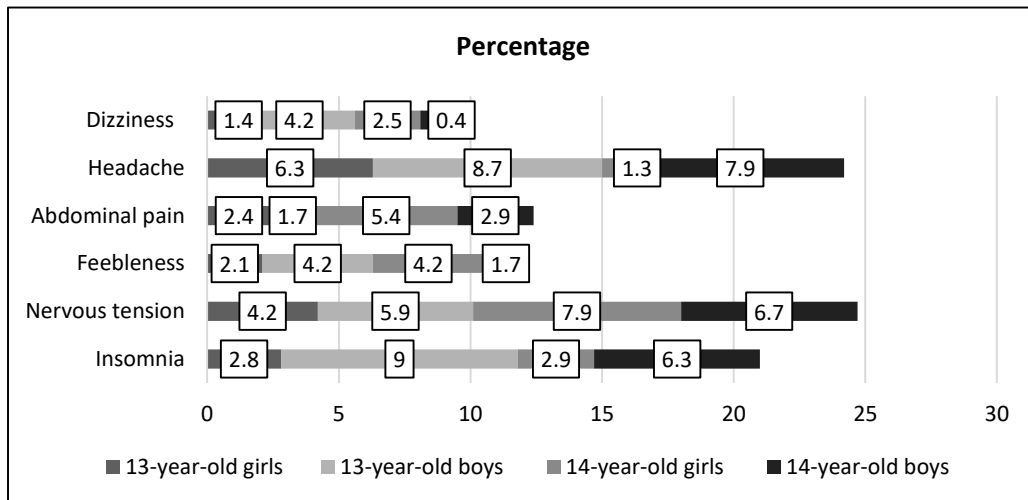


Fig.2 Percentage distribution of the adolescents' views of their indispositions

A slightly larger percentage of the 14-year-old girls (7,9 %) than of the 13-year-old girls (4,2 %) and a slightly larger percentage of the 14-year-old boys (6,7 %) than of the 13-year-old boys (5,9 %) felt nervous tension. Some

adolescents complained of addominal pains, insomnia, dizziness, and feebleness. No statistically significant differences between the boys and the girls were established.

Parents' views on their children's sedentary lifestyle with respect to health

As proved by the research carried out by M. Barkauskaitė et al. (2004), 47 % of the surveyed schoolchildren failed to do all the home assignments, as there were too many, 39,3 % felt tired and did not have the strength to do homework, and about 20 % of the schoolchildren found it difficult to concentrate and thought that the homework was boring and uninteresting. 13,7 % of the schoolchildren indicated that homework took them two or three hours, and only 5,9 % of the schoolchildren were doing their homework for up to four hours. The amount of time allotted to homework was increasing with age: e.g., 16,9 % of the 11th form schoolchildren were doing their homework for more than 4 hours. The girls devoted more time to doing homework than the boys. Consequently, a substantial number of the schoolchildren were spending more time on their homework than provided for by hygiene standards. The authors found out that half of the schoolchildren devoted 1 to 2 hours to rest after lessons, while 9,8 % did not have rest at all. They argued that a schoolchild's day lasted as long as an average working adult's one. Adolescents spent six to seven hours per day in lessons and then were doing homework at home. A question arose *whether adolescents had enough time* not only to prepare for the lessons, but also to take part in non-formal education events or to undertake other favourite activities after school, as well as to health-conducive physical activity.

To grasp the most general trends of harmony between adolescents' leisure, recreation, and physical activity, we thought it was worth finding out their parents' views and viewing schoolchildren's rest from different perspectives. It turned out that almost half of the parent respondents (47,0 %) thought their children were short of time due to excessive occupation at school and at home, a similar number of them (34,8 %) stated the children had enough time, and every fifth respondent (18,2 %) was not sure (Fig. 3).

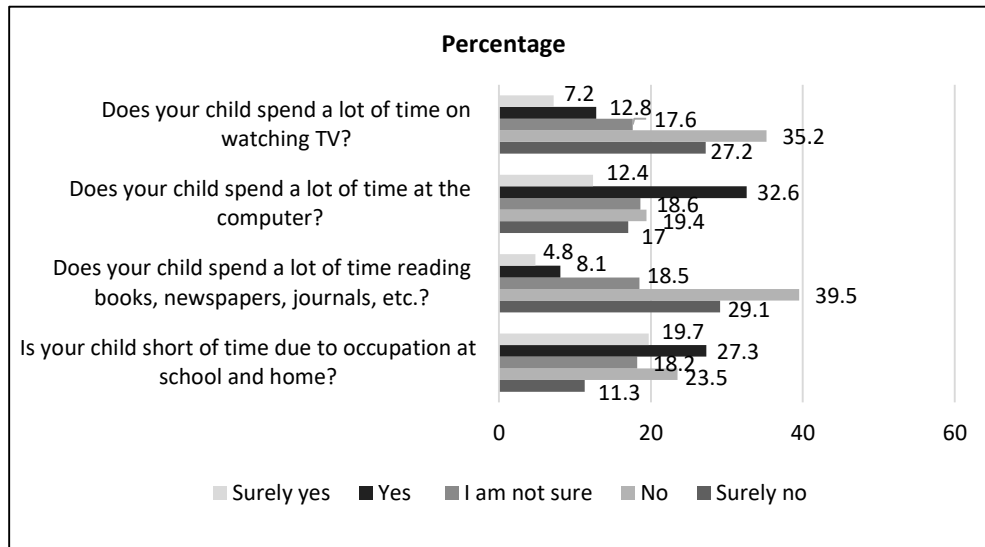


Fig.3 Percentage distribution of parents' views on their children's occupation and sedentary lifestyle

Thus, the trend was identified that about half of the adolescents were rather busy and felt a shortage of time. Therefore, it was important to find out *how schoolchildren spent time after classes and what kind of activities predominated: physically active or passive (sitting)*. For that reason, we sought to establish *how much time schoolchildren devoted to reading of books, journals, newspapers, etc.* The majority of the parents (68,6 %) said their children did not spend much time on reading, only every 8th respondent (12,9 %) indicated the child spent a lot of time sitting and reading, and 18,5 % of the parents were not sure (see Fig. 3).

As seen in Fig. 3, almost half of the parents (45,0 %) stated their children spent a lot of time at the computer, 36,4 % did not think so, and 18,6 % were not sure about the duration of the time at the computer. It should be noted that almost half of the parents indicated their children spent a lot of time in front of the computer screen. As revealed by the research, every fifth (20 %) respondent thought their child spent a lot of time watching TV, slightly more than half of the parents (62,4 %) argued adolescents did not devote much time to watching TV programmes, and 17,6 % of the parents were not sure (Fig. 3). As revealed by a detailed analysis of the data, a meaningful relationship existed between the time spent by adolescents at the computer and other after-school activities and their characteristics, i.e. the more time adolescents were staying at the computer and the longer they were doing their homework and spending the leisure time the way they wanted, the less time they were spending outside on weekdays and at weekends or in sports clubs (Fig. 4).

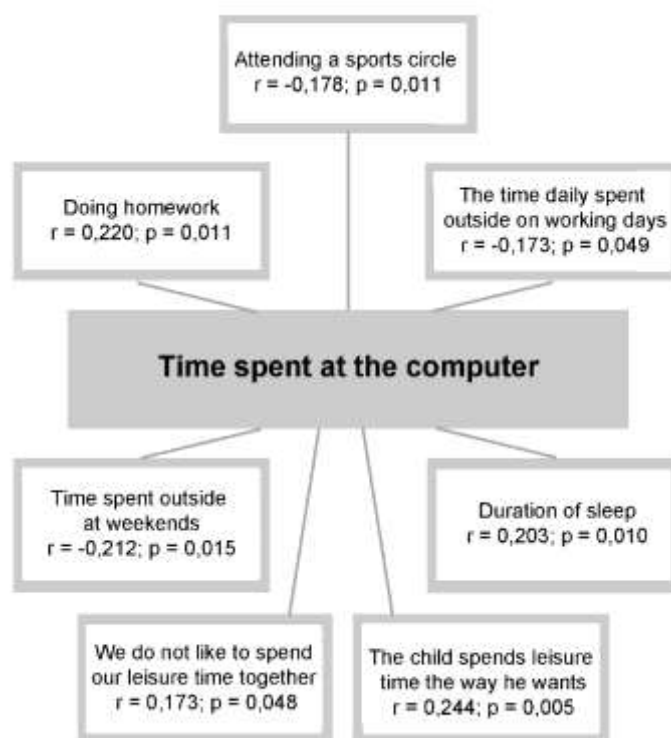


Fig.4 Correlation between the time spent at the computer and the characteristics of other activities (parents' views)

The data suggest that the summation of the sitting time throughout the day: at school and after school – in front of the computer or TV, reading books, doing homework, etc. – means a huge static load for an adolescent's body. Mental activity is undoubtedly associated with psychophysiological tension, therefore, active leisure is physiologically necessary for the body. Learning and also a physically passive, sitting lifestyle without a possibility to rest and relax by actively moving, playing, exercising, immersing into the state of relaxation, or being active in other ways, can turn into a serious cause of different ailments, ill-being, and the tension in relationships. Active rest which realises an individual's striving to act is physiologically necessary for the body. When the need is not met, the balance between the physical and mental states is violated and may lead to pathological phenomena in the body. The more tense the muscles, the greater neuropsychic tension is experienced by a person, and, on the contrary, muscle relaxation shows neuropsychic calm. By relaxing muscles, one can reduce psychological tension and to affect the development of different disorders. A relaxed and rested person is calm, the mental processes are stabilised, and the emotional and mental state is positively affected.

The correlation between adolescents' sedentary lifestyle and the characteristics of the after-school activities (from the schoolchildren's viewpoint)

Adolescents' leisure time differs not merely in the time duration, but also in the way it is spent: some adolescents tend to spend their free time after school in a physically active way (they spend more time outside, play different active games, attend sports clubs, or engage in other activities), while others choose physically passive pastimes, with the prevalence of a sedentary position.

A comprehensive analysis of the research data revealed that a sedentary lifestyle is closely related to adolescents' after-school occupation. A weak direct correlation was established between a sedentary lifestyle and physical inactivity, i.e. the more time adolescents spent reading (books, journals, newspapers, etc.) ($r = 0,16$; $p = 0,000$) or doing homework ($r = 0,13$; $p = 0,005$), if they took private lessons ($r = 0,18$; $p = 0,001$), spent little time outside ($r = 0,48$; $p = 0,000$), spent time at the computer ($r = 0,15$; $p = 0,001$), and attended non-formal education circles (of art, music, etc.) ($r = 0,17$; $p = 0,001$), the more time they stayed sitting and were physically more inactive (Fig. 5).

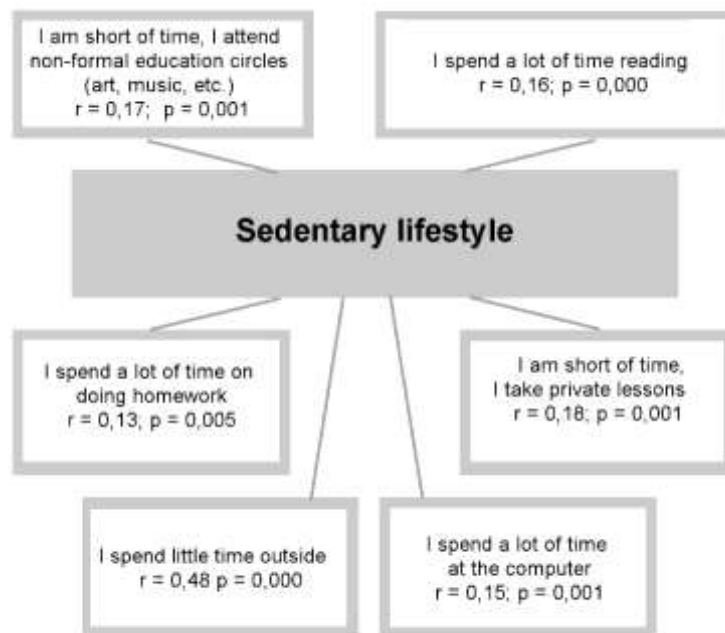


Fig.5 Correlation between adolescents' sedentary lifestyle and physical inactivity (from schoolchildren's viewpoint)

Schoolchildren who have fewer problems related to doing homework, who do not take private lessons and do not attend non-formal education circles related to long periods of physical inactivity, have more time for active pastimes, recreation, and staying in the open air.

The correlation between adolescents' physical inactivity and non-formal education (from the schoolchildren's viewpoint)

Research findings demonstrate that the failure to meet the need for physical activity necessary for the normal functioning of the body blocks adolescents' comprehensive development and improvement. As proved by the research (Biddle et al., 2004), the need for physical activity is not limited to the needs of the physical level, but also helps to realise the needs of a higher level: intellectual, spiritual, social, etc.

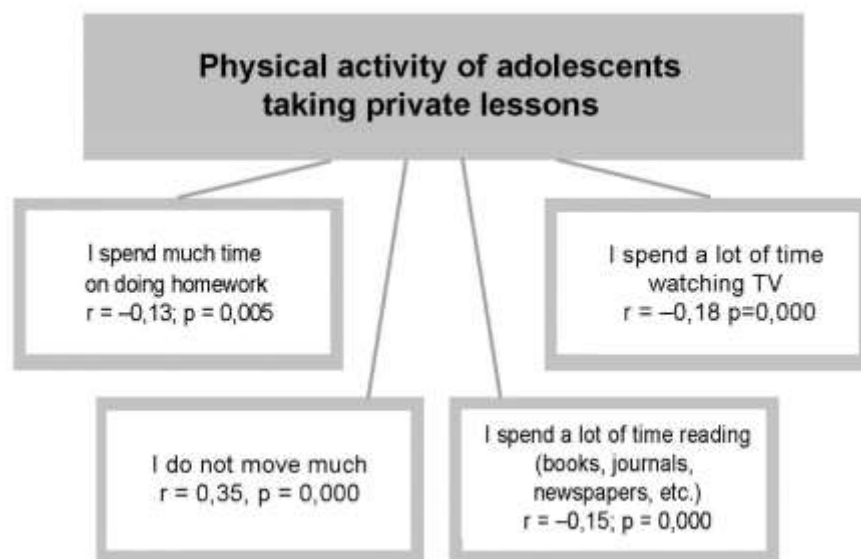


Fig.6 The correlation between the physical activity and after-school occupation by physically inactive pastime forms of the adolescents taking private lessons (from schoolchildren's viewpoint)

The research findings proved the existence of a statistically meaningful inverse relationship between the adolescents' physical activity and the characteristics of the non-formal education practice. It was established that the adolescents *who were taking additional private lessons* had less time for rest, an increased workload, and were physically inactive for longer periods of time. Figure 6 presents the inverse relationship between the sedentary lifestyle and physical activity of the adolescents *taking additional private lessons*. It turned out that the more time was spent by the adolescents on learning - on doing homework ($r = -0,13$; $p = 0,005$) and the longer they were occupied with different physically inactive pastimes, such as watching TV ($r = -0,18$; $p = 0,000$) or reading (books, journals, newspapers, etc.) ($r = -0,15$; $p = 0,000$), the lower their physical activity was. Some schoolchildren, when evaluating their physical activity, admitted they did not move much. The analysis of the data revealed mean direct relationship ($r = 0,35$; $p = 0,000$) between the schoolchildren's taking additional private

lessons, physical activity, and their own evaluation of their physical activity. One could assume that the adolescents deliberately chose additional learning outside the formal education seeking to improve their abilities, however, they lacked moral attitudes with respect to an active lifestyle and the competences to adapt to the environment, to maintain the necessary level of physical activity on their own initiative, and to choose health-conducive leisure pastimes.

Lithuanian schoolchildren very frequently indicate that during their leisure hours they spend a lot of time in front of the screens (computer, TV). It would seem that children who take additional private lessons should more often choose health-conducive behaviour and devote more time to active rest: spend less time in front of the screens and more time on staying in the open air and on movement, however, the research data fails to confirm the hypothesis, because an inverse statistical activity exists between the issues that characterise schoolchildren's physical activity and the after-school physically inactive pastimes. Therefore, it is necessary to make use of the content of education, the supporting measures, forms, and methods and to create a favourable educational space in the family and at school which would promote health-conducive physical activity and help children develop an active and healthy lifestyle.

Conclusions

1. The survey revealed that the majority of the 13 and 14-year-old children respondents indicated being healthy and completely healthy. More boys than girls felt healthy or completely healthy. About half of the adolescents over the last six felt different indispositions: headaches, nervous tension, some adolescents complained of abdominal pain, insomnia, dizziness, and febleness.
2. Schoolchildren's physical activity depended on their after-school pastimes and after-school educational activities. About half of the surveyed parents believed their children lacked time for active recreation due to over-occupation at school and at home. Children spent too much time sitting in front of computer and TV screens.
3. Adolescents' physical inactivity was related to the time spent on ICT (computer, TV), the frequency of their choice, and the duration of doing homework. The more time was spent by adolescents at the computer, on homework, and on leisure activities chosen by themselves, the less time they spent in the open air on weekdays and at weekends and the less they attended sports clubs. The adolescents who took additional private lessons and attended non-formal circles where the sedentary position predominated stood out among peers by a higher level of physical inactivity.

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MOBILO TELEFONU IETEKME UZ LIETOTĀJU VESELĪBU UN TO LIETOŠANAS PARADUMI PIEAUGUŠO VIDŪ

Cell Phone Impact on User Health and Cell Phone Usage Habits Among Adults

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Abstract. *The aim of research is to find out mobile phone adult user habits and understanding of electromagnetic field effects on health. A comprehensive literature searches and analyzation was conducted in the electronic databases (Pubmed, Accessmedicine etc.), to find out later research outcomes about electromagnetic field impact on health, also electronic survey was conducted and results statistically processed with SPSS 24. 192 respondents participated in study: 117–females, 75– males in age range from 18 to 55 years. Hypothesis: Understanding the electromagnetic field health effects reduce the use of mobile phones on a daily basis not confirmed, because the majority of respondents are not willing to change their cell phone use patterns, or believe that it is not possible.*

Keywords: *electromagnetic fields, electromagnetic wave radiation, cell phone, health, usage habits, survey.*

Ievads

Introduction

Pasaulē apmēram 1,6 miljardi cilvēku lieto mobilos telefonus. Lai gan nav tiešu pierādījumu par vāju elektrisko un magnētisko lauku ietekmi uz cilvēku veselību, lietojot mobilos sakarus, tomēr sabiedrībā pieaug bažas un šaubas par to nekaitīgumu un drošumu (Anatomy of an Electromagnetic Wave, 2010).

Pasaulē tiek veikti epidemioloģiski pētījumi, lai noskaidrotu elektromagnētiskā lauka (EML) iespējamus kaitējumus veselībai, taču galvenā problēma, ar ko saskaras pētnieki, ir tā, ka mobilo telefonu lietošana strauji pieaugusi pēdējo 20 gadu laikā. Līdz ar to ekspozīcijas laiks ir samērā neliels, ir grūti savākt precīzu informāciju par mobilā telefona lietošanu. Elektromagnētiskais starojums ir sastopams visur – gan telpās, gan apkārtējā vidē,

visur, kur atrodas elektroniskās iekārtas, līdz ar to nav iespējams precīzi noteikt elektromagnētiskā starojuma devu un frekvenci.

Pasaules Veselības organizācija (PVO) tērē miljoniem dolāru, taču epidemioloģiskos pētījumus veikt ir ļoti grūti. Liela problēma ir kontroles grupa – tātad cilvēki, kuri nelieto mobilos telefonus. Zinot, to, ka pasaulē lavīnveidīgi pieaug abonētu skaits, viegli saprast, ka bieži cilvēks no kontroles grupas kļūst par mobilā telefona lietotāju, līdz ar to nav iespējams veikt ticamu rezultātu salīdzināšanu.

Aktuālie pētījumi tika skatīti zinātnisko rakstu datu bāzēs. Tā, piemēram, poļu pētnieku grupa ir analizējusi elektromagnētiskā starojuma ietekmi uz žurkām, veicot kaulu sistēmas izmaiņu pētījumus (Sieroń-Stołtny, 2015). Savukārt Sauda Arābijas zinātnieks M. M. Khans (Khan, 2008) pierādījis mobilā telefona lietošanas un galvassāpju, noguruma un koncentrēšanās kopsakarības. Indijā ir pētīta mobilā telefona lietošanas ietekme uz medicīnas studentu melatonīna seruma līmeņa rādītājiem (Shrivastava, 2014). Tāpat joprojām aktuāli ir pētījumi par mobilo telefonu ietekmi uz lietotāju dzirdi (Ozturan, 2002), spontānā aborta draudiem grūtniecēm, kas lieto mobilo telefonu (Mobilie telefoni un veselība, b.g.). Pretstatā negatīvās mobilā telefona ietekmes apliecinājumiem, pozitīvi tiek vērtētas iespējas, kā ar mobilā telefona aplikāciju palīdzību nodrošināt fizisko aktivitāšu veicināšanu (Rabin & Bock, 2011).

Neskatoties uz daudzajiem zinātniskajiem atklājumiem, papildus jautājumus rada pašu lietotāju informētība par elektromagnētiskā starojuma, tai skaitā mobilo telefonu lietošanas kaitīgumu, viņu mobilo telefonu lietošanas paradumiem un turpmāko rīcību negatīvās ietekmes novēršanai.

Pētījuma mērķis ir noskaidrot mobilo telefonu ietekmi uz lietotāju veselību un analizēt pieaugušo mobilo telefonu lietošanas paradumus un izpratni par elektromagnētiskā lauka ietekmi uz organismu.

Pētījuma metodes un datu apstrāde:

- Teorētiskās: literatūras un avotu analīze, izmantojot datu bāzes (EBSCO, PubMed, MEDLINE, Accesmedicine u.c.);
- Empīriskās:
 - datu ieguves metode – anketēšana;
 - datu apkopošana un apstrāde veikta, izmantojot SPSS 24, Microsoft Office Excel. Korelācija starp respondentu atbildēm noteikta ar Pīrsona koeficienta metodi.

Elektromagnētiskais lauks un tā ietekme uz organismu *Electromagnetic fields and its effect on the body*

Mobilo telefonu lietošanas ietekmi uz lietotāju skaidro elektromagnētisko viļņu raksturojums. Pēdējo gadu laikā ir pieaugušas bažas par EML iespējamo

nelabvēlīgo ietekmi uz cilvēka organismu, īpašu uzmanību pievēršot ekstremāli zemas frekvences elektriski magnētiskajam lauka un radio/mikroviļņu starojumam, ko rada bezvadu elektriskās ierīces. Attiecībā pret cilvēka organisma darbību un pārējām bioloģiskām ekosistēmām tehnogēnisko elektromagnētisko vidi var uzskatīt par traucējošu faktoru. Starp dzīvo dabu un tehnisko līdzekļu EML avotiem veidojas bioelektromagnētiskās savienojamības jeb savstarpējās iedarbības problēma (Possible effects of Electromagnetic Fields on Human Health, 2007; Eglīte u.c., 2008).

EML iedarbības patofizioloģiskais mehānisms saistīts ar starojuma iedarbību uz šūnas plazmatisko membrānu, izmainot tās caurlaidību. Iedarbības rezultātā notiek kalcija (Ca) jonu izplūšana no šūnas, palielinās stresa olbaltumvielu sintēze, tiek izjaukti šūnu savstarpējie savienojumi, rodas reaktīvā skābekļa pārprodukcija, notiek ornitīna dekarboksilāzes aktivācija, samazinās melatonīna līmenis, smazinās proteīnkināzes C aktivitāte, tiek bojāta DNS struktūra un izmainīta gēnu ekspresija smadzeņu šūnās un izmainīta hematoencefalistiskās barjeras caurlaidība, kā rezultātā pieaug ļaundabīgu audzēju veidošanās risks (Chen et al., 2014; Sri, 2015).

Mobilie telefoni paredzēti, lai izplatītu radioviļņus visos virzienos, tai skaitā arī tieši virzienā uz lietotāju. Pēdējo 20 gadu laikā ir strauji pieaudzis mobilo telefonu lietotāju skaits un attiecīgi mobilo telefonu bāzes staciju skaits, tāpēc, pastāvot bažām par to ietekmi uz veselību, tiek veikti pētījumi, lai noskaidrotu EML izraisītos bioloģiskos efektus.

Ilgstoša, aktīva mobilā telefona lietošana var izraisīt dažādas nespēciskas un nepatīkamas izjūtas, piemēram, dedzinošu sajūtu deniņu rajonā, pakausī, rajonā ap ausi, vaigu ādā. Šīs sūdzības bieži parādās dažas minūtes pēc sarunas uzsākšanas un var ilgt pat vairākas stundas (Hutter et al., 2006). Jāatzīmē, ka dažos pētījumos pierādīta arī atmiņas pasliktināšanās, biežas galvassāpes, samazināta koncentrēšanās spēja, paaugstināts nogurums (Lin et al., 2013). Visas šīs sūdzības galvenokārt saistāmas ar audu uzsilšanu, ko izraisījis mobilā telefona radītais elektromagnētiskais starojums. Jāatzīst gan, ka atmiņas pasliktināšanos, nogurumu, samazinātu koncentrēšanās spēju un galvassāpes var skaidrot arī ar citu faktu – ja mobilo telefonu izmanto darba vajadzībām, tad cilvēks arī ārpus darba laika ir viegli sasniedzams, tādējādi viņam bieži nākas risināt ar darbu saistītās problēmas ārpus darba laika, kas patiesībā neļauj pilnvērtīgi atpūsties (Chen et al., 2014; Electromagnetic fields..., 2014).

Minētās sūdzības izteikti var samazināt cilvēka darba spējas, tomēr nav nopietns drauds veselībai. Daudz nopietnāka problēma ir ļaundabīgo audzēju attīstība (Hardell et al., 1999; Hardell & Sage, 2008). Šobrīd pasaulē tiek veikti daudzi epidemioloģiski pētījumi, kas meklē sakarību starp mobilo telefonu lietošanu un dažādas lokalizācijas audzējiem. Par kritiskajiem orgāniem tiek uzskatītas galvas smadzenes (deniņu un pakaušu daivas), dzirdes nervs, siekalu

dziedzeri (anatomiskās lokalizācijas dēļ) un asinsrades orgāni (augstās šūnu jutības dēļ). Diskusijas joprojām turpinās par to, vai mobilā telefona lietošanu var cēloniski saistīt ar audzējiem (Hocking, 1998; Hutter et al., 2006; Khan, 2008; Behari, 2010).

Zinātniskie pētījumi apstiprina šādu negatīvo mobilo telefonu ietekmi uz cilvēka organismu:

Iedarbība uz imūno sistēmu – pastiprina iekaisuma procesus, pastiprina autoimūnās reakcijas, samazina organisma aizsargspējas pret apkārtējās vides kaitīgākiem faktoriem, grūtniecības laikā veicina organisma autoimūnās reakcijas pret embriju (Hocking, 1998; Knave, 2001; Ozturan, 2002; Khan, 2008; Mahmoudabadi, 2015; Mobilie telefoni un veselība, b.g.).

Iedarbība uz reproduktīvo sistēmu – izmaina organisma neuroendokrīno regulāciju, izmaina hormonu sintēzi, samazina dzimumšūnu produktivitāti, palielina iedzimto patoloģiju risku, palēnina dzimumšūnu veidošanās procesu, palielina priekšlaicīgu dzemdību un spontāno abortu risku (Mohammadzadeh & Mobasher, 2013; Mahmoudabadi, 2015).

Ietekme uz sirds un asinsvadu sistēmu. Jāatzīmē, ka pētījumos Vācijā konstatēts, ka sarunas laikā cilvēkam arteriālais asinsspiediens paaugstinās par 5-10 mm Hg, kas nav bīstami veselam cilvēkam, taču ir nopietni cilvēkam ar izteikti paaugstinātu asinsspiedienu (Repacholi, 2001; Söderqvist, 2008; Redmayne et al., 2013).

Ietekme uz endokrīno sistēmu – stimulē hipofīzi, palielina adrenalīna līmeni asinīs, veicina asins sabiezēšanas procesu, virsnieru serdes izmaiņas, izmaiņas hipotalāma struktūrā (Repacholi, 2001; Hardell & Sage, 2008; Söderqvist, 2008; Trošić & Pavčić, 2009).

Zinātniskajos pētījumos kā biežāki un ātrāk pamanāmi mobilā telefona ietekmes simptomi minēti *nervu sistēmas bojājumi*, kas bieži vien ir blakusparādība iepriekš minētajām saslīmšanām (Behari, 2010; Zajdel, 2013; Zarghami, 2015).

Ietekme uz psihoemocionālo stāvokli – izpaužas kā atkarība no telefona lietošanas, nemiers, satraukums ja telefons nav blakus. Nepārtraukta vēlme pārbaudīt ienākošās ziņas, zvanus, sociālos tīklus. Mobilo telefonu lietotājiem novērojami arī Fantoma vibrācijas sindroms un fantoma zvana sindroms (Rothberg, 2010; Lin et al., 2013; Chen et al., 2014; Da Silva, 2015).

Lai noskaidrotu mobilo telefonu lietotāju paradumus un informētību par mobilā telefona ietekmi uz cilvēka veselību, tika veikts pētījums (Strode, 2016), kurš aprakstīts nākošajā daļā.

Pētījums par mobilo telefonu lietošanas paradumiem ***Study on cell phone usage***

Pētījuma datu ieguvei izmantota anketēšana.

Datu apkopošana un apstrāde veikta, izmantojot SPSS 24, Microsoft Office Excel. Korelācija starp respondentu atbildēm noteikta ar Pīrsona koeficienta metodi.

Datu ieguve

Aptauja ir strukturēta metode datu savākšanai, kas sastāv no jautājumiem, uz kuriem atbild respondents (Kristapsons, 2008). Sākotnējās informācijas ieguvei tikai izmantota aptauja ar elektroniski sagatavotas anketas palīdzību. Šādu izvēli noteica elektroniskās anketēšanas priekšrocības, kas ir šādas: nav intervētāja ietekmes, ir ātri veicama, ar zemu pašizmaksu un zemu vēlamības līmeni (Kristapsons, 2008). Anketa tika izplatīta internetā – izsūtīta uz e-pastiem un izvietota sociālajos tīklos. Pētījuma dalībnieki tika izvēlēti nejauši un anketu aizpildīja brīvprātīgi.

Kopumā anketā ietverti 15 jautājumi. Galvenokārt izmantoti atbilžu izvēles jautājumi. Pētījuma bāze ir pieaugušie mobilo telefonu lietotāji.

Kopējais respondentu skaits ir 192, no tiem 75 vīrieši (39 %), 117 sievietes (61 %), vecums 18-55 gadi.

Datu apstrādes analīze

Respondentu datu statistiskā analīze atklāj, ka 98 % aptaujāto izmanto mobilo telefonu katru dienu, sievietes to ikdienā izmanto biežāk. Aptaujātie mobilo telefonu lieto 3-20 gadus, lietošanas laiks pieaug līdz ar vecumu un izglītības līmeni. 29 % (56) respondentu ir vidējā izglītība un tieši tikpat ir respondentu ar nepabeigtu augstāko izglītību, 21,4 % (41) ir bakalaura grāds, 7,8 % (15) – maģistra grāds, 7,3 % (14) – vidējā profesionālā izglītība, 3,6 % (7) – koledžas izglītība un 1,6 % (3) – doktora grāds.

Atbildot uz jautājumu, kādiem mērķiem galvenokārt izmantojat mobilo telefonu, tika noskaidrots, ka lielākā daļa aptaujāto (85, 16 %) mobilo telefonu izmanto: zvaniem, sarakstei, informācijas meklēšanai internetā, sociālo portālu izmantošanai, fotografēšanai, mūzikas atskaņošanai. Tikai zvaniem un sarakstei mobilo telefonu izmanto viens respondents. Respondenti ar zemāku izglītības līmeni biežāk atzīmēja, ka mobilo telefonu pārsvarā izmanto citiem mērķiem un sievietes vairāk laika pavada, izmantojot mobilo telefonu citiem mērķiem. Zīmīgi, ka mobilie telefoni aizstāj arī fotoaparātus un mūzikas atskaņotājus. Šīs telefona funkcijas izmanto visvairāk respondentu – 85.

Laiks, ko aptaujātie respondenti dienā pavada, izmantojot mobilo telefonu sarunām, visbiežāk ir 30 min. (42 respondenti), 20 min. (35 respondenti) vai 15 min. (20 respondenti). Tikai viens no aptaujātajiem mobilo telefonu sarunām izmanto 300 min. dienā. Pastāv korelācijas starp izglītības līmeni, vecumu un

laiku, ko pavada, izmantojot mobilo telefonu sarunām – jo augstāks izglītības līmenis un vecāks respondents, jo biežāk mobilais telefons tiek izmantots sarunām.

Atbildot uz jautājumu, par telefona izmantošanas ilgumu citiem mērķiem, respondentu atbildes parāda, ka vienāds skaits aptaujāto (60), mobilo telefonu citiem mērķiem izmanto attiecīgi 60 min. un 120 min., 12 aptaujātie – 180 min., 13 aptaujātie – 30 min. Novērojama pozitīva korelācija starp vecumu un telefona izmantošanu citiem mērķiem – jaunākie respondenti daudz biežāk atzīmēja, ka telefonu izmanto ne tikai zvanīšanai, bet arī informācijas meklēšanai internetā, sociālo tīklu izmantošanai, mūzikas atskaņošanai u.c.

Atbildot uz jautājumu, kur atrodas mobilais telefons, kad pārvietojieties, 88 respondentu norāda, ka pārvietojoties mobilo telefonu tur kabatā, 78 – somā, 4 respondenti telefonu tur tuvu pie ķermeņa. Pastāv pozitīva korelācija starp telefona novietojumu attiecībā pret ķermeni un dzimumu – sievietes daudz biežāk mobilo telefonu novieto tālāk no ķermeņa, turpretim vīrieši – tuvu pie ķermeņa.

Jautājot par mobilā telefonu vietu atrodies telpā, 81 aptaujātajam mobilais telefons atrodas atstāts no ķermeņa, 50 – tur to kabatā, 35 respondentiem mobilais telefons visbiežāk atrodas somā. Sievietes mobilo telefonu biežāk novieto atstāts no ķermeņa, nekā vīrieši.

Atbildot par paradumiem, izmantot mobilo telefonu pirms naktsmiera, 76 respondenti atbildēja, ka vienmēr lieto mobilo telefonu pirms gulētiešanas, 103 – tikai dažreiz, bet 13 aptaujāto nekad nelieto mobilo telefonu pirms naktsmiera. Jaunākie respondenti biežāk izmanto mobilo telefonu pirms gulētiešanas, kā arī tie, kuri telefonu izmanto citiem mērķiem, visbiežāk mobilo telefonu izmanto arī pirms aizmigšanas.

Ņemot vērā teorētiskajā izpētē gūto informāciju par mobilā telefona starojumu, būtisks ir jautājums par telefona novietošanu attiecībā pret cilvēka ķermeni miega laikā. 123 respondentiem mobilais telefons naktsmiera laikā atrodas tuvu pie ķermeņa (< 1m), 69 aptaujātie telefonu nakts laikā novieto tālāk par vienu metru no ķermeņa. Novērojama pozitīva korelācija starp vecumu un telefona atrašanos naktsmiera laikā – jaunākie pētījuma dalībnieki daudz biežāk naktsmiera laikā telefonu novieto tuvu ķermenim, tāpat kā tie respondenti, kas telefonu biežāk izmanto citiem mērķiem, nevis tikai zvanīšanai un sarakstei.

82 respondenti uzskata, ka mobilais telefons noteikti var ietekmēt veselības stāvokli, savukārt 99 uzskata, ka tas ir iespējams, bet nav pārliecināti, 8 respondenti neuzskata, ka mobilajiem telefoniem ir ietekme uz veselību.

Tas, ka mobilā telefona ietekmi daļa cilvēku izjūt negatīvi, apliecina atbildes, ka pēc ilgstoša mobilā telefona lietošanas diskomfortu ir izjutuši 41 respondents, 52 tam nepievērš uzmanību, bet 97 respondenti atzīmēja, ka nav izjutuši diskomfortu pēc ilgstošas mobilā telefona izmantošanas.

Zīmīgi, ka vairāk kā puse no respondentiem (113) būtu gatavi mainīt savus telefona lietošanas paradumus, ja būtu skaidri pierādīta mobilo telefonu negatīvā ietekme uz veselību, 53 nebūtu gatavi to darīt, bet 23 respondentu atzīmēja, ka tas nav iespējams. Ņemot vērā, ka ir plašs zinātnisko pētījumu skaits par mobilo telefonu kaitīgumu, nepieciešams veikt lietotāju izglītojošas kampaņas, kas pārliecinātu par drošu mobilo telefonu lietošanas paradumu izveidi.

Respondentu atbilžu korelācijas analīze tika veikta ar *Pīrsona* koeficienta metodi, nosakot sakarību ciešumu (skat. 1.tab.).

1.tab. Respondentu atbilžu korelācijas analīze ar *Pīrsona* koeficienta metodi

Table 1 *Correlation analysis with Pearson's coefficient method*

		Dzi- mums	Vecums pilnos gados	Izglītība	Vai ikdienā izmantojat mobilo telefonu?
Dzimums	Pearson Correlation	1	-,185*	-,018	,148*
	Sig. (2-tailed)		,011	,803	,040
	N	192	190	192	192
Vecums pilnos gados	Pearson Correlation	-,185*	1	,470**	-,075
	Sig. (2-tailed)	,011		,000	,301
	N	190	190	190	190
Izglītība	Pearson Correlation	-,018	,470**	1	-,059
	Sig. (2-tailed)	,803	,000		,416
	N	192	190	192	192
Vai ikdienā izmantojat mobilo telefonu?	Pearson Correlation	,148*	-,075	-,059	1
	Sig. (2-tailed)	,040	,301	,416	
	N	192	190	192	192
Cik gadus izmantojat mobilo telefonu ikdienā?	Pearson Correlation	-,141	,553**	,319**	,025
	Sig. (2-tailed)	,062	,000	,000	,746
	N	176	175	176	176
.....					
*. Correlation is significant at the 0.05 level (2-tailed).					
**. Correlation is significant at the 0.01 level (2-tailed).					

1.tabulā redzams fragments no datu apstrādes rezultātiem, savukārt secinājumos dots vārdiskais iegūto korelāciju apraksts.

Secinājumi **Conclusions**

Veicot teorētisko analīzi, var secināt, ka zinātniskie pētījumi apstiprina mobilo telefonu negatīvo ietekmi uz cilvēka imūno, reproduktīvo, sirds un asinsvadu, endokrīno un nervu sistēmu.

Aptaujas rezultāti pierāda šādas korelācijas:

- 1) Starp dzimumu un mobilo telefonu izmantošanu ikdienā – sievietes izmanto biežāk nekā vīrieši;
- 2) Starp dzimumu un uzskatiem par mobilā telefona kaitīgo ietekmi uz veselību – sievietes atzīmē, ka uzskata mobilo telefonu par kaitīgu veselībai biežāk nekā vīriešiem, dzimumu un subjektīvajām sūdzībām pēc ilgstošas mobilā telefona lietošanas – sievietes sūdzības atzīmē biežāk nekā vīrieši;
- 3) Starp dzimumu un mobilā telefona novietojumu attiecībā pret ķermeni - sievietes biežāk telefonu novieto atstātus no ķermeņa, bet vīrieši telefonu tur tuvāk ķermenim;
- 4) Pastāv arī korelācijas starp izglītības līmeni, respondentu vecumu un mobilā telefona lietošanu – jaunākie respondenti ar zemāku izglītības līmeni daudz biežāk izmanto mobilo telefonu citiem mērķiem, bet respondenti ar augstāku izglītības līmeni un lielāku gadu skaitu mobilo telefonu galvenokārt izmanto zvaniem un sarakstei;
- 5) Novērojama arī sakarības starp vecumu un mobilā telefona lietošanu pirms nakts miera – jaunākie respondenti daudz biežāk atzīmēja, ka izmanto telefonu pirms gulētiešanas, tāpat daudz biežāk telefonu pirms naktsmiera izmanto tie, kuri mobilo telefonu galvenokārt izmanto citiem mērķiem – informācijas meklēšanai internetā, sociālo tīklu izmantošanai, mūzikas atskaņošanai u.c.
- 6) Sievietes naktsmiera laikā telefonu biežāk novieto tuvāk ķermenim, bet atrodoties telpās - tālāk no ķermeņa.

Tā kā vairāk kā puse no respondentiem (113) būtu gatavi mainīt savus telefona lietošanas paradumus, ja būtu skaidri pierādīta mobilo telefonu negatīvā ietekme uz veselību, ir jāturpina pētījumi, kas saistīti ar elektromagnētiskā lauka iedarbības uz organismu izpēti, lai noskaidrotu to ietekmi uz cilvēka mentālo un fizisko veselību un izstrādātu preventīvos pasākumus, kas pasargātu no starojuma kaitīgās ietekmes.

Summary

Approximately 1,6 billion people in the world are using mobile phones and number of mobile phone users are still rising. Although there is no direct evidence of a weak

electric and magnetic fields harmful impact on humans health while using mobile devices, in the community is growing concern and doubt about their safety and security.

The aim of research is to find out mobile phone adult user habits and understanding of electromagnetic field effects on health. A comprehensive literature searches and analyzation was conducted in the electronic databases (Pubmed, Accessmedicine etc.), to find out later research outcomes about electromagnetic field impact on health, also electronic survey was conducted and results statistically processed with SPSS 24. 192 respondents participated in study: 117– females, 75– males in age range from 18 to 55 years.

Research results shows correlation between: 1) gender and mobile phone daily use – women use mobile phone more frequently 2) gender and understanding about mobile phone possible harmful effects on health – woman more often thinks that mobile phones maybe harmful 3) gender and subjective feelings after long time mobile phone usage – women more often feel discomfort after using mobile phone 4) gender and mobile phone placement – women keep mobile phone far from body more often than men does 5) age and education and aim of using mobile phone – younger respondents and respondents with lower education level more frequently uses mobile phone for other purposes – internet, social media, music player etc. 6) age and mobile phone usage before night sleep – younger respondents more often use mobile phone before sleep as well than those who more frequently uses mobile phone for other purposes.

Hypothesis: Understanding the electromagnetic field health effects reduce the use of mobile phones on a daily basis not confirmed, because the majority of respondents are not willing to change their cell phone use patterns, or believe that it is not possible.

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ACTIVITY OF SCAPULAR MUSCLES: COMPARISON OF OPEN AND CLOSED KINETIC CHAIN EXERCISES

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Abstract. *The function of the shoulder region and cervical spine are regulated by the motor control of the scapula. It is important to selectively activate weak muscles and minimally involve tense muscles to improve scapular motor control. The objective of this study was to compare the activity of scapular muscles and the intramuscular balance during various open and closed kinetic chain exercises. Methods: This study included 20 female sedentary office workers. A surface electromyography was used to analyze the activity of the scapular muscle in the correct exercise starting position and during 6 different exercises. Additionally, the optimal intramuscular balance was examined. Results and conclusions: Open kinetic chain exercises is more suitable than closed kinetic chain exercises for training scapular active stability. Horizontal shoulder abduction with external rotation (scapula retraction and internal rotation) while in the prone position was optimal and could be recommended (as well as its modifications with a resistance band) for training programs to improve scapula active stability.*

Keywords: *exercises, muscle activity, motor control, scapula, stability.*

Introduction

Proper motor control of the scapula is essential to the function of the shoulder region and the cervical spine. The functions of the scapular muscles and their disorders are frequently studied, and there is evidence that altered kinematics of shoulder blades are observed in individuals with subacromial impingement syndrome (Timmons et al., 2012).

Scapular motor control is related to the cervical spine, which can be found in the study by Gaffney et al. (2014), who evaluated the relationship between the

activation of the trapezius muscle and both the scapular and cervical posture. Taking into account the wide-spread neck pain found in office workers, the research of *Park & Yoo (2013)* identified alterations of the scapula position after continuous work with the computer keyboard.

It is important to selectively activate weak muscles and their parts with minimal participation of tense muscles to improve scapular motor control during exercises. In the open kinematic chain, it is easier to activate a certain muscle separately, which is impossible in the closed kinematic chain. The purpose of the closed kinematic chain is to improve stability (Kisner & Colby, 2007).

Previous studies examining the functions of scapular muscles analyzed athletes with musculoskeletal disorders of the shoulder region (Ratcliffe et al., 2014; Timmons et al., 2012; Cools et al., 2007; De Mey et al., 2009a, 2013b, 2014c). There is a relationship between the motor control of the scapula, the function of cervical spine, and pain in the neck and upper back. Thus, it is useful to determine the most optimal exercises to improve scapula motor control in clinical practice and health promotion programs for target groups such as office workers.

The objective of this study was to compare the activity of scapular muscles and the intramuscular balance during various open and closed kinetic chain exercises (OKCE, CKCE).

Methods

This study examined 20 female sedentary office workers from one establishment who were not involved in sports activities on a daily basis. The mean participant age was 42.3 ± 9.9 years. The exclusion criteria included the following: actual pain in the cervical spine and/or the shoulder region, injury and/or surgery of the cervical spine or the shoulder region, arthrosis of the shoulder joint, congenital pathology of the spine, red flag signs of the cervical spine, and malignancies.

The study was performed as a cross-sectional analysis. Each participant was measured on Monday morning (after two resting days, before work). The approval for this study was obtained from the Ethics Committee of Riga Stradins University, and each subject was required to sign a consent form prior to study participation.

Surface electromyography (sEMG) was used to register the activity of muscles during the analyzed exercises. sEMG records were performed with ME 6000 biomonitor (Mega electronics Ltd, Finland) and analysed by the MegaWin 3.0 Software (Mega electronics Ltd, Finland). Noraxon Dual electrodes (Noraxon U.S.A. Inc., Scottsdale, Arizona, USA) were used. The location of

electrodes to each muscle was based on the clinical sEMG protocols by Sella (2000).

The sEMG was recorded during each exercise by using the time intervals for correct starting position (muscle pre-activation) and during exercise performance. The mean electromyographic activity (μV) was normalized by the maximal voluntary isometric contraction (% of MVC) and was analyzed across 3 OKCE and 3 CKCE. The MVC was obtained during isometric strength testing of each muscle (Kendall et al, 1993). Two main local stability muscles (the serratus anterior (SA) and the lower trapezius (LT)) and global mobility muscles (the levator scapulae (LS) and the pectoralis minor (PM)) were chosen for the analysis. The intramuscular balance is reached when the activity of local stability muscles is higher than the activity of global mobility muscles. All analyzed exercises were performed in low positions and with low intensity.

Each participant had to perform six therapeutic exercises. The closed kinematic chain included the following exercises: transfer of weight in forearm support (No. 1), transfer of weight on all fours (No. 2), and transfer of weight with arm support against a wall (90 degrees flexion in shoulders) (No. 3). The open kinematic chain included the following exercises: reaching upwards (scapula protraction and external rotation) while in the supine position with 90 degrees flexion in shoulders (No. 4), horizontal shoulder abduction with external rotation (scapula retraction and internal rotation) while prone (No. 5), and reaching forward (scapula protraction and external rotation) in a sitting position with 90 degrees flexion in shoulders (No. 6).

Each exercise was performed twice. The first exercise was a trial used for correction (explanation and demonstration was performed before). The second repetition was used to collect measurements. The three OKCE (sitting, supine, prone lying) were performed first (with 10 minutes rest between each exercise). The participants then had 30 minutes rest before the three CKCE (standing, forearm, all fours) exercises were performed (with 10 minutes rest between each exercise).

The results were analyzed using SPSS.V20 software. We used the mean and standard deviation to describe the results for each muscle and exercise. A paired t-test was used to calculate the difference between mean values of local stability muscles (SA, LT) for EMG activity. The statistically significant level was $p < 0.05$.

Results

The highest pre-activity SA occurred for OKCE No. 4 ($p < 0.001$). The SA pre-activity in all OKCE were higher ($p < 0.05$) than all CKCE. The highest LT

pre-activity was found for OKCE No. 5 ($p < 0.05$). The other two OKCE demonstrated higher LT pre-activity than CKCE No. 1 and No. 2 ($p < 0.05$).

The highest SA and LT activity occurred during exercise OKCE No. 5 ($p < 0.05$). In the other OKCE (No. 4 and 6), the SA activity was higher than in the two CKCE (No. 1 and 2) and was equal in CKCE No. 3 ($p < 0.05$). The second highest LT activity was observed during CKCE No. 3 ($p < 0.05$). The other CKCE (No. 1 and 2) had less LT activity than the two OKCE (No. 5 and 6). However, the LT activity was equal to OKCE No. 4 ($p < 0.05$) (“Fig. 1” and “Fig. 2”).

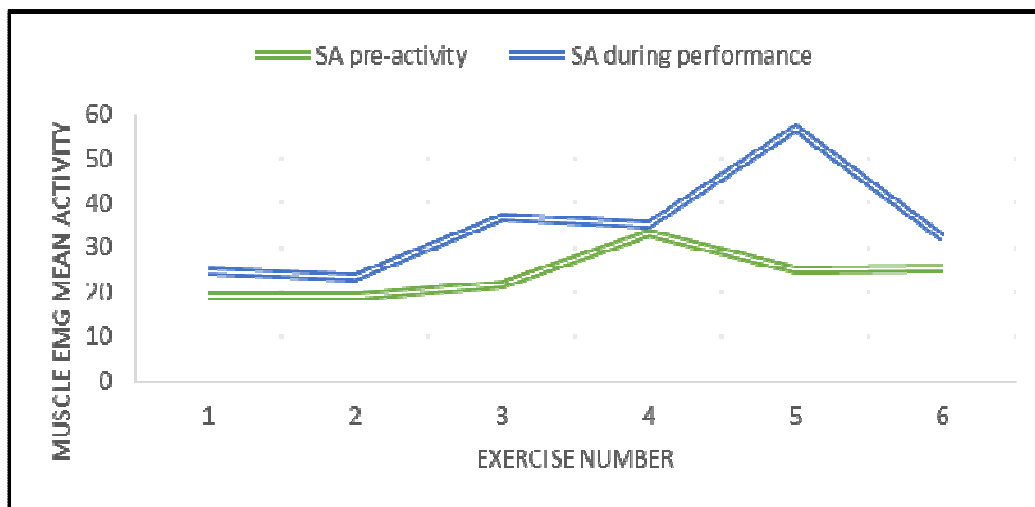


Fig.1 SA mean activity (% of MVC) in analysed OKCE and CKCE

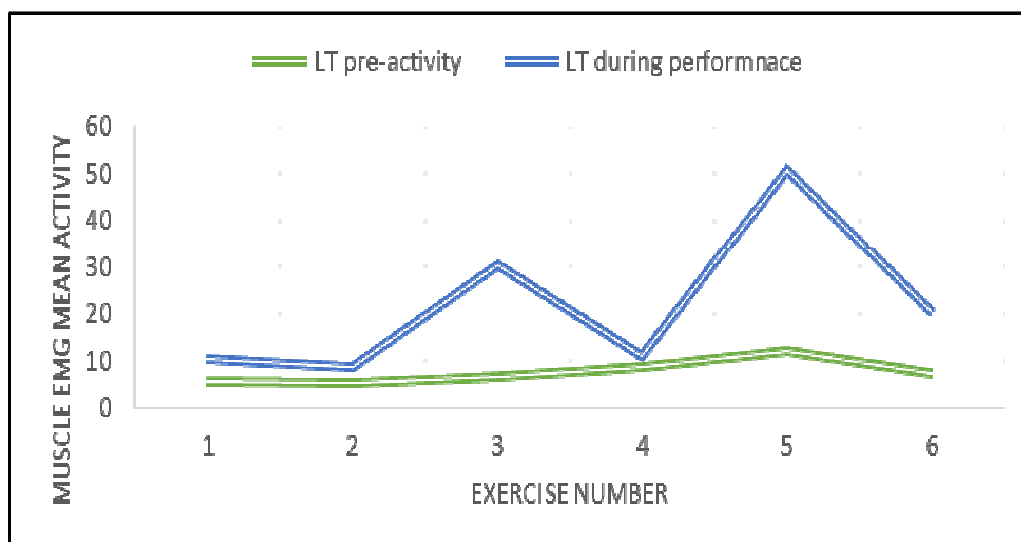


Fig.2 LT mean activity (% of MVC) in analysed OKCE and CKCE

Intramuscular balance: The activity of both analyzed local stability muscles was higher than the activity of both analyzed mobility muscles in OKCE No. 5.

The SA/LS balance was optimal in all the OKCE and the two CKCE (No. 1 and 3). The SA/PM balance was optimal in the two OKCE (No. 4 and 5) (in OKCE No. 6, SA and PM activity was equal) and in the one CKCE (No. 1) (in CKCE No. 2 and 3, PM activity was greater than SA activity). The LT/LS balance was optimal in the two OKCE (No. 5 and 6) and in CKCE No. 3 (in the remaining exercises, LS activity was greater than LT). The LT/PM relationship was optimal in OKCE No. 5.

Discussion

The main findings of our study were the following: (1) all three analyzed OKCE demonstrated higher SA activity during correct start position than CKCE, and the LT was more pronounced in the start position of OKCE than CKCE, with the exception of one CKCE (No. 3); (2) the highest SA and LT activity was demonstrated during performance of OKCE No. 5, which is the horizontal shoulder abduction with external rotation (scapula retraction and internal rotation) while prone; (3) the SA and LT activity during exercises does not suggest the superiority of analyzed OKCE or CKCE; (4) analyzed OKCE demonstrated more optimal intramuscular balance with higher SA and LT activity and less LS and PM activity.

The results of our research indicate that the involvement of SA in the start position was sufficient (i.e., at least 20 % MVC) in all analyzed exercises. However, the LT did not reach 20 % of MVC in any of the exercises. Thus, it can be assumed that there was insufficient control of the scapula during elevation (taking into account that simultaneous scapular kinematic analysis was not performed, and it cannot be either confirmed or denied). The data suggest it is necessary to reinforce the involvement of the LT at the start position of these exercises.

There was more involvement of stability muscles for the analyzed OKCE in correct exercise start positions than CKCE. Therefore, training with the correct start position for the analyzed OKCE is an option for scapula motor control improvement.

The SA and LT activity during exercise did not show the superiority of analyzed OKCE or CKCE despite evidence ($p < 0,05$) that the highest SA and LT activity was demonstrated during OKCE No. 5, which is the horizontal shoulder abduction with external rotation (scapula retraction and internal rotation) while prone. This was the only exercise that showed optimal intramuscular balance for all analyzed muscles. The study of *Cools et al., (2007)* demonstrated the relationship is optimal between the upper trapezius and LT for this exercise (as

well as the relationship between the upper and the middle trapezius). However, the relationship is not optimal for the upper trapezius and SA.

The results of our research suggest that improving the active stability of the scapula is best achieved using OKCE No. 5. However, the start position of this exercise requires additional attention regarding the LT. Clinical practice and health promotion programs use resistance band exercises to produce the same shoulder movements (horizontal abduction from 90 degrees flexion with external rotation) and scapula movement (retraction and internal rotation). The major difference is that the starting position can be lying on the back, sitting or standing. These exercises could be used to improve the motor control of the scapula in case a prone position is contraindicated or if the power of involved muscles is insufficient to overcome gravity or to diversify the program of exercises. By considering the cervical spine position in exercises while prone (which are less analyzed in research literature) and while lying on the back or sitting/standing, it is possible that the activity of the upper trapezius will change and could form an optimal relationship with SA. However, this possibility requires additional investigation and was not the objective of this research.

The results show that the transfer of weight using forearm support used the least mobility muscles and was equal to the activity of both stability muscles (also relatively low). However, using facilitation methods for stability muscles (especially LT) will allow this exercise to be effectively integrated into an exercise program.

There was excessive activity of mobility muscles and relatively low activity of stability muscles observed in the transfer of weight on all fours and while reaching upwards (scapula protraction and external rotation) while supine with 90 degree shoulder flexion. The position on all fours is frequently used in practice to improve active stability of the scapula. The results of our research show that despite high SA activity, the LT is not sufficiently involved and the activity of mobility muscles is excessively in this position. Therefore, this posture and more complicated variations of this posture (unstable support surface that can reduce the activity of SA (Kalantari & Ardestani, 2014)) are not recommended for improving scapula stability. The position on all fours also requires sufficient control of the lower part of the body (the lumbar spine, pelvis, hips and knees). These aspects were not analyzed in this study relative to the scapula activity (also lacking in the literature). The exercise that involves reaching upwards (scapula protraction and external rotation) while supine with 90 degree shoulder flexion is part of a clinical SA training program. However, the excessive activity of mobility muscles (especially PM) does not indicate this is an optimal exercise.

The study cohort was sufficiently homogeneous (age, gender, functional status, and daily risk factors), which allowed the data to be properly analyzed

and interpreted. The surface EMG was the chosen assessment method in this study. EMG is adequately informative and provided the expected results. The EMG normalization process is one study limitation because determining the maximal voluntary contraction activity is complicated and there is no unified protocol for scapular muscles. Therefore, the muscle power tests were used as a reference. Future research studies should use several tests for each muscle. The muscle activity results are another limitation to this study. Although the exercises were practiced before the measurements were recorded, the precision of their execution was low. However, the results are similar to actual situations because these exercises are frequently utilized in group sessions or training programs at home where individual correction and guidance is impossible.

Conclusions

- Open kinetic chain exercises are more suitable than closed kinetic chain exercises for training scapular active stability.
- Horizontal shoulder abduction with external rotation (scapula retraction and internal rotation) while in the prone position was optimal and could be recommended (as well as its modifications with a resistance band) for training programs to improve scapula active stability. As well this exercise is suitable for SA strength training based on results of previous studies.

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**INFORMĀCIJAS TEHNOLOĢIJU
IZMANTOŠANA IZGLĪTĪBĀ
*INFORMATION TECHNOLOGIES IN
EDUCATION***

PRIMARY SCHOOL TEACHERS' APPROACH TO ADVANTAGES OF ICT USE IN EDUCATION

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Abstract. *The article reveals primary school teachers' approach towards advantages and disadvantages of information and communication technologies, their influence to children education as well as teacher experience in the application of ICT technologies in primary education and opportunities of teachers in the development of professional competence. Qualitative study (structured interview) was carried out which involved the teachers of 1 – 4 forms more than four years actively using ICT in the classroom. According to the teachers, Content analysis of the study results revealed essential factors and potential ways of more efficient use of ICT in primary education, i. e .improvement of teachers' special professional competence (knowledge, skills and ability to use various ICT tools in the classroom, identification of special needs of primary school children, linking the development of formal and informal needs, etc.), personal viewpoint to ICT in social life, the shortage of ICT tools in primary school.*

Keywords: *primary school teachers, information and communication technologies (ICT), primary education, teachers' professional competence.*

Introduction

Modern school is an integral part of changing society and most of the current problems of society are reflected in school life. Global and technological society copes with new challenges of economical effectiveness, social and cultural literacy through more productive information and communication devices and technologies. Fast change of information communication technologies and still growing supply becomes a challenge to the young generation. School communities choose a similar way dealing with educational problems arising at school. Information and communication technologies (ICT) are becoming increasingly important in educational system. Modern information tools and technologies are promoted to use at all levels of education process teaching and learning different things. These provisions are established in the EU's strategy documents, covering all areas and levels of teaching and learning.

It is natural that substantially altering technological teaching facilities at comprehensive schools teachers of primary classes lack competence in purposefully using modern technologies and software in teaching process and planning their work using ICT as well as trying to know the pupils. These and other trends of ICT tools installation in schools are noticeable in national and international research and in the reviews of education state (*Digital Agenda for Europe*, 2010; *Survey of Schools: ICT in Education*, 2013; Ranguelov et al., 2011; Wastiau et al., 2013; Kamylytis et al., 2015; Kalvaitis, 2014; Labutė & Žemaitaitytė, 2015, et al.) Education reviews state that Lithuanian general education teachers are increasingly using ICT tools, more than a third of 4th and 8th form pupils is sufficiently provided with ICT tools, teachers frequently use them during lessons. According to the data of the international research, 58 % of Lithuanian primary classes are only partially equipped with the means of ICT, and even 22 % of 4th form teachers systematically use ICT measures in class (about 24 % of lessons) (Ranguelov et al., 2011). This indicator is lower than EU average. The review emphasizes that the teachers of primary and general education in Lithuania can expect timely help in various areas related to ICT software. Primary school teachers more frequently apply ICT measures for the subjects of natural and social sciences. International research of the state of education focus on the earlier and more diverse use of ICT measures in education as this helps to individualize teaching and learning, allows to apply various teaching methods and to form self-dependent learning skills, teaches digital and basic literacy, provides additional communication opportunities (Wastiau et al., 2013; *Survey of Schools: ICT in Education*, 2013; Ranguelov et al., 2011; Kamylytis et al., 2015; Labutė & Žemaitaitytė, 2015, et al.). The launch of the renewed *Programs of primary and basic education* and taking into account the results of national and international research, the need for the primary school teachers to focus educational process on general and subject-specific competencies as well as to improve primary education quality in Lithuanian schools of general education arose. Systematic application of ICT measures and the pursuit of primary education quality are challenges dealt with by Lithuanian primary school teachers. According to Kalvaitis (2014), one fifth of primary school teachers has quite good preparation to use ICT because they use ICT tools in their classes systematically.

A new approach to primary education outcomes obligates to change the viewpoint not only to the content of education, the means of its realization but also to the pupil. The pupil is not framed in a certain work place – forms and methods of didactic activities have to be thought over so that learning can take place in different environments. According to Targamadžė et al. (2015), classroom doors should open because the children of Z generation require a wider range of learning space as well as the need to harmonize both real and virtual

learning spaces. The children of this generation do not like monotony – in virtual space they are accompanied by images, sounds, etc., the information is presented in an attractive form – all this should also be assessed in real space. The opportunity to participate in the development of learning environment is also important to the pupil (Targamadžė, 2014). A teacher should consult him and help to orientate in both real and virtual worlds as a child often does not feel their boundaries. The child should be encouraged to develop appropriate learning conditions in the real space and taught to use virtual space as the means to achieve certain purposes rather than treat it as a residence area. ICT enables to see the environment not only in the classroom, but also outside it; that is why innovation becomes even more attractive to the whole school community. According to Rangelov et al. (2011), Gudoniene et al. (2013), Targamadze et al. (2015), Labutė and Žemaitaitytė (2015), mobile devices can be used for learning anywhere: in the classroom, in the corridor, in the school yard, in the park or a museum – this opens up new spaces and possibilities.

The aim of State education regulating documents is to define concepts suitable for modern educational environment (*The Concept of a Good School* (2015)). Exclusive features of the environment are referred to dynamism and openness allowing pupils to flourish freely themselves: “Educational environment is open – traditional classroom spaces shift to classrooms without walls: educational process can take place in the corridors, in the lounges, in the library, in the school yard and in other internal and external school spaces. Classrooms are comfortable, functional, easy to adapt, pleasantly colourful, stimulating thinking, creativity and learning. Opportunities to learn both individually and in groups, in silence and communicating, cleanly and using different oiling materials and tools are provided (*The Concept of a Good School*, 2015). So what regards the use of ICT, it is essential to emphasize not only organization of learning process, but also to use these tools to create a variety of learning environments. In this case, primary school teachers’ attitude towards ICT, their competence to use ICT tools in education, assessment of their advantages and disadvantages, consistent improvement of their competence in this field become important (Saylik & Kalesnikienė, 2013). International research which compares the experience of EU countries in the development of application of ICT tools at school emphasizes that almost half of Lithuanian primary school teachers spend more than 6 days a year for the competence development seminars (EU average is 48 %) (*Survey of Schools: ICT in Education*, 2013). The recent research analyse the interface between information literacy and application of ICT in education. Kalesnikienė and Saylik (2013), Saylik (2010) research shows that information literacy, comprehension of information skills and abilities allow primary school teacher develop his skills to apply ICT in educational process focusing on thinking development of primary school children, which is especially important. In the

research of this area, ICT tools are called educational entity, the third participant of education environment, supplementing the dyad of the teacher and the pupil (Prensky, 2001; Dagiene & Kurilovas, 2008; Brazdeikis, 2009; Duobliene, 2010). However, it is not enough for a teacher to have ICT basics; it is important that both the teacher's own learning and professional development were based on a comprehensive application of ICT measures, that the teacher was interested in and searched for new measures of ICT, the ways to use them, was able to assess and to make out advantages and disadvantages of ICT measures, i.e. was digitally confident and supportive (Wastiau et al., 2013). In Lithuanian schools, digital and various educational means are more frequently used by the teachers having less than 15 years of teaching practice and working in city schools (Kalvaitis, 2014). In the previous works of Lithuanian researchers of the beginning of the XXIC, in the use of ICT and innovations in education the topics were analyzed in various aspects: ICT implementation in education was analyzed by Dagiene and Kurilovas (2008); the innovative operating assumptions for school head – by Budreckienė and Janiūnaitė (2010), creative application of innovations was analyzed by Gudoniene et al. (2014), Brazdeikis and Masaitis (2012) and Brazdeikis (2009); Gudynas et al. (2010) wrote about innovative teaching methods and their application to improve the quality of primary teaching and learning; the constant ongoing changes in science, technology and social space as well as teachers' competence were investigated by Juceviciene and Brazdeikis (2012); Targamadžė et al.(2015) investigated the contexts of virtual educational reality.

In science investigations perceiving the teachers' attitude towards educational innovations and the connection of their implementation success the unanswered question still remains: what advantages of the use of ICT in education see primary school teachers and how it determines their professional activities. **The goal of the study:** to determine primary school teachers' approach to advantages of the use of ICT in education.

Research Methodology

In order to investigate primary school teachers' approach to advantages of ICT tools in education, a qualitative study was chosen (half structured interview). At this point of the problem research it was decided to go deeper into the 1-4 form teachers' experience using a variety of ICT tools. According to Creswell (2009), a qualitative study helps to know the analyzed phenomenon better, to find out its characteristics, to reveal the peculiarities of viewpoints.

For the study to carry out a half structured interview with 20 teachers from 5 Klaipeda city schools was chosen, i.e. 5 teachers from each school working in different 1-4 forms. Later, the informants were requested to clarify certain aspects

of the problem under investigation in writing. For the selection of the informants criteria selection was applied. All of the informants were women. The requirement for the teachers participating in the study was to have the experience of the use of various ICT tools in their work no less than 4 years. The teachers' average teaching experience had to be 17 years. It was important to investigate and to find out what teachers working with pupils of 1- 4 forms think about the advantages of ICT in educational process, what problems of their application in teaching they come across most often, what teaching and learning problems they solve using ICT, how they improve their professional competences in this field.

Carrying out *content* analysis of the interview results the aim was to emphasize the statements which highlighted essential, according to the informants advantages and reasons (e.g. *the best, the most often, the easiest, the most important, essential, basic, first of all* , etc.) and received the approval of most of the informants. A lot of answers coincided. The statements of the informants during the content analysis were divided into several categories and subcategories (Creswell, 2009). Discussing primary school teachers' approach to ICT tools in education, it was necessary to find out what tools are used in primary education. Opinions of the informants were grouped, according to frequency of their use (most of them were mentioned by informants). Advantages of the use of ICT in primary education classes were divided into four subcategories: the use of ICT in classes of several subjects, promotion of pupils' learning, education of pupils with special needs, integration of educational content (table 1).

The Research Instrument. The questions formulated for the informants were divided into several blocks: ICT tools in primary education, advantages of ICT tools in primary education, development of a primary school teacher competence to use ICT tools.

Research Results and Their Discussion

All primary school teachers having participated in the study emphasized that they use a few ICT tools, i.e. they regularly use the tools they have in their workplaces. The teachers pointed out that in their personal life they can use and know more ICT and technical means, but that they lack this variety at work: "*a great tool is Kahoot, however, there is only one computer in the classroom and not all the pupils have got mobile phones*", "*great website, but only for work at home*", "*classrooms lack computerized workplaces*", "*it is not always easy to coordinate employment of computerized classes*", etc. The informants most frequently mentioned Interactive whiteboard and multimedia (MS PowerPoint presentations) and other technical tools: SMART board; multimedia-projector; computers (stationary, tablet PCs); mobile phones.

According to the EU research in the state of education, in Lithuanian primary schools smartphones are scarcely used, one stationary computer is for six pupils. A similar ratio is for laptops and projectors. That is significantly worse ratio than EU average (Ranguelov et al., 2011; *Survey of Schools: ICT in education*, 2013). The data of the research confirm this tendency.

In their studies, Gudynas et al. (2010) and other researchers mentioned that various ICT tools are used to provide pupils with the widest possibilities to actively participate in educational process, in discussions and projects, i.e. stationary computer and laptop, multimedia projector, copier printer, mobile phone, video and audio players, TV set, film screening equipment, audio and video recording equipment, calculators, interactive whiteboard, microphone headset, computer video camera, graphic projector.

ICT tools most frequently used by the teachers who participated in the study enable them to effectively individualize pupils' learning, to encourage their conscious learning. It could be pointed out that some informants as one of the ICT advantages named intercourse with parents.

Though according to Dagiene and Kurilovas (2008), Brazdeikis (2009), Gudynas et al. (2010), properly applied new information technologies bring many new opportunities in communication with pupils' parents. The Internet, e-mail conferences, and school or teacher web pages become one of the most effective ways of teachers' and parents' communication and collaboration.

During the lessons, ICT tools (computers, tablets, multimedia-projectors) are used by most primary school teachers as video players, for the review of educational and feature films and their clips. All primary school teachers having participated in the study said that for educational process they look for and find information in media portals (lrt.lt/for children, youtube.com, etc.).

During the interview, primary school teachers named these frequently used ICT tools: internet and computer programs, online applications, media Portal, online games, virtual teaching aids/ textbooks. According to primary school teachers, all the groups of used tools programs or applications mentioned have great advantages: perfect Lithuanian, simple to use for children, easy to link to the content of primary education program, the possibility to work at home. Most frequently mentioned disadvantages are the lack of technical tools for each pupil and the possibility to work in bigger groups: *"a great tool is smart robots however, not all can use them in the lesson"*, *"pupils like tasks on the interactive board, but while one or two work others only watch and everybody knows that pupils like team work"*. The data of the research confirm the fact that primary education classes have got only partial provision of digital means (*Survey of Schools: ICT in Education*, 2013).

Primary school teachers, comparing various ICT tools, named the teaching aids which they use to prepare for classes. The most frequently used aids,

mentioned by the informants are MS Power Point and MS Movie Maker. The tools for creating presentation are best known and especially liked by the teachers. They are most easily applied by them therefore, they are systematically used. According to the teachers: “*in this way it takes me very little time to prepare for lessons*”, “*I myself install video material for the lesson and I can show it to the whole class*”, “*I already know what quality views the class needs*”, “*Kahoot*” is a great tool, but you need to have several computers in the classroom”, “*I myself have prepared a test (MS PowerPoint) for the whole class*”, etc.

Primary class teachers discussing the tools point out that namely the tools they know best, are used by other teachers of the school, but they do not know anything about other teaching aids or they have not been taught how to use them, eg.: *prezi.com, projeqt.com, present.me*, etc. Interactive whiteboards adapted to demonstrate interactive slide shows as well as their scenarios help to create an active lesson, where slides are used to interest pupils, to highlight the urgent topic, to present new material, to consolidate knowledge and abilities, to assess and evaluate themselves. Presentation scenarios are a methodological support for teachers preparing for the lesson and during the lesson. It should be noted that the teachers having participated in the study do not mention insertion virtual learning environment in primary education lessons or as the means of the development of their professional competence.

The importance of the use of the virtual environment educating pupils' digital literacy is indicated in scientific research and education state reports (Kampylis et al., 2015; Ranguelov et al., 2011; Wastiau et al., 2013; Labutė & Žemaitaitytė, 2015, et al.).

Though part of the research stressed that digital speech and digital images for teachers (*digital immigrants*) are not natural communicative means (Prensky, 2010; Saylik, 2010; Targamadzė et al, 2015), however, the participants of the research emphasized the benefits of ICT tools in creating visual information, easy communication with children (*digital native*), etc. In the guidelines of *Information Technology change of 2014-2020* (2014) the purpose is pointed out that ICT were used no less than 20 % of the formal education time and that elements of ICT were integrated into traditional subjects. The ICT tool variety mentioned by the informants allows to state that this purpose is fully put into practice. According to the informants, “*having a better supply of ICT it would be possible to use it even more often*”.

Participants of the research discussing benefits of smart board usage emphasized semi finished tasks and games which can be found on the Internet websites. Some websites were distinguished as mostly used by many teachers (*ismaniejrobotukai.lt; smalsutis.eu; pradinukai.lt; peliukai.lt*; etc.). Only some teachers mentioned their preference to Internet appliques. They make animated tasks and educational material themselves. It should be noted that teachers of

primary school highly appreciate the opportunity to create or modify various internet tasks, not to use tasks prepared in a unified way.

Teachers learn about the possibilities to use Internet websites and teaching tasks from their colleagues or from training events. According to Bradeikis and Masaitis (2012), Gudynas et al. (2010), Budreckiene and Janiuniene (2010) and others, a better usage of ICT in the educational process ensures proper professional development of teachers. Gudynas et al. (2010) emphasizes the usage of ICT not only for pupils but for teachers as well, as ICT tools give more opportunities to communicate and collaborate with colleagues, with specialists of various fields and to systematically develop competences of the use of ICT. Development in this field depends greatly on the teacher's competence and motivation. The ability to use a variety of ICT tools depends on the teacher's competence, though on the other hand, the more often the teacher uses ICT, the more advantages of ICT tools he sees. That is why, the teacher is the most important factor that determines the usefulness of ICT and the level of the use of ICT during the lessons (Dagiene & Kurilovas, 2008; Budreckaite & Janiuniene, 2010, et al.) 27 % of Lithuanian primary school teachers rely on their technical skills and do not see any barriers to the use of ICT measures in class. However, they rely on their social media skills less than EU average. (*Survey of Schools: ICT in Education*, 2013). The survey results confirm these trends. Discussing other SMART interactive technology advantages, teachers emphasized the possibility of primary school pupils to perform the tasks by touching, that is by writing, rubbing or drawing.

The analysis of the research participants' opinions about the advantages of ICT tools in primary education helped to select and to group the statements where all or most of the teachers cited undeniable advantages of ICT (table 1). This category is divided into sub-categories: The use of ICT in lessons of several subjects (no less than 3 subjects); promoting pupils' learning (tasks independently performed by pupils); education of pupils with special needs (individualization of teaching and learning); integration of educational content (internal and external integration of educational content).

Table 1 Advantages of ICT tools in primary education

Sub-categories	Examples of statements
The use of ICT in lessons of several subjects	<i>“the best I can use during all subjects”, “what is most important it is good for mathematics, the knowledge of the world, Lithuanian”, “it is for mathematics and English”, “art and technology”, “it is an advantage because I can use it in lessons of all subjects”.</i>
Promoting pupils' learning	<i>“it is important, they are so interested and repeat willingly”, when the text is on the screen, they enthusiastically read”, “when they get tired, they willingly work at the computer”, “very well follow the information on the screen”, “to correct mistakes on the screen is</i>

	<i>much more interesting for them than on a sheet of paper”, “homework is done 100 %”, even group learning is more successful”.</i>
Education of pupils with special needs	<i>“perfect for gifted children occupation”, “if they work more slowly”, “suitable for children with articulation problems“, “good for those who learn mathematics and know it well”, “good opportunity to repeat the exercises according to one’s own pace”.</i>
Integration of educational content	<i>“a good opportunity to link multiple lesson topics”, “I associate knowledge of the world lesson with a trip experience and impressions”, “in the website all the themes are integrated”, “I use the same task both in mathematics and in the knowledge of the world”, “the same story is also good at the Lithuanian language lesson”, “they get interested In the topic and then go on reading themselves”, “the text read in the textbook comes to life on the screen”.</i>

In the sub-category ‘The use of ICT in lessons of several subjects’ teachers emphasized that existing ICT tool advantage lies in versatility, i.e. in the opportunity to use them in all or in almost all lessons. The teachers noted that they use not only the same existing ICT tools, but the same websites, media portals. So, teachers usually choose 3-5 tools and use them for a long time: *“I have used this website for about 3 years already”, “during a year maybe once I try to look for something new”, “I am quite satisfied with the websites I use”, I have learnt to create such type of tasks”, etc.* Compared with traditional (non-electronic) tools, ICT have obvious advantages of visualizing teaching material (e.g. spatial structures or moving images), researching and interpreting the interaction of various items, experimenting, consolidating knowledge, developing skills, giving the pupils instantaneous evaluation, searching for information, creatively expressing ideas and the viewpoint, communicating despite the distance, cooperating, etc.(Labutė & Žemaitaitė, 2015)

In the sub-category ‘Promoting pupils’ learning’ teachers pointed out several meaningful advantages of the use of ICT: pupils willingly do repetition tasks, consolidate the material, performing tasks they retain their focus longer, pupil’s curiosity is supported getting deeper into the theme, pupils are motivated to perform teaching tasks after classes. According to primary school teachers: *“pupils repeat the tasks willingly”, “if they have to do their homework using website, the homework is usually done by all the pupils”, “they will do all the tasks”, they always rejoice when they succeed in doing the tasks”, “they can spend a lot of time at long tasks however, they do not ask for help”, “they all work self-dependently”, etc.* These advantages of the use of ICT reflect in the national *Conception of good school* (2015). The conception emphasizes that the most important mission of successful school is good results of pupils’ education achieved in pleasant, memorable and meaningful life and learning moments at

school. Information and communication technology based education technology the most important feature of which is realization of educational activities mediated by technical means is also formed in modern society (Gudynas, et al., 2010). The use of ICT in class gives pupils autonomy. The teacher here is only a mediator but not the leader. The role of primary school teacher changes essentially as well. The teacher, disseminator of knowledge, becomes the teacher, indicating the direction showing where to go to achieve good results. Therefore, appropriately applying ICT in education process pupils are given more opportunities of independent learning (Dagiene & Kurilovas, 2008; Gudoniene et al., 2013). Gudynas et al. (2010) state that working on the computer individually pupils themselves choose ways of work with information corresponding their learning style. Demonstrating their knowledge they can use various ICT tools by means of their creativity.

In the sub-category 'educations of pupils with special needs' primary school teachers emphasized versatility of ICT programs to individualize the content of primary education, according to pupils' needs (gifted pupils, pupils with special needs). Emphasizing advantages of ICT tools in this context the teachers mentioned: *"I can choose separate tasks for one group of pupils and others for another group"*, *"I can always choose different number of tasks"*, *"when I got a pupil with special needs it took me long to seek for tasks suitable for him, and then I saw that it is easier to create tasks for interactive whiteboard myself"*, *"when I start thinking about interactive tasks, I at once select the ones which can be done by the pupils working fastest and the ones which can be done by the pupils working more slowly"*, etc. One of the essential purposes of the *Conception of a good school* (2015) is pupils' personal growth, educational outcomes corresponding to the individual possibilities and constant educational progress reached by maximum individualizing educational process. The teachers, who participated in the study, point out advantages of ICT working in heterogeneous classes taking into account different pupils' learning needs and opportunities. However, teachers did not mention the internet and its potential in helping pupils to learn at home, to learn in an informal environment.

In the sub-category 'Integration of education content' the informants emphasized integrated features of ICT tools. Teachers of primary school named various internet websites, internet appliquéés, games, which they chose because of the close links of given topics with the content of primary education, integration of different subjects in common themes, wider cognitive opportunities of pupils' social and natural environment. Primary school teachers pointed out internal and external integration opportunities of educational content: *"in the program the same topic overviews historical facts, provides texts for reading comprehension"*, *while doing various tasks pupils not only count, but also get acquainted with nature"*, *"information is presented in such a way that while doing the tasks they*

learn even several subjects”, “I find there well integrated topics of the knowledge of the world”, etc. Namely integrity the informants emphasized as the essential criterion according to which they select ICT tools appropriate and inappropriate for use, eg. in mathematics (the object combination formation, labyrinths, roads, logic games), in the Lithuanian language (grammar rules, reading and writing), in music (recognition of recurring melodies and composition).

Targamadžė et al. (2015) describing Z generation, i.e. school-age children, emphasized their close link with virtual (digital) environment, virtual environment created culture, conceptions of both new and computer literacy.

In the changed cultural situation, the teacher together with the pupils has actively participate in various activities of virtual (digital) culture, to become the leader and partner in the new educational contexts.

Conclusions

Summarizing the data of the research it can be said that the informants revealing various advantages of ICT use in lessons expressed their positive views to their application in education. Enumerating advantages of the use of ICT in primary education teachers pointed out advantages of the use of ICT in lessons of several subjects (in the lessons of no less than 3 subjects); promoting pupils' learning (pupils self-dependently do tasks during the lessons and at home); individualizing education of pupils with special needs; integration of education content (external and internal integration of education content). Primary school teachers - research participants - emphasized the meaning of ICT use to their own personal and professional development. They indicated that more and more often ICT tools become also the development tool of other professional competences. The research allows to foresee the possible trends of more effective use of ICT tools in schools of the country: the development of special professional competence of teachers (knowledge and ability to use a variety of ICT tools at the lesson, to identify special needs of primary school pupils, integrated education, etc.), a better primary schools supply with ICT tools and interactive presentations scenarios, accessibility of interactive teaching tools in the state language.

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SHORTEST PATH DETERMINATION BETWEEN EDUCATIONAL INSTITUTIONS OF RĒZEKNE MUNICIPALITY

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Abstract. *This study describes an optimization method called Simulated Annealing. The Simulated Annealing method is widely used in various combinatorial optimization tasks. Simulated Annealing is a stochastic optimization method that can be used to minimize the specified cost function given a combinatorial system with multiple degrees of freedom. In this study the application of the Simulated Annealing method to a well - known task of combinatorial analysis, Travelling Salesman Problem, is demonstrated and an experiment aimed to find the shortest tour distances between educational institutions of Rēzekne Municipality is performed. It gives possibilities to analyze and search optimal schools' network in Rēzekne Municipality.*
Keywords: *Educational institutions, Optimization, Rēzekne Municipality, Simulated Annealing, Travelling Salesman Problem.*

Introduction

Information about school consolidation or optimization periodically appears in Latvian society. It is believed that the ideal school network is not ready. Ministry of Education and Science offered the company "Jāņa Sēta" to develop the mapping of educational institutions. In a follow-up study, in Bauska county, there can be seen both students' pathways and the most populous and economically most active counties, that helped the county authority take the decision that secondary schools should be retained only in Bauska. When "Jāņa Sēta" develops a similar mapping for all of Latvia, then the ideal network of schools will be seen (Kuzmina, 2016). Children of Rēzekne Municipality have possibility to choose among 13 basic schools, 6 secondary schools, 3 special boarding basic schools and 19 kindergartens. After school they can attend: one sports school for children and youth, one art school for children or one center for children and youth ("Educational institutions," 2016). The article offers the analysis of the location of educational institutions based on their availability. The theoretical study has been carried out and the shortest path between different

educational institutions is calculated mathematically, the mapping of these educational institutions and different levels of analysis of the location of educational institutions are offered (e.g. to find up the opportunities for basic school or kindergarten graduates have access to education as close as possible to the place of residence) (we used data from ("Educational institutions," 2016).

We define the following levels of educational institutions:

Level 1: Kindergartens; Level 2: Basic schools; Level 3: Secondary schools; Level 4: Special boarding basic schools; Level 5: Vocational oriented educational institutions.

We have developed the software that allows to find the shortest path between different educational institutions in Rēzekne Municipality with a purpose to optimize and determine the shortest route between educational institutions. A multi-tiered architecture in educational institutions characterization and overlapping is offered. The aim of the study could be the development of recommendations and analysis in the potential educational network optimization.

Mathematical background

Simulated Annealing (SA) is a stochastic optimization method used for the optimization of objective function (energy). It allows to find the global extreme for the function that has local minimums. SA principle was announced in the classical work (Kirkpatrick et al., 1983) and developed in works (Laarhoven & Aarts, 1987), (Otten & Ginneken, 1987), (Granville et al., 1994), (Ingber, 1993).

SA is based on the analogy of statistical mechanics and, in particular, the solid-state physics elements. The practical example from metallurgy can be given- what happens to the atomic structure of the body, lowering its temperature, in other words, if it is rapidly cooled. Rapid temperature reduction can lead to unsymmetrical system structure, or in other words, to a sub-optimal position (with errors). Cooling ultimately leads to a condition where the system curdles or freezes, and thermal equilibrium sets in.

The so-called Metropolis procedure (Kirkpatrick et al., 1983) determines iterative steps, which control the best solution to be achieved. This algorithm is used in atomic equilibrium simulation with the given temperature. On each step of the algorithm atom is raised with a small probabilistic movement (shifting): $x_i + \zeta$, and system energy change ΔE is calculated.

- If $\Delta E \leq 0$, then the movement is accepted and configuration with altered states of atoms is used as the initial state for the next step;

- If $\Delta E > 0$, then the probability that the new state will be accepted is:

$$P(\Delta E) = e^{-\frac{\Delta E}{kT}} \quad (1)$$

where k – Boltzmann's constant, T – temperature parameter.

Using the energy system as a target function and defining the states of the system with $\{x_i\}$ - it is seen, that the Metropolis procedure generates a series of states for the given optimization problem with particular temperature.

Another way to understand SA as a combinatorial optimization method is to imagine the energy surface, as it is shown in Figure 1.

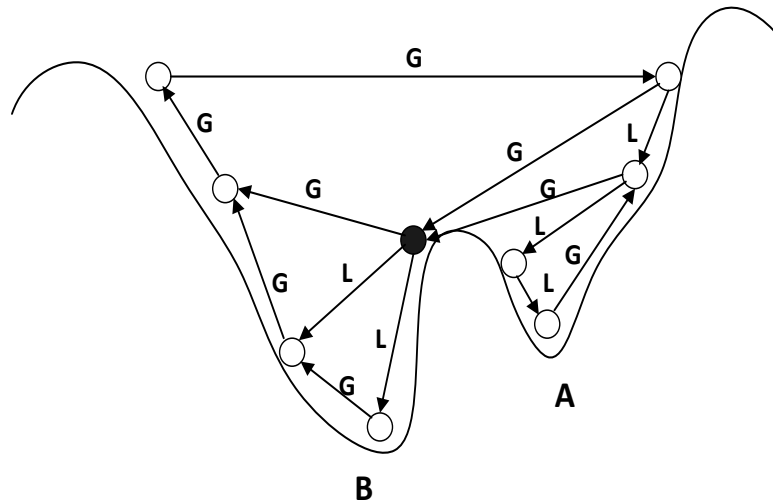


Fig.1 Energy surface (G – global, L – local)

The black globule, starting from the arbitrarily selected point, always searches for the way down. If such a system is compromised - and somehow is exposed (e.g. by shaking), then the globule will mostly move from A to B, because the energy barrier is less from the A side.

If there is a slight effect, then, obviously, the globule more often will move from A to B, not from B to A. If the effect is strong, then the globule will overcome the barriers faster and more frequently, that is it may move from A to B and from B to A. If, however, we want to affect the globule movement, then a good compromise would be to start with a stronger effect and gradually reduce the exposure. This will ensure that at some step the globule will pass the global minimum.

To use the SA method practically, the following must be specified:

1. Target function W (analogous to energy surface), whose minimization is the purpose of this procedure;
2. Possible set of solutions according to the energy surface or the physical state of the system;
3. Configuration conditions, the variation generator;
4. Control parameter T , which characterizes an artificial system temperature, and the cooling mode (annealing schedule), that describes how the temperature will be lowered.

SA algorithm is based on the Boltzmann's probability distribution:

$$\Pr(e) \sim e^{-\frac{E}{kT}} \quad (2)$$

This expression specifies that if the system is in thermal equilibrium with temperature T , then its energy is probably divided among all the different energy states E . Even at low temperatures there is a possibility that the system may be found in a high energy state. The system has an adequate probability of moving from a local energy minimum state to a better, more global, minimum.

Further, as SA algorithm application the well-known combinatorial task will be offered- the Traveling Salesman Problem (TSP).

Classical Travelling Salesman Problem

TSP task is to find the minimum route between N cities – entering into each city only once and in the end returning to original city. This is well-known combinatorial task that can be solved with a variety of combinatorics or graph theory techniques. In literature TSP solving methods with the SA algorithm are viewed also (Cook, 2011), (Coughlin & Baran, 1985), (Applegate et al., 2006), (Grabusts, 2000).

Let us define the distance matrix $D = (d_{ij}), i, j = 1, 2, \dots, n$, - distance between cities i and j . Each route can be represented as an element π of all permutations among the n cities sets. If possible route set consists of all the cyclical permutations, then in total there are $\sqrt{(n-1)!}$ such permutations. The objective function is defined as follows:

$$C(\pi) = \sum_{i=1}^n d_{i\pi(i)} \quad (3)$$

TSP task is to minimize the objective function in all possible permutations. If n cities are located in 2-dimensional Euclidean space and d_{ij} is Euclidean distance between cities i and j , then $C_{opt}^{(D)}$ is the shortest route for a given distance matrix D .

To use SA algorithm for such type of tasks some concepts have to be introduced. For each route we can define the neighbor as a rout set that can be reached from the current path during one transition. Such neighboring structure mechanism for the TSP is called the $k - opt$ transitions. In the simplest case - $2 - opt$ transition is based on the fact that the two cities are selected on the current route and the sequence, in which the cities between these couples were visited, is reversed (see Figure 2).

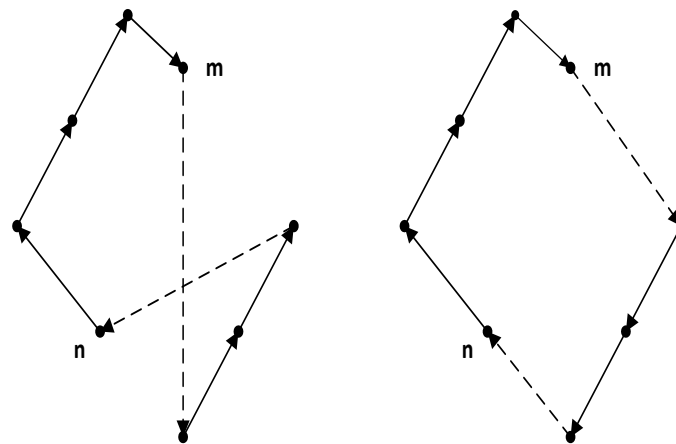


Fig.2 2-opt example (on the left – the current route, on the right – after reversing the sequence between *m* and *n*)

Route neighbors are now defined as a set of cities that can be reached from the current route through the 2 – opt transitions (i.e. $\sqrt{(n - 1)n}$ such neighbors).

Research part

In the research part different levels of educational institutions, educational institutions and their GPS coordinates were defined, the shortest path between educational institutions with the help of SA algorithm was computed and the attachment of educational institutions to the geographic maps was carried out.

Level 1. Kindergartens (see Table 1.)

Table 1 Denotation and GPS coordinates of kindergartens

No.	Name of kindergartens (in Latvian)	Latitude	Longitude
1	Čornaja (Čornajas pirmsskolas izglītības iestāde)	56,38478	27,415519
2	Dricāni (Dricānu pirmsskolas izglītības iestāde)	56,649235	27,182159
3	Gaigalava (Gaigalavas pirmsskolas izglītības iestāde)	56,734355	27,06622
4	Ilzeskalns (Ilzeskalna pirmsskolas izglītības iestāde)	56,641404	27,393226
5	Kaunata (Kaunatas pirmsskolas izglītības iestāde „Zvaniņš”)	56,330835	27,544932
6	Lūznava (Lūznavas pirmsskolas izglītības iestāde „Pasaciņa”)	56,359505	27,262984
7	Malta (Maltas pirmsskolas izglītības iestāde)	56,349716	27,166046
8	Mākoņkalns (Mākoņkalna pirmsskolas izglītības iestāde)	56,290113	27,439382
9	Nagļi (Nagļu pirmsskolas izglītības iestāde)	56,684951	26,928374
10	Nautrēni (Nautrēnu pirmsskolas izglītības iestāde „Vālodzīte”)	56,711536	27,411917

No.	Name of kindergartens (in Latvian)	Latitude	Longitude
11	Ozolaine (<i>Ozolaines pirmsskolas izglītības iestāde „Jāņtārpiņš”</i>)	56,41097	27,233186
12	Rikava (<i>Rikavas pirmsskolas izglītības iestāde</i>)	56,610504	27,033659
13	Silmala (<i>Silmalas pirmsskolas izglītības iestāde</i>)	56,396045	27,095819
14	Strūžāni (<i>Strūžānu pirmsskolas izglītības iestāde „Zvaniņš”</i>)	56,69624	27,239002
15	Uljanova (<i>Uljanovas pirmsskolas izglītības iestāde „Skudriņa”</i>)	56,549423	27,061344

SA algorithm in this case was carried out in 21 steps. Algorithm computed the shortest route; it was 198 km (see Figure 3). Attachment of educational institutions to the map is shown in Figure 4.

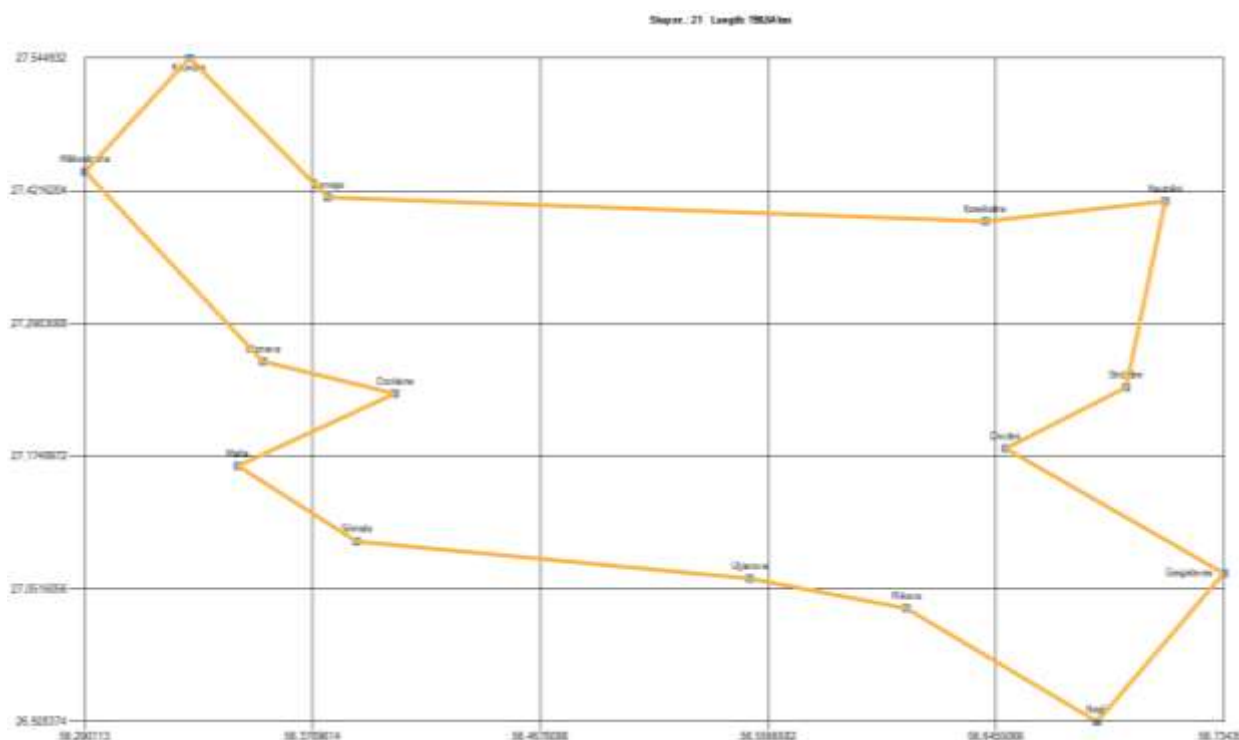


Fig.3 The shortest path between kindergartens computed with the help of SA algorithm

Level 2. Basic schools (see Table 2.)

SA algorithm in this case was carried out in 22 steps. The shortest path computed with algorithm was 251 km (see Figure 5). The attachment of educational institutions to the map is shown in Figure 6.

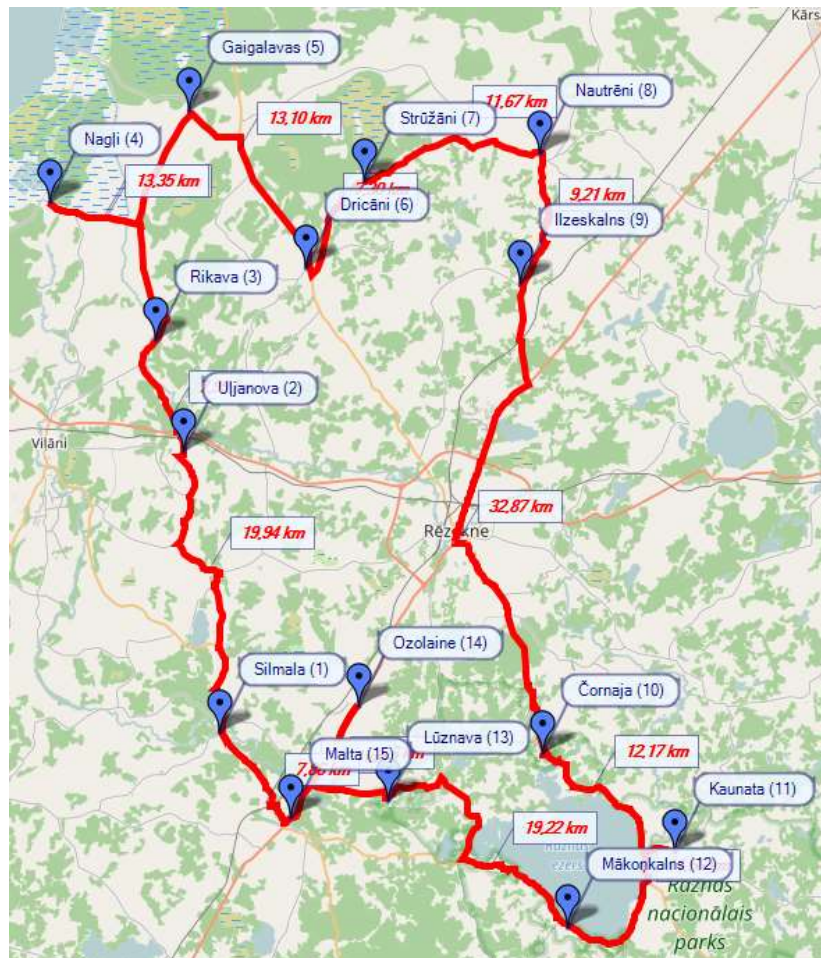


Fig.4 The attachment of the shortest path between the kindergartens to Google maps

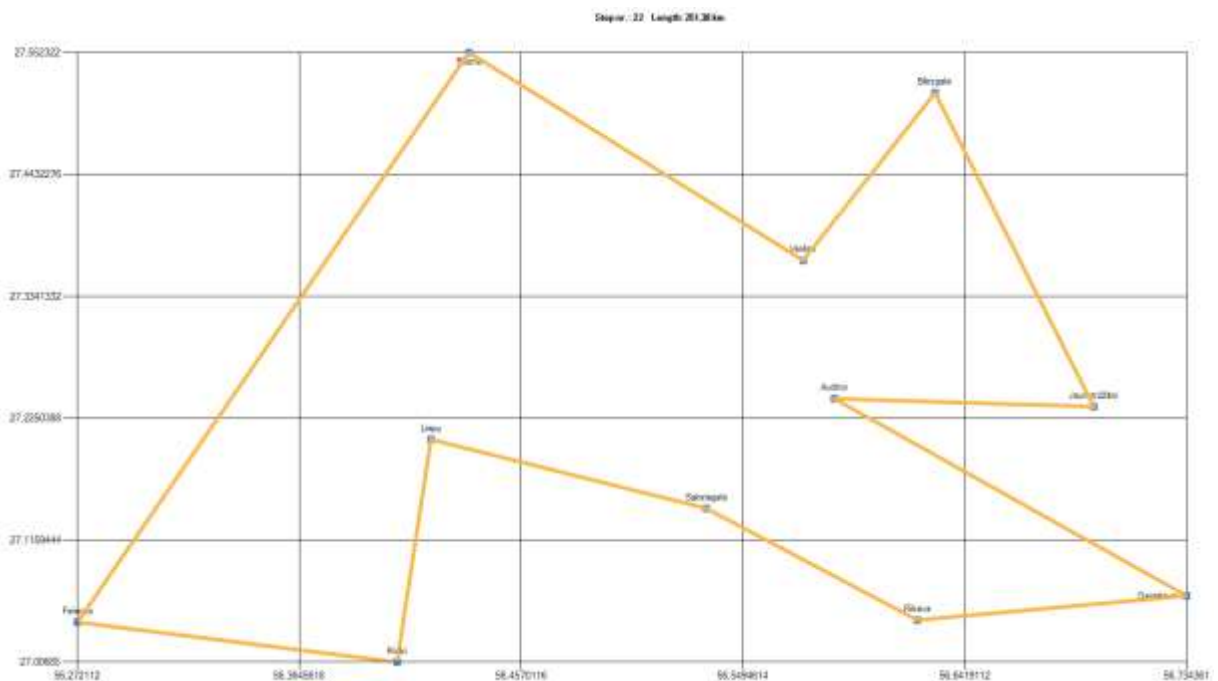


Fig.5 The shortest path between basic schools computed with the help of SA algorithm

Table 2 Denotation and GPS coordinates of basic schools

No.	Name of basic schools (in Latvian)	Latitude	Longitude
1	Audriņi (<i>Audriņu pamatskola</i>)	56,587559	27,242635
2	Bērzgale (<i>Bērzgales pamatskola</i>)	56,629493	27,516288
3	Feimaņi (<i>Feimaņu pamatskola</i>)	56,272112	27,042613
4	Gaigalava (<i>Gaigalavas pamatskola</i>)	56,734361	27,06622
5	Jaunstrūžāni (<i>Jaunstrūžānu pamatskola</i>)	56,695701	27,235483
6	Kruķi (<i>Kruķu pamatskola</i>)	56,405302	27,00685
7	Liepas (<i>Liepu pamatskola</i>)	56,419436	27,206095
8	Rēzna (<i>Rēznas pamatskola</i>)	56,435283	27,552322
9	Rikava (<i>Rikavas pamatskola</i>)	56,622145	27,044503
10	Sakstagals (<i>Sakstagala Jāņa Klīdzēja pamatskola</i>)	56,534155	27,144494
11	Verēmi (<i>Verēmu pamatskola</i>)	56,574573	27,366389

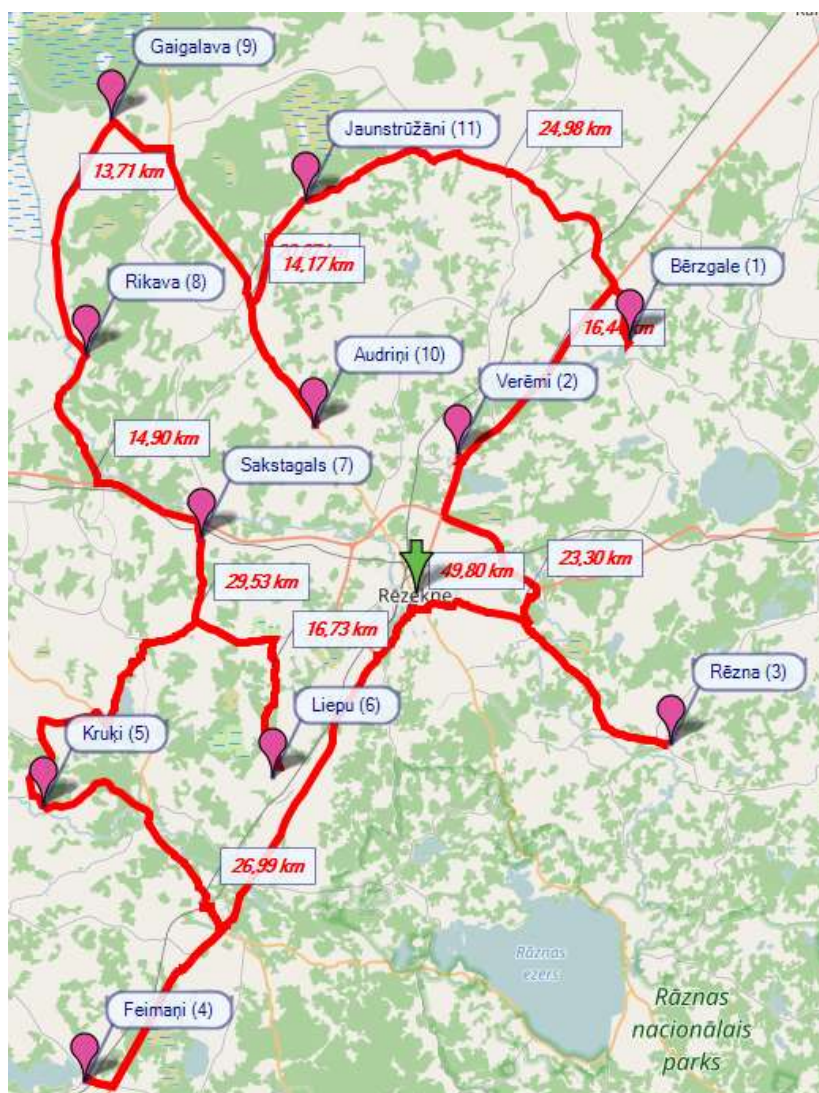


Fig.6 The attachment of the shortest route between basic schools to Google Maps

Level 3. Secondary schools (see Table 3.)

Table 3 Denotation and GPS coordinates of secondary schools

No.	Name of secondary schools (in Latvian)	Latitude	Longitude
1	Dricāni (<i>Dricāņu vidusskola</i>)	56,649232	27,182524
2	Kaunata (<i>Kaunatas vidusskola</i>)	56,331737	27,543208
3	Makašāni (<i>Lūcijas Rancānes Makašāņu Amatu vidusskola</i>)	56,587671	27,315964
4	Malta (<i>Maltas vidusskola</i>)	56,347054	27,157439
5	Nautrēni (<i>Nautrēņu vidusskola</i>)	56,71153	27,412196
6	Tiskādi (<i>Tiskādu vidusskola</i>)	56,405377	27,007207

SA algorithm in this case was carried out in 17 steps. The shortest path computed with algorithm was 162 km (see Figure 7). The attachment of educational institutions to the map is shown in Figure 8.

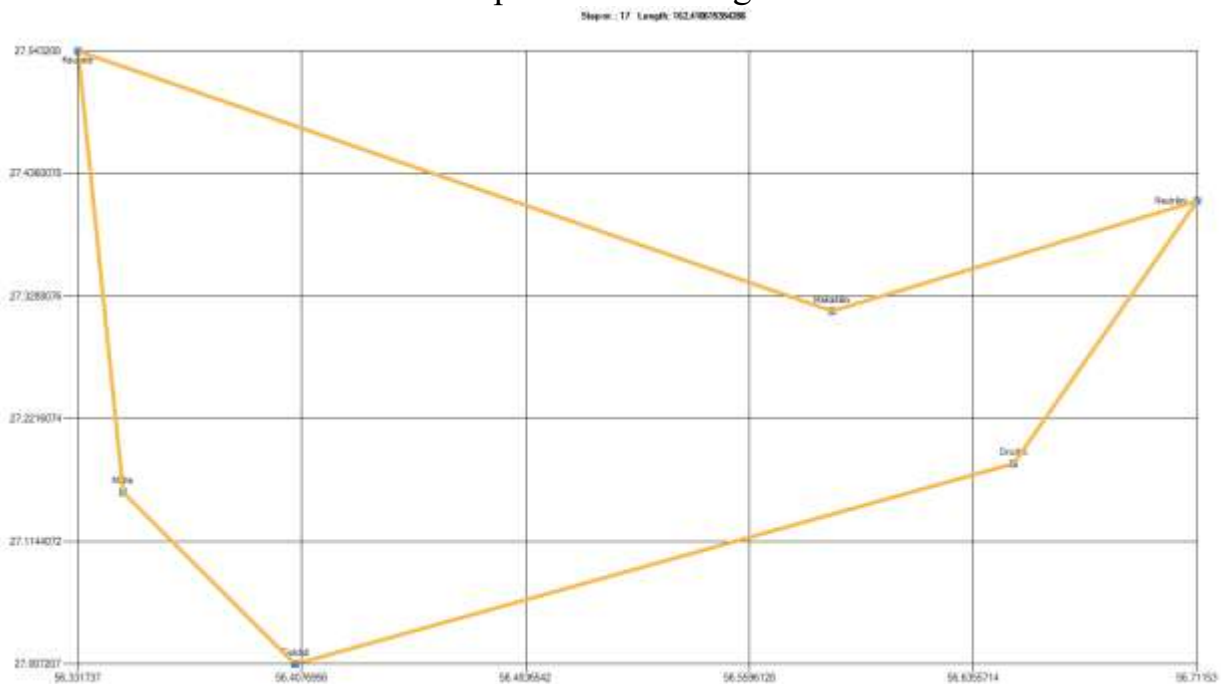


Fig.7 The shortest path between secondary schools computed with the help of SA algorithm



Fig.8 The attachment of the shortest path between secondary schools to Google Maps

Similarly, statistics on Level 4 and 5 was collected. How can it be used practically? Supposing, that there is a need to find out the optimal distance between secondary schools, basic schools and kindergartens, make the attachment of these educational institutions to the map with the purpose to analyze the potential children closeness to the educational institution. (see Figures 9 and 10).

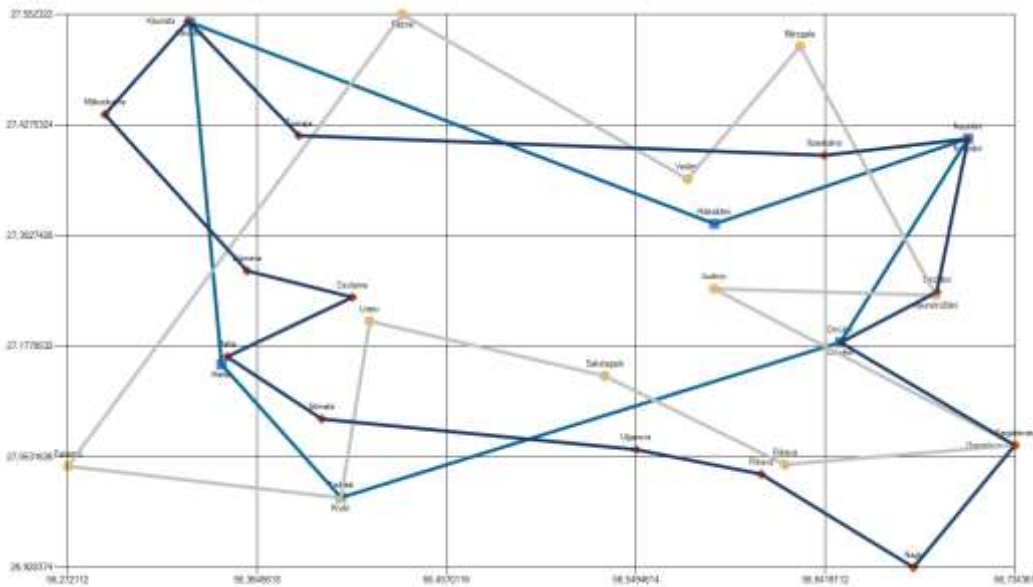


Fig.9 The shortest computed route between the three groups of educational institutions



Fig.10 The attachment of the shortest route between the three groups of educational institutions to Google Maps

We assume that the result is trivial for the heads of educational institutions. It is clear, that for the children after finishing Čornaja kindergarten it is nearer to get education in Rēznas basic school or Kaunatas secondary school. But in our case, a theoretical modeling tool is offered, when one of the educational institutions is hypothetically excluded from "circulation".

Conclusions

We proposed that our simulation result is relatively simple, but in case it was needed to exclude a school from the existing network of educational institutions, it would allow to model overlapping of educational institutions on the map and determine children potentially shortest route to the chosen educational institution.

In this study the software that allows to find the shortest path between different educational institutions in Rēzekne Municipality with a purpose to optimize and determine the shortest path between educational institutions has been developed. A multi-tiered architecture in educational institutions characterization and overlapping is offered. The aim of the study was to develop the modeling tool for analysis of potential educational network optimization.

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SIMULATION MODELLING POSSIBILITIES IN TEACHING ECONOMIC PROCESSES

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Abstract. *For the purpose of simulation models visualization of various economic disciplines, it is appropriate to use specialized programs that allow to characterize the nature of a particular model, but also make it possible to carry out a simulation model based on various parameters. This article substantiates the usefulness of introduction the simulation models at the initial research process, when simulation models can be imported parallel with analytical relations acquisition. Series of research were carried out in order to demonstrate the suitability of the Matlab Simulink for the purpose of visualization of various simulation models of various economic disciplines. Often, the analytical solution is much simpler than the visual Simulink model, but in the perspective of training purposes, it gives an understanding of the usefulness of such models. In the research part of the study the modelling capabilities in economic studies were demonstrated- adapted models in optimal tax rates computing and equilibrium determination in the competitive market.*

Keywords: *education, Matlab Simulink, modelling, simulation, visualization.*

Introduction

The classification of the general economic models is based on the scope of the economic system under study. From this perspective, the models can be divided into three major groups: the model of firms, industry models and macroeconomic models.

The model should be based on solid empirical basis. However, this information is usually not available for the creators of economic models. The management of the companies simply do not want to provide the details about the activities of their businesses to the third person. This is especially true for the companies working in the face of strong competition.

There are difficulties in constructing an adequate numerical model of the company due to the fact that such a model should be based on a deep knowledge of the real decision-making processes in organizations. To do this, it is necessary to be aware of the current state of such disciplines as decision-taking theory, organization theory, and understand the issues of psychology, sociology, politics, production management and economics as well.

The aim of the study of different simulation models is the formation students' theoretical knowledge and practical skills in the use of simulation modelling techniques in research of solving specific problems in programming and modelling of real applications - matrix algebra, solving of equations, economics applications. During the course students get acquainted with the means of simulation modelling processes of functioning systems, master the simulation modelling methods and typical stages of modelling process that form the "sequence": the construction of the conceptual model and its formalization – model algorithmization and its computer implementation – simulation experiment and interpretation of the results of the modelling; acquire practical skills for implementation of modelling algorithms for studies of characteristics and behaviour of complex economic systems (Kay, 1984; Karel & Tomas, 2015).

Simulation modelling - the most powerful and versatile method for studying and evaluating the effectiveness of systems the behavior of which depends on the influence of random factors.

The implementation of such opportunities in the universal programming language is a difficult task. Currently, there are quite a lot of software, that allow to model processes. However, now there is a product that allows to solve these problems quite effectively - MATLAB packet (Kiusalaas, 2016; Siau & Bayern, 2015; Smith, 2013) containing visual simulation tool – Simulink. Simulink - a tool that allows you to simulate the system quickly, get the indexes of expected effect and compare them with the amount of effort required to achieve them (Karel & Tomas, 2015; Xue & Chen, 2013).

The aim of the article is to show Matlab Simulink suitability for the purpose of visualizing simulation models of various economic disciplines (Grabusts, 2016). To reach the aim, the following research tasks have been set: identification of Matlab Simulink possibilities for simulation of economic processes; demonstrate visualization models on the basis of examples. The article presents examples of using simulation modelling in the economic research processes - optimal tax rate searching and modelling market equilibrium price. Common research methods are used in this research: descriptive research method, statistical method, mathematical modelling.

Matlab Simulink and possibilities of visual simulation

Of particular interest for simulation is a Simulink tool designed specifically for modelling dynamical systems. It has a library of standard graphics units with built-in mathematical functions. It is sometimes called a tool of visual modelling (Shiflet & Shiflet, 2014; Silva, 2009).

The system has a library of graphical blocks with built-in mathematical functions. Although Simulink is used to solve engineering and scientific-technical

problems, the possibilities of its use are almost unlimited. Initial parameters are input interactively by graphics setting of elementary blocks circuit compounds, resulting in a model of the studied system. The blocks included in the model relate to each other both in information and in management. The type of connection depends on the type of the block and the logic of the model.

Simulink program is an application to the MATLAB package. When simulation using Simulink is implemented, the principle of visual programming is realized, according to which the user on the screen creates a model of device, process or system, and performs calculations from the standard blocks of the library. At the same time, in contrast to the classical ways of modelling, the user does not need to study the programming language and numerical methods of mathematics thoroughly but some general knowledge is required when working on the computer, and, of course, knowledge on the subject area in which he operates.

Thus creating a model and launching it, it is possible to observe the results of simulation. In the simulation the user can choose the method of solving the equations, and the way of changing the model time. During the simulation it is possible to monitor the processes happening in the system. To this purpose special viewing devices, that are part of the Simulink library, are used. The results of simulation may be presented in the form of graphs.

Series of research were carried out in order to demonstrate the Simulink suitability for simulation model visualization purposes in different economics disciplines. It should be noted that often the analytical solution is much simpler than the visual Simulink model, but in perspective it gives an understanding of such models usefulness.

Fig. 1 shows the used blocks' description and its explanation given in the examples.

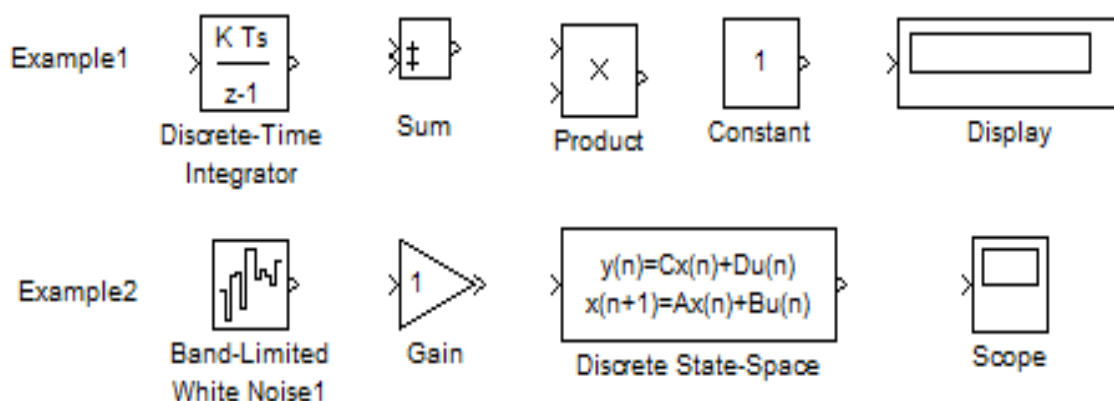


Figure 1 Blocks used in the examples

The **Discrete Time Integrator** block (Commonly Used Blocks) performs discrete-time integration or accumulation of a signal. We use this block in discrete–time systems instead of the Continuous Integrator block in continuous–time systems. The block can integrate or accumulate using the Forward Euler, Backward Euler, and Trapezoidal methods.

The **Product** block (Commonly Used Blocks) block performs multiplication or division of its inputs. This block produces outputs using either element–wise or matrix multiplication, depending on the value of the Multiplication parameter.

The **Sum** block (Commonly Used Blocks) performs addition or subtraction on its inputs. This block can add or subtract scalar, vector, or matrix inputs.

The **Constant** block (Sources) is used to define a real or complex constant value.

The **Display** block (Sinks) shows the output value at the end of the simulation time.

The **Band Limited** block (Sources) is an implementation of white noise into Zero–Order Hold block.

The **Gain** block (Commonly Used Blocks) multiplies the input by a constant value (gain). The input and the gain can each be a scalar, vector, or matrix. We specify the value of the gain in the Gain parameter.

The **Discrete State-Space** block (Discrete) implements the system described by the equations: $x[n + 1] = Ax[n] + Bu[n]$ $y[n] = Cx$.

Research part

Example 1. Optimal Tax Rate searching

The aim of the experiment: to study the dependence of budget revenues on the tax rates. The author modified the (Cisar, 2004) study results.

The state announces the income tax rate and receives funds from the companies to the budget. Companies have their own capital, get profit, and pay funds to the budget according to the tax rate. After-tax profit as retained earnings is fully included in the company's own capital. Dividends are not paid out, no other deductions from income are done. All profit is divided only into two flows: to the budget and the rest-to the equity.

Budget revenues for a certain period of time will be the greatest not at the maximum but at the optimum tax rate for the budget. That is, with the growth of the tax rate, the revenues to the budget will increase and then decrease.

The amount of tax revenues from enterprises for the simulated period is stored in the fiscal accounts, and is represented by the integral:

$$BD(t) = \int_{-t=tb}^{-t=tf} PRF(t)*TXRT*dt \quad (1)$$

where $BD(t)$ – amount of funds received in the budget from the beginning of the simulation till the moment t , euro;

$PRF(t)$ – pretax profit, derived by an enterprise at the moment t , euro/year.;

$TXRT$ – income tax rate;

t – current time, year.

tb – beginning moment of simulation;

tf – final moment of simulation.

A profit balance capitalized by an enterprise during the simulation time:

$$CP(t) = \int_{-t=tb}^{-t=tf} PRF(t) * (1 - TXRT) * dt \quad (2)$$

Profit at time t :

$$PRF(t) = CP(t) * RN \quad (3)$$

where RN - profitability of the enterprise capital. It is set as a parameter of the enterprise, initial data.

The model of such a process is shown in Fig. 2.

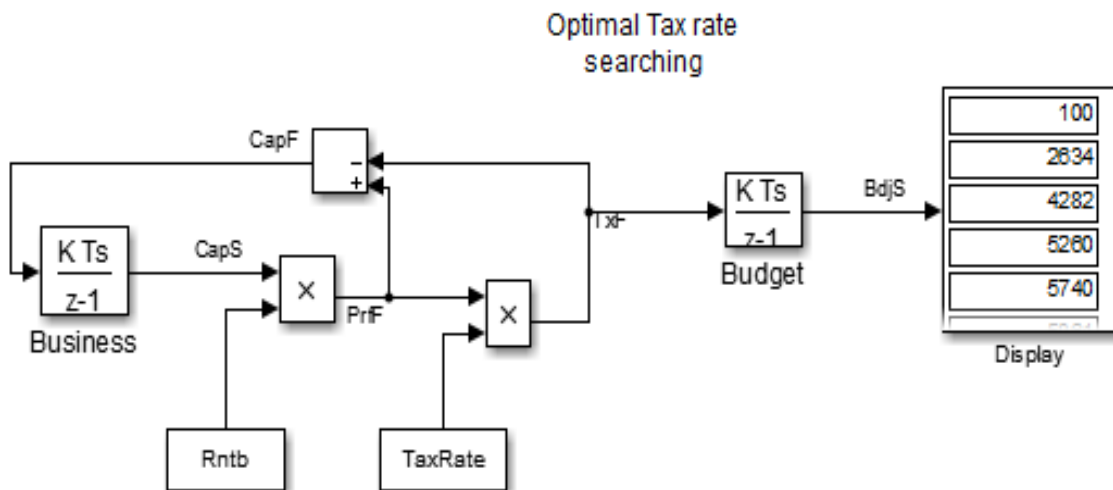


Figure 2 Optimal tax rate searching model

In the scheme block **Business**, there is presented the hoarder of the equity of the enterprise, it is taken from the library of elements as a block **Integrator of discrete time**. The investment flow **CapF** enters on the block input. It is after-tax, retained profit. It is accumulated by a business and increases its equity capital. Block **Out** - is the amount of capital in business **CapS**. Profitability is defined by a block with the name **Rntb**. The next block works out the multiplication of the profit flow on the tax rate **Tax Rate**. This is the flow of deductions from profits to the state budget **TxF**. The tax rate is set with the name **Tax Rate**. The block **Budget** is represented by the integrator. It accumulates tax revenues **TxF** for the

simulation period as a variable **BdjS**. The block **Display** reflects numerical values of **BdjS**.

The optimal tax rate modelling result is shown in Fig. 3.

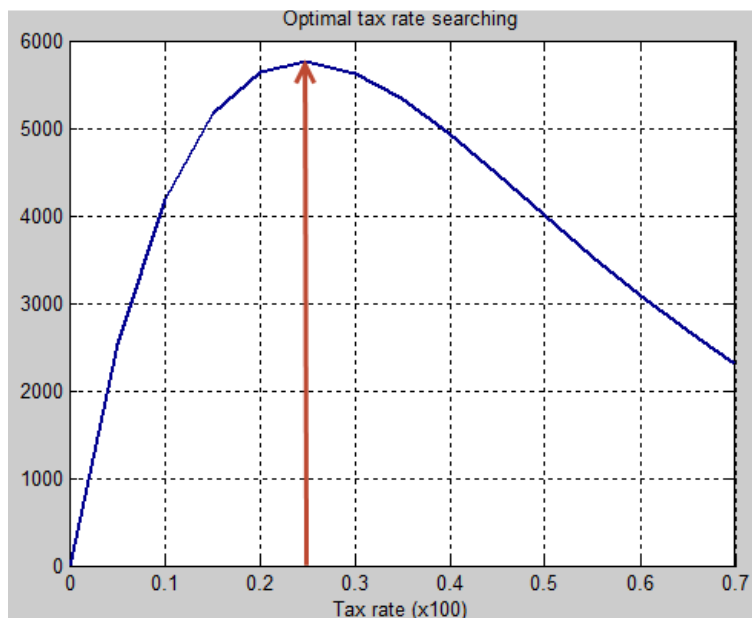


Figure 3 **Optimal tax rate**

With increasing rate, the revenues to the budget increase and then decrease. There is a strongly marked maximum, i.e., the optimal tax rate for the budget. The higher the profitability of the enterprise is, the more pronounced the optimal tax rate is. With the growth of the profitability, the optimal rate is reduced (shifted to the left), aiming at a fixed value, on our charts, approximately, to 23 – 25 %.

Example 2. Model of market equilibrium price

In economic theory it is considered that the price is set by the interaction of supply and demand.

Suppliers deliver goods to the market. The higher the market price, the more suppliers and goods. Consumers buy goods. The lower the price, the more customers and purchases. Goods on the market are characterized by two parameters: quantity and price. In this research author modified the (Cisar, 2004) study results.

For the initial study a very rough model is selected: linear, without reserves, chances, forecasts, and other factors.

Function of dependence demand on price

$$Dmd = D0 - Kd * Prc \tag{4}$$

where –

Dmd - demand for the current time interval;

D0 - demand at zero price;

Kd - the slope of the demand line;

Prc - price of the goods.

The line of dependence supply on price

$$Spl = S0 + Ks * Prc \tag{5}$$

where –

Spl - supply for the current time interval;

$S0$ - offer at zero price;

Ks - the slope of the demand line;

Prc - price of the goods.

A block diagram of the simulation model in Simulink looks as follows (see Fig. 4).

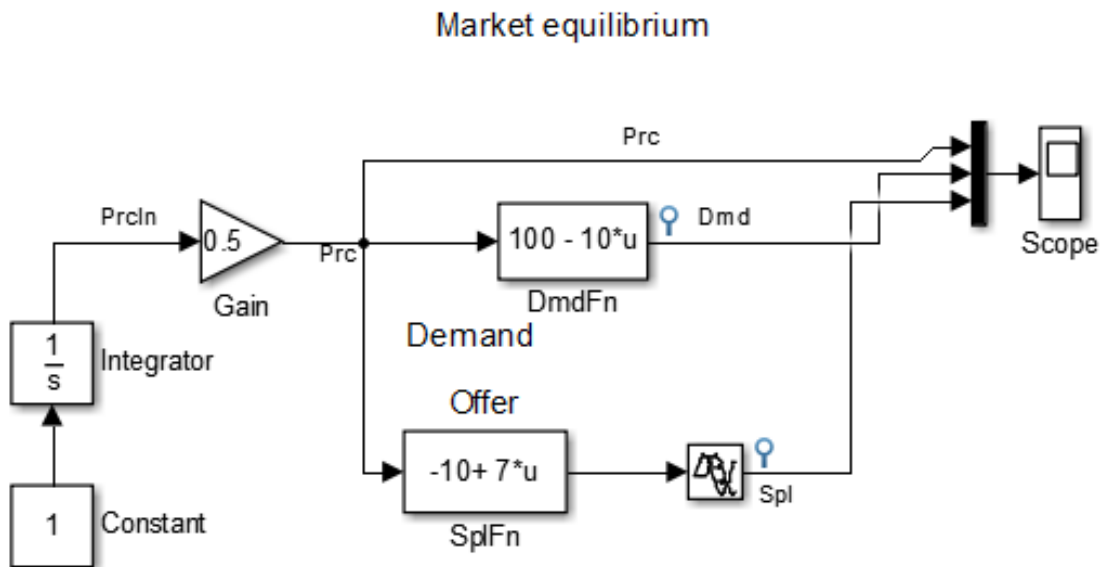


Figure 4 Block diagram of Simulation model

Demand is represented by a single block called **DmdFn**. It calculates the demand value based on the prices supplied to the input unit.

Symbols and unit settings on the following scheme:

$$u = Prc, D0 = 100, Kd = 10.$$

The offer is represented by three building blocks. The function of dependence the amount of goods offered for sale on the price is realized by block named **SplFn**. It calculates the value of the offer, depending on the prices supplied to the input unit.

Block symbols and parameters on the scheme are following:

$$u = Prc, S0 = 10, Ks. = 7.$$

The seller delivers the goods in the amount of **Spl**, defined on the basis of the price of last period of time. **SplFn** block simulates a solution of a supplier to accept the price of the current demand. He agrees to sell all the goods at a price that the demand line dictates. The block implements the function which is opposite of demand function and calculates the price **Prc**, at which supplier will be able to buy all the goods **Spl**. Block Parameters are identical with parameters of the block Demand **DmdFn**.

The results of modelling are shown in Fig. 5.

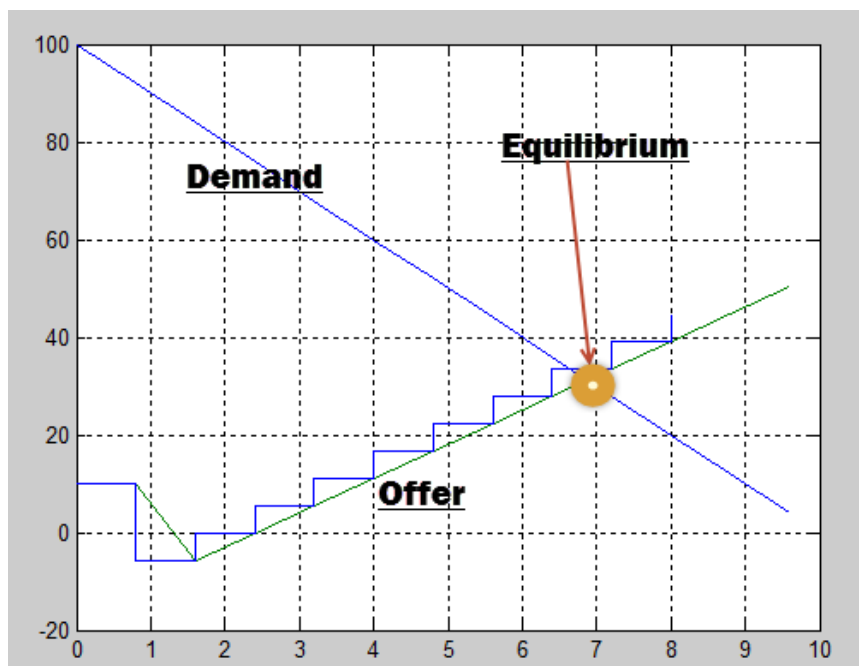


Figure 5 Results of modelling

As result of modelling it can be stated that in theory, at some period of time, the equilibrium between demand and supply was established. Of course, this model is very rough, but it gives an idea of the possibilities of Matlab Simulink in economic or other scientific processes simulation (Anderson, 2005; Cerný, 2009; Chapra & Canale, 2015; Esfandiari, 2013; Karris, 2006).

Conclusions

In the article there is a substantiation of the usefulness of simulation model implementation for the initial teaching process when acquiring the analytic relationship for modelling purpose, the simulation models can also be imported. This makes it possible to perceive not only the possibilities of using formulas, but also to visualize the different correlations in graphical form.

In the research part the possibilities of simulation modelling for economic studies are demonstrated - optimal tax rate searching and market equilibrium modelling. Of course, these examples can be realized easier, but the use of simulation models make it possible to raise learners' horizon and gives an idea of the potential options of using such models.

As a whole, it can be concluded that Matlab Simulink tool is very suitable not only for engineering calculations, but also can serve as a simulation model visualization tool in different economic applications.

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Э-ПОРТФОЛИО КАК СРЕДСТВО ПОВЫШЕНИЯ ПРОФЕССИОНАЛЬНЫЙ КОМПЕТЕНТНОСТИ ПЕДАГОГИЧЕСКИХ КАДРОВ ВУЗОВ

E-Portfolio as a Means of Upgrading Professional Competence of Pedagogical Staff from Higher Educational Institutions

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Abstract. *The article discusses the use of an electronic portfolio system in the development of professional competence of pedagogical staff. The effectiveness of electronic monitoring system in the management of a portfolio of teaching staff's professional activity and the popularization of pedagogical experiments are revealed. Besides, examples of overseas best practices are provided.*

Keywords: *education, information and communication technology (ICT), pedagogue, professional activity, portfolio, recording, retraining and professional development.*

Введение Introduction

Образование считается важной сферой общественной жизни. Образование формирует интеллектуальный, культурный и нравственный уровень общества. Если любое правительство обратит больше внимания на сферу образования, потратит больше денег и его результат отвечает самым высоким международным стандартам, то тем выше будет качество жизни в этой стране.

В нашей стране внедрен целостный образовательный комплекс на основе непрерывности и преемственности, охватывающий все стороны и этапы воспитания совершенного молодого поколения. В “Национальной программе по подготовке кадров” указано, что “проводится дальнейшее укрепление ресурсной, кадровой и информационной базы образовательных учреждений” (Национальная программа по подготовке кадров, 1997).

Современный период ставит новые требования к системе высшего образования, направляет систему на подготовку конкурентоспособных специалистов, требуемых на рынке труда. Процессы глобализации в мире и углубленная конкурентная среда требуют подготовку к этим чрезвычайным ситуациям. Они обеспечивают не только развитие своих собственных идей и благоприятные условия для внедрения созданных теоретических моделей в практике, но также считаются важным интеллектуальным фактором для инновационного развития экономики.

Как известно, профессиональная деятельность – это социально-значимый, нацеленный вид деятельности, она требует специальной подготовки и необходимых профессиональных знаний. В это время на основе необходимых теоретических знаний, практических навыков и квалификаций специалиста, а также освоение духовных и нравственных качеств уровень физиологической, психологической и физической подготовки по отношению осуществления профессиональной деятельности личности является одним из главных факторов.

Ученые Л. М. Митина и О. В. Кузьменкова в своих исследованиях, сформировав концепцию профессионального развития преподавателя, объясняют её социально-значимые качества и в то же время выделяют ряд важных факторов, влияющие на профессиональную подготовку преподавателя.

В частности, ученые высказывают что необходимо практическое внедрение в педагогический труд, а также интеграцию, формирование, рост профессиональных знаний и навыков, профессионально-значимые личные качества и способности это является одним из главных факторов влияющие на профессиональную подготовку преподавателя, однако рассматривают в качестве основного фактора личная мотивация человека, обеспечивающая эффективную работу в профессиональной деятельности и направленность на педагогическую сферу. Такая ситуация научно объясняет необходимость организации на основе нужд и возможностей индивида непосредственно формирования профессиональной подготовки.

Если мы анализируем значение профессиональной деятельности педагогических кадров высших учебных заведений и поставленные перед ним современные требования, при условиях модернизации сегодняшнего образования исходя из потребностей изучающих, проектирование учебно-воспитательного процесса, широкое внедрение передовых зарубежных опытов информационно-коммуникационных технологий, педагогических технологий в учебный процесс, инновационные подходы, направленные на развитие учебной активности студентов, разработка методик, профессиональное

саморазвивание становятся базой значения профессиональной деятельности педагогов высших образовательных учреждений.

На сегодняшний день, в системе образования дают положительные результаты использование системы электронного портфолио в повышении квалификации педагогических кадров системы высшего образования и ознакомление с их профессиональной деятельностью, в развитии их профессиональной компетентности из-за важного значения в развитии сферы профессиональной подготовки педагогических кадров.

В каждом образовательном учреждении личность педагога занимает главное место. Он должен правильно планировать учебные, научные, а также культурные и образовательные мероприятия в организации деятельности, моментально адаптироваться современным требованиям в устойчивом повышении профессиональных педагогических навыков.

Для перехода на национальную модель образования современные учебные заведения требуют преподавателей новой категории и руководящих кадров, которые могут использовать творческое мышление, современные методы и технологии образования, современные образовательные диагностические методы и технологии, методы самостоятельного проектирования педагогического процесса на основе конкретной практической деятельности.

На сегодняшний день, современные информационные и коммуникационные технологии рассматриваются в качестве неотъемлемой части педагогической деятельности и профессиональной компетенции, в качестве приоритетного направления его формирования. По этой причине, база профессиональных данных педагогов и организация образовательного общения со студентами на основе электронных ресурсов являются одной из наиболее важных задач с точки зрения педагогики. Такие задачи требуют разработать и внедрить в практике система э-портфолио педагогических кадров.

Портфолио – это документы, образцы работ, фотографии, а также материалы, позволяющие представить себе предлагаемые возможности, сборник специализированных служб.

В целом, концепция портфолио ссылается на информации о проделанных работах во время рабочей деятельности какого-либо профессионала.

Глобализация системы образования, обеспечение мобильности кадров, разработка международных стандартов по качеству образования ставят новые задачи перед системой образования XXI -го века. Социально-экономическое развитие любой страны зависит прежде всего от её потенциала кадров, знаний и опыта. Качество персонала, их

дееспособность, создание инноваций на рабочем месте через инициативы являются требованием времени.

Таким образом, продолжение эффективного осуществления реформ в системе образования республики, интенсивное продолжение реализации задач стоящие после третьего этапа Национальной программы подготовки кадров и определение образовательных перспектив являются насущными задачами.

Опыты зарубежных стран по внедрению системы портфолио *Expertise of foreign countries regarding the implementation of portfolio system*

Опыты использования современных систем дают большие результаты в процессе набора специалистов или при оценивании потенциала педагогических кадров. Использование таких систем при развитии профессиональной деятельности педагогических кадров важно для их всестороннего изучения. Во многих странах мира портфолио используется в системе образования.

В частности, в Латвии (Рижский Технический Университет) разработана система электронного портфолио развития компетенции обучающихся (Gorbunovs, 2014), в Голландии (университет Лейдена) портфолио используется в качестве средства поощрения учителей (Mansvelder-Longayroux, Beijaard, & Verloop, 2007), а в Великобритании используется (University of Aberdeen, 2011). портфолио в системе университета, а также системы управления педагогического развития в области образования (Derek & Sue, 2005).

На сегодняшний день, также в нашей республике создание портфолио педагогических кадров стало неотъемлемой частью усовершенствования системы переподготовки и повышения квалификации педагогических кадров высших учебных заведений. Оно служит в качестве постоянного главного средства непрерывного повышения квалификации педагогов.

В то же время портфолио проводит мониторинг результатов профессиональной деятельности педагогов, а также создаёт большие возможности для самостоятельного профессионального развития.

Возможности система Э-портфолио *Feasible advantages of e-portfolio*

При введении портфолио формируется многофункциональное средство оценивания образовательной деятельности и само-оценивания

(Альджанова, 2012). В этом случае портфолио помогает решить ряд педагогических проблем:

- развитие высокой мотивации в образовании;
- усиление стремления студентов работать над собой;
- реализация фактора для постоянного непрерывного стимулирования развития;
- стремление к эффективному усвоению знаний;
- диагностика результатов педагогической деятельности.

Кроме этого, портфолио даёт возможность представить собственные результаты преподавателю шире и более различно.

Портфолио может быть в следующих формах:

- сайт портфолио (портфолио в виде сайта);
- веб страница (личная страница в каком-то сайте);
- электронное представление/презентация;
- папка результатов.

Электронное портфолио имеет представление, удобство, чёткая структура ресурсов, а также ряд уникальных особенностей и преимуществ:

- современность;
- быстрота (возможность быстрого добавления необходимых изменений);
- функциональность (возможность предоставить опыты большому количеству экспертов, коллег-профессионалов, заинтересованных личностей), а также отмечать свои успехи, возможность одновременного постоянного заполнения цифровых образовательных ресурсов, создавая систематизированную медиатеку;
- эффективность (самооценки преподавателю, оказание положительного влияния на управленческий состав и на студентов).

Визуальная форма портфолио реализует показ в виде презентации, а сайта-портфолио позволяет получить и искать больше информации.

Созданные возможности для широкого введения системы интернет в учебный процесс дают высокую эффективность при помощи создания портфолио в виде веб-сайта и системная реализация постоянного обновления его ресурсов. Таким образом, размещение портфолио в качестве веб-сайта является самым оптимальным вариантом.

Важные аспекты портфолио состоят из предоставления результатов педагогической практики для оценки профессиональной компетентности (проделанные проекты, участие студентов в олимпиадах и соревнованиях, проделанные научные исследования и т.д.). Портфолио позволяет учителям проанализировать результаты своих работ, обобщать, систематизировать,

объективно оценивать свои способности и планировать как преодолеть проблемы и достичь высоких результатов.

При формировании ресурсов портфолио нужно обратить внимание на следующие аспекты:

- систематизированность;
- презентабельность;
- честное и правильное оценивание достижений;
- полнота, точность и надежность презентуемой информации;
- объективность информации.

Таким образом, портфолио позволяет отразить достижения преподавателем в различных формах педагогической деятельности (учебная, воспитательная, творческая, методическая, исследовательская) (Мусаева, 2013).

Ряд авторов в своих статьях предлагают э-портфолио в нескольких вариантах (Григоренко, 2007; Новикова, Пинская, & Прутченков, 2009):

- портфолио достижений – обращает внимание на документы, подтверждающие результаты деятельности;
- портфолио-презентация – сборник лучших работ преподавателя, оно необходимо для того, чтобы принять участие в различных конкурсах, на интервью для новой работы;
- портфолио в виде отчета – информирует о достижениях и проделанных работах, заканчивая какую-либо проектную работу.
- портфолио-комплекс - включает в себя вышеупомянутые формы портфолио и служит, чтобы продемонстрировать портфолио преподавателей.

Внедрение системы э-портфолио *The implementation of e-portfolio system*

Э-портфолио педагога было сформулировано в качестве системы, которая позволяет отмечать его профессиональные показатели, в ряду с ресурсами, связанные с организацией педагогической деятельности, получение информации по предмету студентами, задания, а также результаты мониторинга по освоению знаний.

В этом процессе, необходимо организовать деятельность создания э-портфолио преподавателей в следующих действиях: во-первых, создается программная платформа портфолио педагогов и педагоги знакомятся с его возможностями; во-вторых, преподаватели, сформировав относящиеся к ним профессиональные данные и образовательные ресурсы, организуют разработку программной платформы; в-третьих, введение его постоянной

непрерывной деятельности, обеспечивая безопасность информации и регулярное обновление ресурсов, организовать специальный доступ для пользователей.

В состав портала Головного научно-методического центра по организации переподготовки и повышения квалификации педагогических и руководящих кадров системы высшего образования при Министерстве высшего и среднего специального образования была разработана программная платформа “Портфолио педагога” (<http://portfolio.bimm.uz>) и была внедрена в практику¹.

На основе наших исследований предлагаемое с нашей стороны э-портфолио было разработано в качестве системы дающей возможность регистрировать результаты мониторинга освоения знаний студентами, а также контрольных заданий, получения информации по предмету студентами, ресурсы, связанные с организацией педагогической деятельности.

Задание данной платформы - это внедрение централизованного портфолио педагогов высших учебных заведений, создание для них возможности образовательных ресурсов по результатам профессиональной деятельности и относящимся предметам, и организация комплексного мониторинга педагогической деятельности (Шоймардонов, 2016).

В системе электронного портфолио пользователи делятся на 3 категории (1-рисунок):

- высшее образовательное учреждение. Администрация высшего образовательного учреждения используя эту систему, может получить информацию о профессиональной деятельности педагогических кадров, работающих в этом образовательном учреждении, их достижениях и ряд других сведений;
- студент. Студенты могут добровольно зарегистрироваться в системе. Им даётся возможность использовать образовательные ресурсы преподавателей (при наличии специального электронного разрешения);
- педагог. Это является основной частью системы. На сегодняшний день были зарегистрированы преподаватели всей системы высшего образования республики (более 22 000 педагогов) в данной системе.

Сведения о профессиональной деятельности педагога заполняются лично педагогом. Эти сведения делятся на 2 вида: личные и профессиональные.

¹ Приказ Министра высшего и среднего специального образования республики Узбекистан от 25 декабря 2014 года № 483.

Личными сведениями относятся анкетные данные педагога, электронные ресурсы, подготовленные по предметам, которые они преподают. Студентам разрешается использовать эти ресурсы. Для этого студент должен войти в систему и ознакомиться с содержанием предмета, а также запросить разрешение на использование ресурса от преподавателя. Таким образом будет запущено виртуальное общение между преподавателем и студентом.

Профессиональные сведения - это следующие направления отражающие успехи, достигнутые за всю свою деятельность:

- учебная и учебно-методическая деятельность;
- научно-исследовательская деятельность;
- организационно-методическая деятельность.

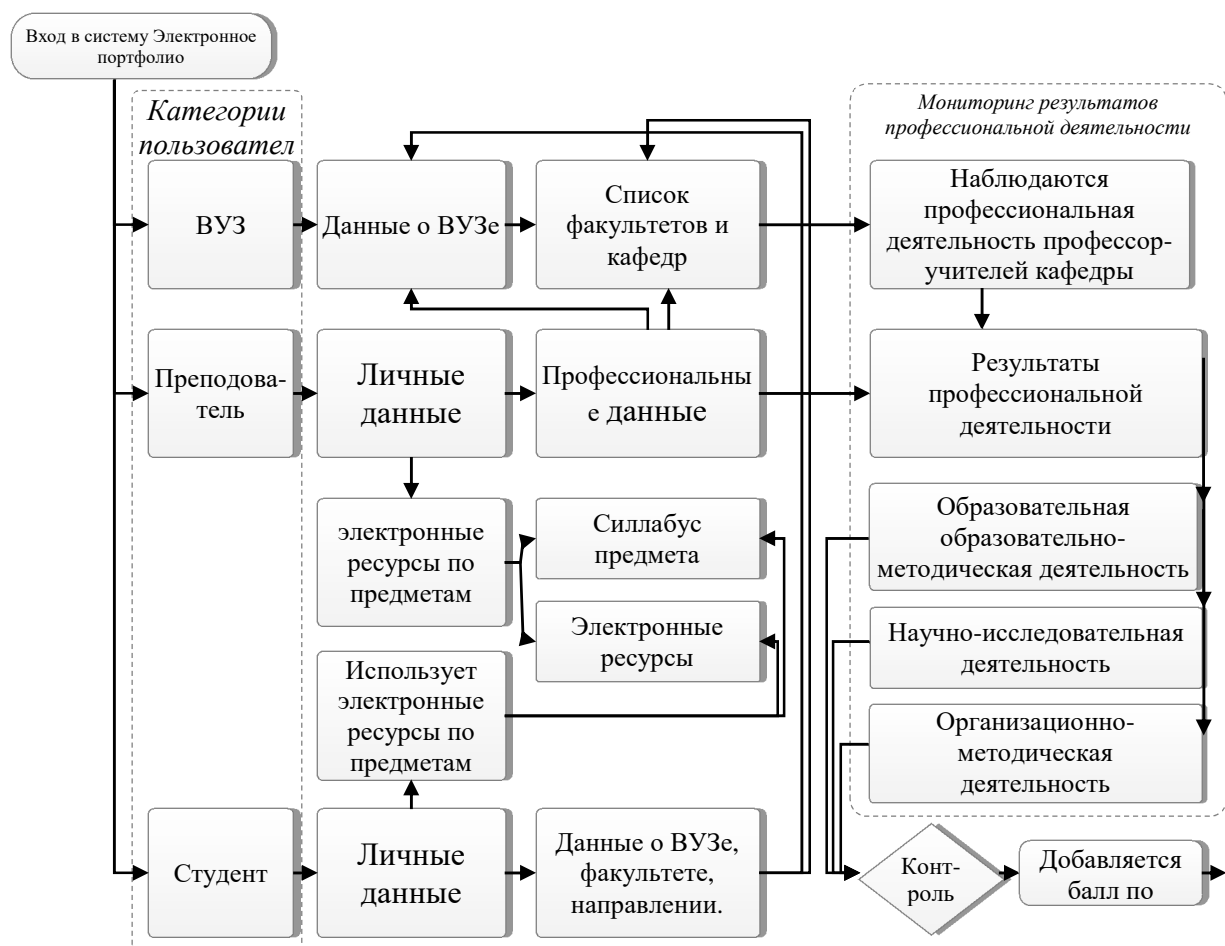


Рисунок 1. Схема электронного портфолио
 Fig.1 The structure of e-portfolio

Эти три направления в свою очередь делятся на 9 категорий. До января 2017 года итогов больше 350 000 сведений были внесены в систему в качестве результатов профессиональной деятельности педагогами, и эта информация постоянно обновляется (2-, 3- рисунки).



Рисунок 2. Сведения результатов профессиональной деятельности слушателей
 Fig 2 Results of the professional activity of listeners

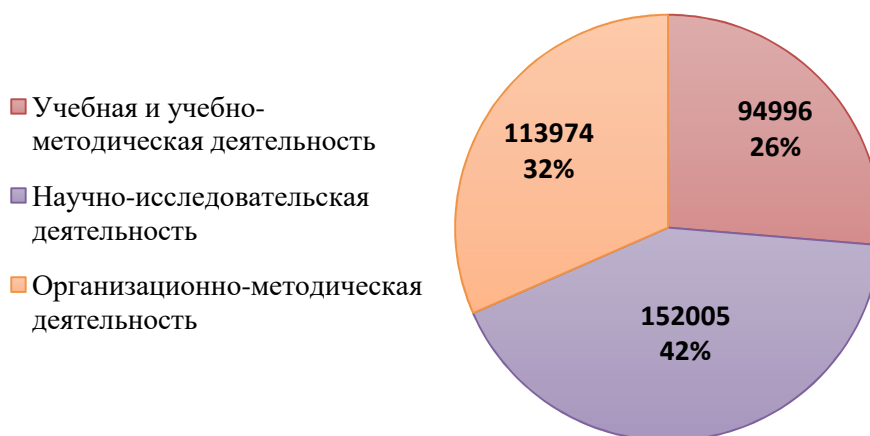


Рисунок 3. Анализ показателей по видам деятельности
 Fig 3 Analysis of indicators by type of activity

Заключение Conclusion

Предлагаемая система э-портфолио выделяет особую роль проведению мониторинга профессиональной деятельности педагогических кадров, продвижению передового педагогического опыта, организации виртуального общения между педагогами и студентами, созданию возможности эффективного использования образовательных ресурсов.

В результате исследований, было разработано система объединяющая в себе образовательные ресурсы и указатели профессиональной деятельности направленные на развитие профессиональной мотивации педагогических кадров и было сформировано в качестве составной части мониторинга профессиональной деятельности педагога.

Системе э-портфолио исполняет важную мотивационную роль при их непрерывном повышении квалификации. С помощью системы портфолио педагог определяет и оценивает свой профессиональный уровень.

Имеют особое значение проведение мониторинга профессиональной деятельности путем предлагаемого э-портфолио, популяризация передового профессионального опыта преподавания, организация виртуального общения между педагогами и студентами, создание возможностей для эффективного использования образовательных ресурсов. Кроме того, создаются возможности педагогам представить свои профессиональные результаты и проанализировать их, а также собранные в нем сведения могут быть оценены в качестве удостоверения профессиональной деятельности педагога.

Summary

Monitoring the professional activities through the proposed electronic portfolios, popularization of advanced professional experience in teaching, organization of virtual communication between teachers and students, creating opportunities for the effective use of educational resources are of special importance. In addition, teachers are able to present their professional results and to analyze them. The data collected in the portfolio serve as a professional educator license.

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THE UTILISATION OF INDUSTRIAL PROCESS MODELS IN ACQUIRING THE PRACTICAL SKILLS OF PLC PROGRAMMING

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***Abstract.** In the paper the use of process models and computer simulation as the tools which facilitates students to learn the conditions of the industrial processes control has been presented. Such approach enables to familiarise with operation and programming of controllers of industrial process. Moreover, it also enables safe testing of control algorithms provided by logic controllers through their implementation at the real industrial facility.*

***Keywords:** process model, programmable logic controller, simulation.*

Introduction

The correct implementation of automated engineering process shall require from the persons preparing particular stages of it to have specific knowledge including control, implementation of relevant algorithms and to have clearly defined tasks of supervision over operation of the production lines. Inherent part in the industrial technology is also to involve various means of transmissions and information processing. Therefore, preparation of the staff to the tasks imposed upon it forces the provision of adequate training not only within technical details of a particular process and its control but also regarding communication network interoperability between different system elements, both at normal operation and failure condition. The safe acquisition of such skills by the future technical staff is opportune due to the application at training students of relevant didactic tools provided in a form of models and simulation of controlled system or process (Olesiak, 2014; Podlejski & Rak, 2007; Prauzner, 2016; Ptak, 2015).

The structure of industrial systems

The procedures for direct control of particular equipment of the process line as well as visualisation and supervision over such equipment are implemented within 1 level and 2 level of hierarchical structure of industrial systems, it means of the control system of industrial process, where the most common are Programmable Logic Controllers (PLC) and Supervisory Control And Data

Acquisition system or Human Machine Interface (SCADA/HMI). Communication protocols of industrial automation (Modbus, Profibus, DeviceNet, etc.), until recently the closed systems, owing to the new possibilities which are offered by Ethernet, TCP/IP, GSM, GPRS technologies and due to their application to sensors, actuators, control systems and data acquisition systems allow the communication between them also via for example a web browser or a mobile phone. Therefore, the exchange of data, both in wired and wireless way, from controlled equipment as well as from PLC and SCADA layers and other external systems, including also between Manufacturing Execution System (MES) applied in production management network and management of the enterprise under the ERP system (Enterprise Resource Planning) is possible – Figure 1 (Bognár & Tóth, 2013; Liptak & Eren, 2011; Wilamowski & Irwin, 2016).

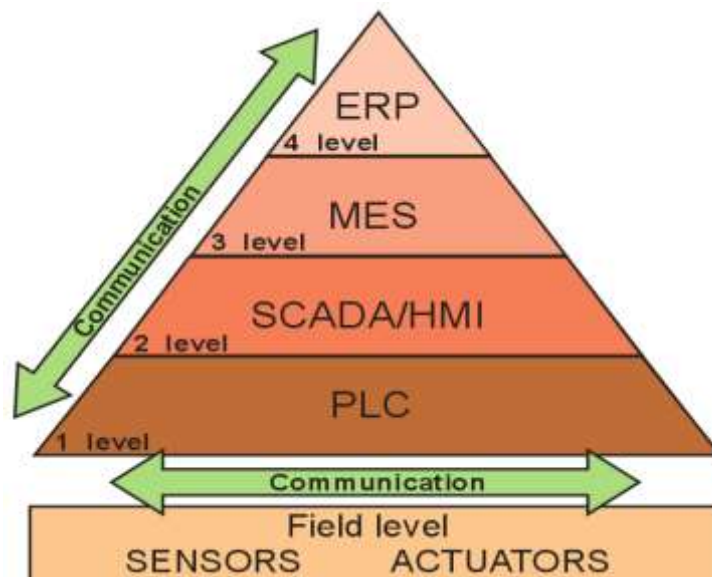


Fig.1 The communication layers in industrial systems

From the engineer designer and the later industrial system administrator's point of view, knowledge of the issues related to creation of control algorithms, programming and being aware of the specific engineering process and dynamics of control system elements. This will ensure relevant communication between particular control system elements which shall guarantee correct and failure-free production. Moreover, having the opportunity to analyse the configuration and to verify functioning and efficiency of the data transfer system (network simulators) and interoperability between the communication network and PLC control systems and the equipment of automation systems (sensors, encoders, inverters, valves, etc.) is also important. Carrying out tests on the operating technological process is usually for various reasons impossible and often even dangerous (e.g. potential to cause interruption to operation, equipment damage). Development of

the model and simulation of a particular control process which reflect the real responses of the system is a solution to the issue. The simulation can be used at educating the staff as well as to test and learn new solutions, to improve the control quality, to analyse the reliability, or to develop the conduct procedures at failures and to mitigate their results.

The concept of control process simulators

Generally, several implementing arrangements of simulators intended to control system level, supervise and visualize the process can be identified. The simulator as close as possible to the industrial control system is a test facility consisting of a equipment providing the visualisation of the process (computer, operator panel) interoperable with logic controller and a model of the controlled system (Process Trainer) – Figure 2. That solution shall require developing a physical model of the process line, what depending on a degree of reflection accuracy of the real process (sensors, actuators) can involve significant financial costs. The SCADA software type is for example Asix, ControlMaestro, ICONICS, iFIX, InTouch, PROMOTIC, TRACE MODE, Vijeo Citect, WinCC.



Fig.2 The process computerised visualisation interoperable with the control system and the process physical model

Under laboratory conditions the facility model, for reasons of simplicity, may constitute a set of discreet and analogue programming devices which enables forcing positions at controller’s inputs manually and monitoring its output positions – PLC Trainer (Fig. 3). Figure 4 and Figure 5 provide the examples of the physical model of the controlled system. The positions programming devices adjusted manually are presented in Figures 6 and 7.

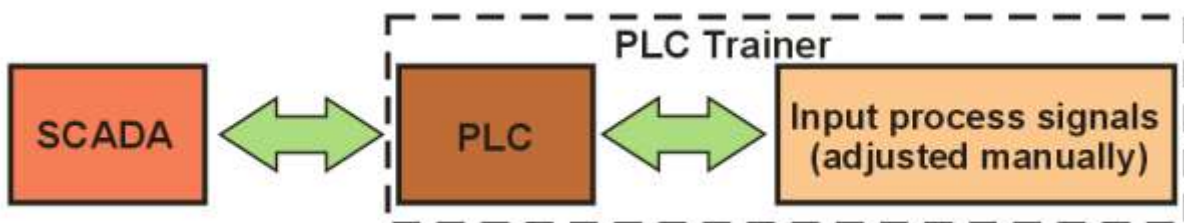


Fig.3 The process computerised visualisation interoperable with PLC Trainer



Fig.4 Pressure flow level and temperature process training system by Festo (LabVolt, 2017)

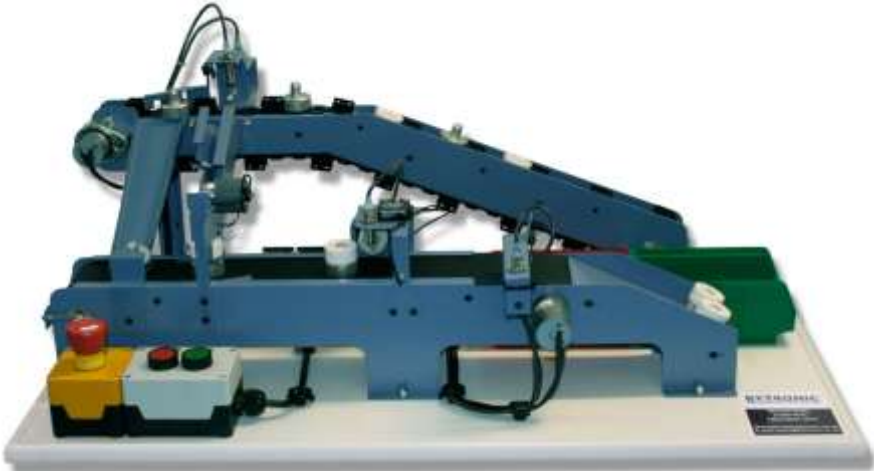


Fig.5 Industrial Control Trainer by Baytronic (Baytronic, 2017)



Fig.6. PLC Trainer by ASTI (ASTI, 2017)



Fig.7 PLC Trainer by KOESTER (Encon, 2017)

The simulation set can be also composed of a process physical model controlled by PLC controller implemented on PC, an industrial computer or an advanced operator panel (PC-based controller). Such a software controller, so called softPLC (for example SIMATIC S7-1500 Software Controller, SIMATIC WinAC, TwinCAT), is nothing other than an application operating under control, for example of Windows system, which through industrial networks or I/O modules communicates and controls elements of the model – Figure 8. The undoubted advantage of such approach is considerable increase of computing power in relation to the standard industrial controllers. SoftPLC can be applied as independent environment, and any SCADA software can be used for graphic presentation of the process. The use of a packet which combines inter alia control functions, visualization and communication with signals acquisition systems can be another option e.g Automation Studio. It is also possible, due to the use of the programme and calculation environment for example LabVIEW software, which controls the process model by means of the multifunction I/O card, to apply the author’s approach (Figure 9).



Fig.8 The computer provided with SCADA and PC-based controller interoperable with a physical model of the facility

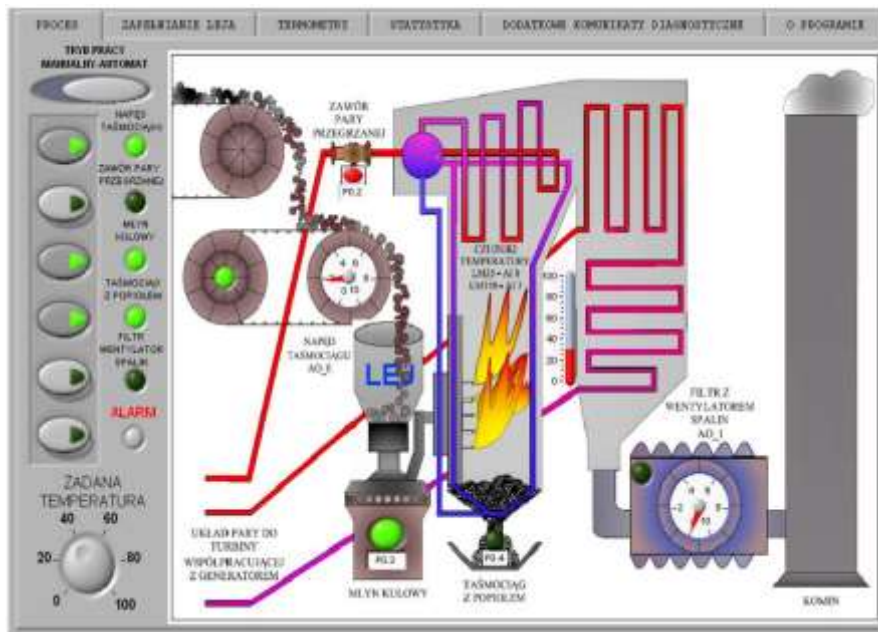


Fig.9 Visualisation of the superheated steam control process (Podlejski & Rak, 2007)

In another type of the process simulator PLC controller shall read signals from virtual sensors and control virtual actuators. The facility has been modelled on the computer and it communicates with the logic controller. The entire process is visualised on the computer's monitor – Figure 10.



Fig.10 The physical control device connected with the computer model and process visualisation

The ones of computer process models are of a company, the most frequently closed to a user and/or dedicated merely to a particular process or a range of applied equipment, for e.g. ITS programme which offers virtual manufacturing processes. Figure 11 presents one of them. Another computer process model prepared individually by author are based on generally available programmes. They ensure high flexibility and openness of the structure. Mathematical models of the analysed issue are developed in the programme and calculation environment, for e.g. MATLAB, which can be also used to carry out a graphic picture of the process. The programmes of SCADA type can be also applied for visualisation of the modelled problem.



Fig.11 Simulation of the batch process (Encon, 2017)

A fully computerised simulator of the process, it means the IT system is a convenient type of the simulator. The IT system consists of computerised visualisation interoperable with dynamic models of the process, control systems, sensors and automation equipment. We are dealing here both with a virtual control object and a virtual PLC controller – Figure 12. On the market highly specialized simulation environments prepared for training within specific areas, e.g. Industrial Training Simulator by ABB, Operating Training Simulator by Honeywell, are available. Usually, the programmes are closed, what means a user may interfere in to them within a very limited range.



Fig.12 The computerised visualisation interoperable with dynamic models of the process and control systems

In the event we intend to provide simulation of various processes and where we want to have the complete control over the simulator structure it shall be efficient to use generally available SCADA as well as softPLC software and independently develop appropriate applications. Then, the computerised simulators of controlled objects (e.g. developed at LabVIEW) should take into consideration the elements of sequence control and the dynamic parameters of the process. Both the object of control and a software controller are connected in to

one network system of data exchange operating in the real time. It enables the effective analysis of the entire system, not only with regard to the quality of automotive control but also regarding consideration in this process of network performance, connected with the data exchange and visualisation.

Conclusions

The industrial processes simulators play an essential role in the process of education of new staff and professional training. Depending on specificity of the process which they are to reflect, their structure may take various forms. The application of a physical model of the object of control is a solution as close to the reality as possible. Unfortunately, from the scientific perspective of programming automation systems and industrial communication networks the solution is not optimal. The primary concern is to handle critical situations which may lead to damage the model. Insurance for safe use of the simulator itself shall be also required. In view of that, the use of the complete computerised simulator of the process seems to be applied. In order to reflect the real process the simulating algorithms shall include the completed times of response of sensors and controllers to the adjusted signals. However, such form of the simulator allows to serve critical emergency situations occurring due to operator's mistaken decisions or sudden loss of communication between the facility and the controller

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ADAPTIVE E-LEARNING SYSTEM BASED ON STUDENT ACTIVITY SKILLS IN MOOLDE SYSTEM

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Abstract. Nowadays there are many views related to the online testing systems. The importance of acquisition of the final result is considered to be the main disadvantage in the classic test system where the learner chooses the correct answer from the suggested set of answers; this does not motivate a person to define the answer themselves or to create a logical chain of problem solutions. The integration of the intellectual processes into the existing training systems will prevent the drawbacks of the existing knowledge assessment systems and will make it possible to assess the learners' ability to make logical decisions, to clarify the answers using examples and to evaluate the method of achieving the result. The article describes the algorithm for creating the intellectual, user adapted questions; this algorithm uses the model of the learner from the set of questions and by fulfilling the modified Dijkstra's algorithm chooses the questions that help the learner reach the result that is most appropriate to their competence level.

Keywords: Adaptive system, Intelligent system, Moodle, Student classification, Quiz systems.

Introduction

Nowadays one of the ways how to check the learners' knowledge in the Latvian educational system is a test. Test in a broader sense is a standardized assessment of knowledge and comprehension using different types of tasks. In a narrower sense, it is an assessment of knowledge and comprehension through tasks with multiple choice questions. Tests can be used for the initial assessment, the formative assessment as well as the summative assessment. However, tests may be used during the learning process and for self-assessment in an equally successful way.

The tests used for evaluation are based around everything that has been learnt during the learning process. In order to create the task system, it is recommended to progress from simpler to more complex tasks, thus checking the students' knowledge and understanding of using the appropriate knowledge in a standardized situation as well as in a new situation that has not been dealt with prior.

Tests are often used for formative assessment purposes and the number of questions that they contain should not exceed 7 to 10 questions. By contrast,

summative assessment involves a complex test consisting of test questions and tasks which examine the use of knowledge and creative skills. The summative assessment can also take a combination such as this: test + research.

Nowadays there are many views related to the testing systems. The importance of acquisition of the final result is considered to be the main disadvantage in the classic test system where the learner chooses the correct answer from the suggested set of answers (Niemiec et al., 2009); this does not motivate a person to define the answer themselves or to create a logical chain of problem solutions. This is the reason why testing does not always allow determining the actual level of the learner's knowledge. Other authors have proven (El Bachari et al., 2010) that when carrying out the assessment of the learner's knowledge by using open questions and tests, the results obtained by using tests are 48 % better than using the open question form.

The integration of the intellectual processes into the existing training systems (utilisation of the artificial intelligence methods) will prevent the drawbacks of the existing knowledge assessment systems and will make it possible to assess the learners' ability to make logical decisions, to clarify the answers using examples and to evaluate the method of achieving the final result.

The article describes the algorithm for creating the intellectual, user adapted questions; this algorithm uses the model of the learner from the set of questions and by fulfilling the modified Dijkstra's algorithm chooses the questions that help the learner reach the result that is most appropriate to their competence level.

Related works

Thanks to the rapid development of the modern technology, nowadays a new generation of learners has emerged – they use only electronic resources in order to acquire new knowledge (Abraham et al., 2013). Despite the fact that today's systems can provide full educational process by using the method of presenting information mentioned prior, the way of presenting information is not always acceptable to all groups of learners. Nowadays the online educational systems can be divided into three relative groups (Azough et al., 2010): *Learning managements system*, *Synchronous collaboration*, and all *other computer tools including asynchronous collaboration*. Whilst working with training systems, the user must choose the category of the training system for themselves and they must also adapt to the training course methodology. The research nowadays has shown that when using a static training system, the user cannot choose the training style that fits their personal needs which has resulted in: 39 % of the time it being a reason to stop learning or 40 % of the time it being a reason to simply skip incomprehensible or difficult topics and master them through other systems or courses (Abraham et al., 2013).

In their work (El Bachari et al., 2010) it has been proven that using adaptive learning systems lets a person choose the learning content and the way of presenting information; it also increases the quality of the course by 28 % by reducing the rate of terminating a course by 60 %.

The tools of today only partially solve traditional problems which are related to the intelligent training systems. It is scientifically proven (Surjono, 2011) that the main obstacle in implementing the intelligent training systems is related to the integration of the decision-making algorithm in the environment of a training system and its connection with the user model. Nowadays the intelligent training systems mainly have the adaptive rather than the intelligent functions.

The development of the learning model by using the Moodle learning system

In order to provide the customization of information for every student, an intellectual agent has been integrated into the Moodle system and by taking four steps it makes it possible to define the necessary requirements for the selection of information from the common Moodle data sets which corresponds to the specific learner's ability and needs:

- **Data selection.** The training system identifies each user through a unique identification code and collects the information on the system usage intensity and the number of resources used. By taking this step, the user's model has been defined indicating the topics which the learner has mastered as well as the topics which they have viewed on a regular basis following the current task.
- **Pre-processing the information.** The received information is automatically summarized and structured in the format of a new table. MySQL System Tray Monitor and Administrator tools are used for data pre-processing by using the expert-defined requirements.
- **Apply association rule mining.** The data mining algorithms (Delgado et al., 2010) are applied to discover and summarize knowledge of interest to the teacher.
- **Defining the user model coefficient.** One of the factors that determines the learner's achieved results are the results of the electronic training system self-assessment tasks. The received results define the learning process of the category and the further direction in order to achieve the final results. The teacher will use the received data for making decision about the students and the Moodle activities of the course in order to improve the students' learning skills.

Within an working system it is impossible to obtain all the necessary information to define the user model. Some base values of the model, such as the time which is spent using the Moodle system or the amount of resources viewed, do not always indicate the actual time spent in the system, but only the time while a remote session is open and the system remains active. As a result, there are some restrictions that do not allow preparing all the necessary information in order to adapt the course material:

- It is not possible to find out how a user will behave and what kind of material they will look at. Also the learner's demand might be unchanged or the system user will use the expected information selection process or any casual requests.
- The results which are acquired whilst completing the tasks of self-assessment cannot be categorized or do not allow defining the priority themes.

As a result, it can be concluded that in order to monitor the result of the learner's knowledge acquisition, a physical audit is necessary and it can be conducted by using self-assessment questions. There are often situations when previously prepared tests do not provide the actual results and they do not motivate the learners to revise the material acquired prior. Thus, when receiving the minimum permitted mark in a test, the learner moves on to the next topic where the previously skipped topics are no longer discussed. Nowadays, this issue can be resolved only by involving a real expert who will manually adjust the learning materials of each topic for learning model of the learner.

The use of question metrics in the process of designing a test

This article has proposed a method for designing self-assessment tasks where the selection of questions is implemented by using the graph theory. Suppose that a set of questions which can be used to achieve the result D has been assigned a matter of metrics $l(S(s))$, a value which is located in the indexed set and can be used in comparison. In the models suggested by other author (Гекк et al., 2006), the metrics are built using recursive approach from top to bottom, defining the conditions for establishing the route.

For the question selection algorithm to be effective it is necessary to meet three conditions: determining the importance of the question, preservation of priorities, and the determination of the importance of a question.

Determining the importance of the question. The selectable question v is useful for the test u , if the condition is fulfilled (formula 1):

$$\begin{pmatrix} S(v_1) \\ S(v_2) \\ \dots \\ S(v_n) \end{pmatrix}_T \xrightarrow{t,select} \begin{pmatrix} S(v_{i_1}) \\ S(v_{i_2}) \\ \dots \\ S(v_{i_n}) \end{pmatrix}_T, \quad (1)$$

where $S(v_{i_j}) > S(v_{i_{j+1}}), j=1,2,\dots,n-1$.

Its condition plays an important role. All metrics, whose rates are low, will be selected from the metrics list $S(u)$ (the questions were not covered before or the learner has made several errors while filling in questions of a similar category). Accordingly, there will be no possibility to choose the test questions which the student can easily answer or has already answered successfully before.

Preserving the priorities. The metric preserves its priority if the $l(S(v)) \leq l(S(uv))$ follows with $l(S(u) \leq l(S(v) \oplus S(u))$ for all $\forall v \in V$ and $\forall u \in N(v)$. This means that before adding a new question u to the list $S(v)$, it is evaluated as to whether it will be better than anyone else from the list $S(v)$.

Defining the importance of a question. It determines the behaviour of the metrics through the full test question reconfiguration. Let us assume that $R(v) = (v_1, v_2, \dots, v_n)$ is the set of questions for the u test. Let us introduce an additional list $R^*(v)$ with questions that are sorted in the ascending order of the metrics - $l(S(v_n)) \leq l(S(v_{n+1}))$. The arranged list of metrics will allow choosing the number of the most important questions for the v test (formula 2):

$$l[S_{R^*(v)}(v)] \leq [S_{R^*(v)}(v)]. \quad (2)$$

The algorithm of the intellectual question selection

The Dijkstra's procedure is considered to be the basis of the classic information search algorithm in the graph (Вабищевич et al., 2010). When implementing the procedure each question in the database is accompanied by two variables – $prior(v)$ indicating the frequency of using the question v and $pred(v)$ which indicates the location of the question v in the test. The starting value of the variable $prior(v) \rightarrow \infty$ has been defined. This means that the question has not been viewed yet. The starting value of the variable $pred(v) = 0$ – this means that the questions do not have a determined location in the test or that the location does not matter.

It is defined that the usage ratio of a question is a positive number. In this case, it is proposed to use the Dijkstra's algorithm (figure 1.) provided that -

$l(u, v) \geq 0$. As a result, the path of the graph must be built through questions with a minimum utilization coefficient.

Dijkstra's Procedure

(set of questions, test set, and achievable result)

```

for all  $u \in V$  {
     $prior(u) := \infty$ ;
     $pred(u) = 0$ ; }
 $prior(d) = 0$ ;
 $H = CreateQueue(V)$ ;
while  $H$  is not empty {
     $u = Fist\_Out(H)$ ;
    for all  $(v, u) \in E$  {
        if ( $prior(v) = prior(u) + l(v, u)$ )
            {  $prior(v) = prior(u) + l(v, u)$ ;
               $pred(v) = u$ ;
               $Rearrange\_Queue(H, v)$ ; }
    }
}

```

A significant difference in the procedures is the use of line H where all the elements are sorted using $prior(v)$ values. The procedure $CreateQueue()$ creates the line of question priorities H by replacing the question of the start of the line with the lowest usage coefficient $prior(v) = 0$. The procedure $Rearrange_Queue(H, v)$ provides the reconfiguration of the line in case of priorities or usage of the questions.

Every time when performing a *while* cycle two conditions are met:

1. There is a $d > 0$ value where all the questions viewed - $prior(v) \leq d$ and all the remaining questions of the line - $prior(v) \geq d$.
2. The value $prior(v)$ for each question v in the line is equal to ∞ or the minimum coefficient which points to the need of including the question; moreover, the frequently used in questions or the questions which do not meet the aim are removed from the line.

The completion of the requirements guarantees the result of the algorithm solution (figure 1).

If it is necessary to evaluate the change in metrics through a dynamic question selection the use of Bellman-Ford algorithm (Golderg et al., 1993) is suggested. When the algorithm is in action, the starting value of the metrics of each question may vary multiple times depending on the results received during the tests. Every time the change in metrics is conducted by using the procedure (3):

$$Update_M(v, u) : prior(v) - \min\{prior(v), prior(u) - l(v, u)\} \quad (3)$$

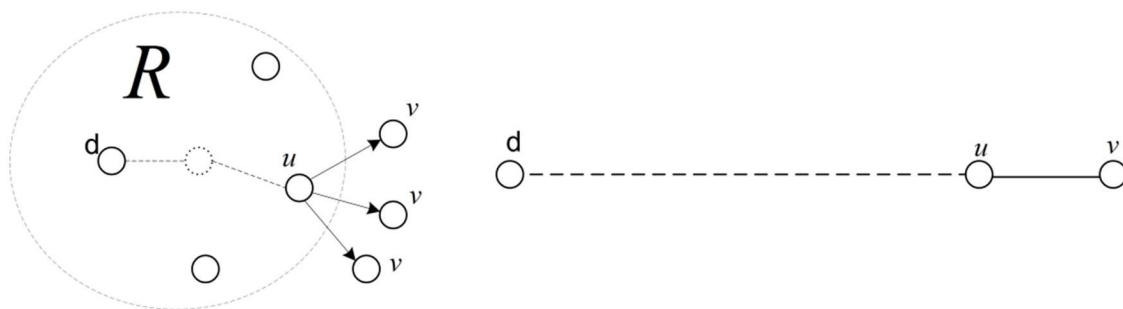


Fig.1 Application of Dijkstra's algorithm

During the procedure certain characteristics are conducted:

- the use of the procedure does not increase $\text{prior}(v)$ values;
- the most effective result corresponds to a minimal $\text{prior}(v)$ value, therefore the regular *Update_M* procedure will not affect the results negatively.

The proposed algorithm creates a test looking at all the questions from the group $S(v)$ if the question usage coefficient is available to the $l(S(v))$ metrics. Where it is not possible to identify the value of the question usage, the algorithm for creating intellectual questions is no longer able to work.

Conclusions

Nowadays, an intelligent E-Learning system allows teachers to monitor students' learning process. Online analytics tools prove to be highly practical when working with students' process validation, what mistakes they can have, and how they are interacting with course content. Teachers can change or adapt their lessons structure and main content. Moodle framework is highly reliable and encourages students with semantic and other motivated courses by using adaptive e-learning. But it lacks the feature of social interaction especially when it comes to interact with teachers and the meaning of sharing experience.

The article describes the algorithm for creating the intellectual, user adapted questions; this algorithm uses the model of the learner from the set of questions and by fulfilling the modified Dijkstra's algorithm chooses the questions that help the learner reach the result that is most appropriate to their competence level.

In result, general architecture of intelligent questioner module for e-learning intelligent system was described in this paper. The objective is to make a system work like a real teacher which can model the description of pedagogic resources and guide the learner in his educational process according to his assets and to the pedagogic objective that is defined by the teacher.

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MANIFESTATIONS OF TEACHER PROFESSIONAL AGENCY IN RELATION TO INTEGRATION OF ICT IN TEACHING

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Abstract. Drawing on the social domain theory of Derek Layder, this qualitative meta-study study aims to propose a novel typology of school teacher professional agency in relation to the process of information and communication technology (ICT) integration in teaching in Latvian and Estonian schools. The typology is built by understanding teachers' choices and practices of technology use as both resourced and constrained by various personal, situational, social and contextual factors. The findings are based on semi-structured interviews with Latvian (N=16) and Estonian (N=10) teachers, class observations, and a study on teachers' information search performance online. Five distinct types of teacher agency manifestation are identified and discussed on three dimensions: pedagogic use of ICT, mediation of students' uses of ICT, and teachers' learning about ICT. Implications for in-service teacher training are discussed.

Keywords: ICT integration in teaching; secondary school teachers; social domain theory; teacher professional agency.

Introduction

Teaching by its nature is a very agentic profession: to be an in-service teacher requires standing for something, taking stances and acting accordingly (Kelchtermans, 2009). Being an in-service teacher means also balancing between different societal pressures and demands posed on teachers due to societal, political and cultural transformations, which we experience recently along changes in production, consumption, social and political relations (Fullan, 2007; Hargreaves, 1994, 2000; Selwyn, 2011). Thus, being a teacher means coping with an ongoing and constant change process (Fullan, 2007). Perhaps the most persistent and long-standing change in teacher work is related to the worldwide attempts to integrate information and communication technology (ICT) in teaching (Selwyn, 2011). It is due to the fact that on policy level for the last decades schools are largely seen as means of preparation of skilled and ICT literate workforce (Apple, 1994; European Commission, 2014; Ward, 2012). Such understanding leads to notion of ICT as an integral part of every school

subject (Haydn, 2010; Tondeur et al., 2007). Therefore, the teacher responses to pressures related to ICT integration in different school subjects has become an issue of interest in the field of educational technology studies.

This qualitative meta-study aims to propose a novel typology of school teacher professional agency in relation to the process of ICT integration in teaching in Latvian and Estonian schools. Subsequently, the research question, which informs the present study, is the following: How is teacher agency in technology integration process manifested when teachers navigate within various personal, situational, social and contextual influences? To shed the light on these issue, this paper synthesizes the main findings of a list of previous publications where the author of the current paper has contributed during her doctoral studies at the University of Tartu (Karaseva, et al., 2013; Karaseva et al., 2015; Karaseva, 2016a; Karaseva, 2016b; Karaseva et al., forthcoming).

Estonia and Latvia both serve as interesting examples for studying ICT integration in teaching due to several reasons. First, after the collapse of Soviet Union in 1991 digital tools on policy level have been addressed as a powerful means for “catching up” with the West economically, mentally and culturally (Runnel et al., 2009). Such notions have fuelled the process of rapid “internetisation” of Estonian and Latvian schools in second part of 90ties via initiatives such as “Tiger Leap” in Estonia (UNDP, 2003), and “Latvian Education Informatization System” (LIIS) in Latvia (Bicevskis, Andzans, Ikaunieks, Medvedis, Straujums, & Vezis, 2004). These programs were aiming to equip schools with digital technology, connect them to the Internet and train teachers in ICT skills to be able to integrate digital technology in every subject teaching (Mägi, 2006; Kangro & Kangro, 2004). Nowadays, both national curricula define digital competences among other core competences (Latvian Ministry of Education and Science, 2013; Estonian Ministry of Education and Research, 2011). Teachers in both countries can autonomously decide about the teaching aids, instructional methods and organization of classroom process, however, as research shows, the policy context for teacher work in both countries is tightening and teachers repeatedly report decrease in their feeling of autonomy (Loogma et al., 2010). It happens due to growing demands related to teacher accountability, responsibility over student attainment in centralized exams, pressures to innovate and keep up with the societal, cultural, and technological changes (Errs, 2015; Loogma et al., 2010; OECD, 2009). Therefore, conceiving teaching profession and integration of ICT in Latvian and Estonian schools as phenomena embedded in specific social, political and economic contexts (Selwyn, 2011), this study draws on the social domain theory of Derek Layder (1993; 1997) as its theoretical framework.

The rest of the following paper is structured in the following way: first, the social domain theory of Derek Layder (1997) is introduced briefly; second, the

concept of teacher professional agency and its manifestations is reviewed. Further, the data collection and data analysis process is described in Methods section, which is followed by Results' part, Discussion and Conclusions.

Theoretical context of the study

Social domain theory

Derek Layder (1993; 1997) proposed that social life can be understood by looking not only at the often applied dyadic distinction between micro and macro, or individual and the society, but by splitting the social world into four distinct domains. These domains are as follows: 1) the domain of the self (which Layder also calls as the domain of psychobiography), 2) the domain of the situated activity, 3) the domain of the social setting, and 4) the domain of contextual resources.

The domain of psychobiography refers to individual's identity, personal characteristics such as beliefs and perceptions of social world. It contains personal feelings, attitudes, and predispositions that people develop through their lives and also the future aspirations and personal and professional goals which people strive to achieve (Layder, 1997). From the viewpoint of social domain theory, it is important to stress that the domain of psychobiography mediates the perception and interpretations of the other domains, thus it explains why people in similar situations react differently (Layder, 1997).

The domain of situated activity refers to everyday interaction between individuals. Layder (1997) describes it also as the domain of "focused gatherings", - situations that arise when two or more people share each other company for a purpose. Layder (1997) notes that what happens during these "focused gatherings" at face-to-face level depends upon how participants formulate their conduct in the light of their own behaviour and intentions and of the other people who are present.

Speaking about the social organization, according to Layder, the closest to face-to-face encounters and everyday negotiations is the domain of social setting. This refers to proximate, specific location where human interaction takes place. Here the focus shifts from individuals to the workplaces, where the social activities and social practices of people are situated (Layder, 1997).

The fourth domain in Layder's theory is the domain of contextual resources. It can be understood as a set of economic and dominative resources and various forms of hierarchy and inequality on a society-wide basis related to the structure, rules, norms and ownership of economic and cultural resources (Layder, 1997).

Layder (1997) argues that all domains are strongly interconnected and they interact with each other through power, social relations and practices. However,

a merit of this theoretical framework is that it acknowledges the interconnectedness of the different layers of social life, but denies a stable hierarchy between them, i.e., Layder insists that systemic factors do not determine the psychologies of individuals nor do they determine the nature of interpersonal encounters. And vice versa: psychobiography and interaction between individuals does not cause or determine the functioning of social setting or the contextual environment. Selwyn (2011:50) has noted that “the use of digital technologies within schools is best understood as being situated within all of the social interests, relationships and restrictions that are associated with schools and schooling”. Hence, application of social domain theory in the analysis of educational changes related to ICT integration in teaching allows to recognize the subjective and objective factors related to the change process thus helping to understand why there are variations in teachers’ responses to educational changes.

Teacher professional agency and responses to educational changes

Often the notion of human agency is understood in the Giddensian sense as the agent’s ability to intervene with the world and make changes to the current situation (Giddens, 1984). Lipponen and Kumpulainen (2011) point towards the idea that agency can also refer to strivings to maintain and reinforce the current state of affairs. Eteläpelto et al. (2013) argue that investigations of professional agency and its’ various manifestations require considerations of the relationship between contextual constraints and resources, and professional agency. Understanding the dynamic interplay between these two helps to understand how people create meaning, and cope with professional challenges and take work-related choices (ibid.). The notions of human agency as being resourced both socially and individually (Lipponen & Kumpulainen, 2011; Vähäsantanen, 2015) have become prominent in the field of educational studies. It is used to address teachers both as professionals doing their work, and as lifelong learners (Eteläpelto et al., 2013), able to make decisions, take stances, and act accordingly thus affecting work-related matters (Ketelaar et al., 2012; Lasky, 2005; Lipponen & Kumpulainen, 2011).

In the current paper the idea is pursued of teacher professional agency as something that teachers “do” instead of “have” (Fuchs, 2001; Ketelaar et al., 2012; Vähäsantanen et al., 2008). Thus, professional agency can be understood as active management and engagement with contexts of action which is resourced and constrained by various personal, situational, social and contextual factors. Namely, drawing on the framework provided by social domain theory (Layder, 1997), the manifestations of teacher agency can be understood, first, as mediated by various pre-existing teacher beliefs, previous experience, and at the same time also achievement goals and future aspirations (the psychobiographical domain). It can be understood also as emerging from

interactions and face-to-face encounters with students (the domain of situational activity), third, as influenced by various social and cultural properties of the local context (domain of social setting). Fourth, manifestation of teacher agency can be understood as influenced also by macro level institutional pressures such as educational policies and dominant norms, rules and culture specific aspects (domain of contextual resources).

Teachers are recognized as the key actors in the process of change (Fullan, 2007), and previous research indicates that teacher responses can vary considerably when teachers face different school reforms and policy pressures. Coburn (2004) found five distinct types of teacher responses to educational change: rejection, symbolic response, establishment of parallel structures, assimilation of the proposed policy, and accommodation to the imposed changes. Luttenberg et al. (2013) found four dominant types of responses to educational changes: assimilation, accommodation, toleration and distantiation from the propose reform. Stillmann and Anderson (2015) made a case-study on how a teacher went through the process of appropriation developing an active, agentic, and learning-rich response to policy, stitching together multiple influences, re-authoring and co-authoring the policy, making it “one’s own”. Vähäsantanen and Billett (2008) described how teachers respond to educational changes through involvement in professional development and active participation, through attempts to balance the existing practices and the pressures to change, through withdrawal from the reform or passive involvement in the form of mere adjustment and toleration of the external demands. Kesküla et al. (2012) analyzed how secondary school teachers in Estonia have responded to curriculum changes since 1990ties including the introduction of the national final examination system. Seven distinctive positions were found in their study, ranging from enthusiastic embracement of the new norms, obedient acceptance and gradual adaption to the new situation to continuation of the previous practice and refusal to change due to a view that curriculum demands are impossible to fulfil. Among other responses, this study detected also refusal to change due to moral objections where the teacher called the national final examinations and excessive curricular demands “unethical with regard to students’ interests” (p. 372).

The variety in teachers responses to educational change captured in previous studies should be kept in mind when exploring teacher responses to ICT policies in schools. It is due to the fact teacher professional agency in the context of ICT integration is often conceptualized in two extremes. On one hand, teacher agency is often understood as agency of change (Heijden, Geldens, Beijjaard, & Popeijus, 2015), and teachers being as more or less enthusiastic implementers of externally formulated innovation policies who also serve as policy advocates (agents of change) on peer-to-peer level (Leander &

Osborne, 2008). On the other end of the extreme, teacher professional agency is often pictured as resistance towards the new initiatives and change (e.g., see Sannino, 2010; Selwyn, 2011). Such “either – or” view is problematic, because, it leads to instrumentalization of teachers as more or less reliant/ obedient “servants” in the innovation implementation process, refusing to see teachers as professionals who play the key role in implementation of educational innovations (Fullan, 2007). In addition, such “either - or” views poorly cover the richness of realities of practicing teachers who have to find their way within various challenges and opportunities related to ICT integration in teaching, trying to balance their own views and beliefs, and at the same time attend the external pressures and expectations (Selwyn, 2011).

Methods

Data and participants

The study presented here is based on re-analysis of findings of five previous studies, which draw on a mix of qualitative and quantitative data deriving from semi-structured interviews with different subject teachers in Latvia and Estonia, a study on teachers’ information search performance online, and classroom observations. The empirical evidence was collected in a sample, which consisted of 26 participants: 10 teachers of different subjects from five Estonian- or Russian-speaking schools around Estonia and 16 teachers of different subjects working in a middle-sized school (~ 500 students) in a regional town in Latvia. In Estonia, teachers came from schools which had participated in activities provided by “Tiger Leap” program (UNDP, 2003). The Latvian sample was formed in the course of a larger action research project aiming to encourage teachers to work with ICT in more creative and diverse ways. All participants, except one, were female. Their work experience at school was rather heterogeneous, ranging from few years to more than 30 years spent in teaching profession. There were 12 science and math teachers, and 14 humanities teachers in the sample. The size of the sample and the method of choosing study participants can be considered as limitations of the study, therefore, there is no ambition to generalize the results or make any cross-national claims. Instead, this exploratory study contributes to the growing body of literature aiming to reclaim “teacher agency in (...) computer-mediated, digital world” (Kimber, Pilley, & Richards, 2002: 155) and open directions for future research.

Data analysis

A qualitative meta-analysis approach was applied in order to do a rigorous secondary analysis of the primary empirical findings (Schreibner et al., 1997). The primary studies had utilized a variety of qualitative and quantitative

approaches to data collection and data analysis. Various theoretical frameworks were employed to examine the influences of different personal, situational, social and contextual factors and relationships between these factors on teachers' practices of ICT integration in teaching. However, conducted in separate studies, they did not provide a comprehensive picture of the phenomenon under investigation – teacher professional agency and its manifestations in relation to the various influences and pressures related to ICT integration policies in education. Therefore the rich empirical foundation established in the individual studies, was employed for the current meta-analysis and development of a novel typology of teacher professional agency manifestations. Figure 1 is a visual summary of how the manifestation of teacher professional agency was conceptualized in the current study, indicating that is resourced and constrained by various personal, situational, social and contextual factors, which were explored in the individual studies.

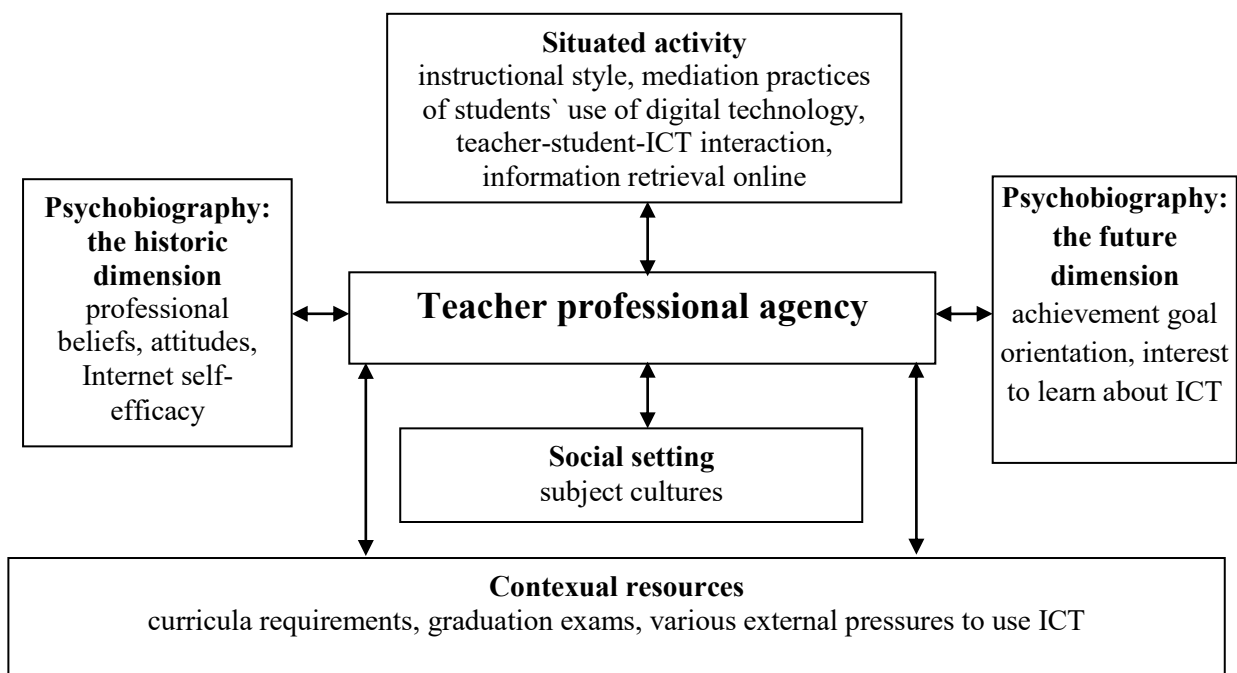


Fig.1 Visual representation of the relationships between teacher agency and various personal, situational, social and contextual influencers

The analysis of the meta-study was interpretative in its nature aiming to employ the findings of the individual studies to develop a typology of manifestations of teacher professional agency paying attention to three important dimensions: teachers as ICT users, teachers as mediators of students' use of ICT, and teachers as learners about ICT.

In labelling the types of teacher agency manifestations, the term “appropriation” was borrowed from the study of Stillman and Anderson (2015) considering how aptly this term describes the richness of ICT use and the level of co-authoring that teachers demonstrated when making the ICT integration policy “their own”. In a similar way, the notion of “ritualism” from the Merton’s study (1957) indicating the situation when teachers were against computers, but used them occasionally anyway for the sake to prove some ICT flavour in their teaching. The next chapter introduces the results of the meta-analysis.

Results

The five types of teacher agency manifestation, which derived from the meta-analysis, are the following: enthusiastic appropriation; pragmatic assimilation; reserved balancing act; hampered accommodation; and sceptical ritualism. Each type is described in detail below.

Enthusiastic appropriation

The meta-analysis indicated that there was a distinct group of teachers who had acknowledged the value of ICT in implementing student centred and inquiry based teaching and learning approaches. They saw the value of ICT in making their own lives at school more enjoyable and interesting by providing opportunities to experiment, develop and change their practice, and learn new things. Such attitudes to ICT were related to mastery achievement goal orientation. Teachers in this group held high ICT-related self-efficacy beliefs. These teachers supported students’ use of technology in various ways, and actively helped them to develop skills for using, e.g., the Internet not only for information search, but for creative self-expression, thus serving as “windows” and active guides and coaches helping students to navigate through the “digital jungle”. These teachers were the ones who were most enthusiastic towards involvement in teacher professional development and attending training related to ICT. Teachers in this group felt ownership towards the educational technology. One remarkable example in this group was a teacher of biology (Karaseva, 2016a) who integrated technology in her practice by putting much self-reflexivity in managing the challenges that came along with, e.g., in mediating students’ use of ICT, helping them to acquire advanced skills in using various hardware and software, in planning and organizing teacher’s own use of digital tools. However, it has to be noted that none of the teachers in this group were teaching subjects in which students according to Latvian and Estonian rules are to take centralized exams.

Pragmatic assimilation

Teachers in this group saw the value of ICT as far as it helped them to reduce some workload related to preparation for lessons, teaching, assessing

student work. Such attitudes indicated orientation towards work avoidance goal (Karaseva et al, forthcoming). These teachers were convinced that their ICT skills are above average and, accordingly, they reported to be very active and confident ICT users; however, technology was adapted by them in ways which did not make big changes in teachers' already established, mainly teacher-centred practices. This was related to several factors, mostly to strong beliefs about the nature of learning and the nature of technology, namely, the degree to which the ICT tools can support learning (Karaseva et al., 2015). Namely, some teachers held values and expressed opinions, which were contradictory to the approaches they relied on in their actual teaching practice. These teachers "in theory" acknowledged the creative potential and usefulness of various ICT tools for student-centred teaching, but their choices of using digital technology in ways, which supported teacher-centred learning. Such paradox was related to their perceived need to keep up with the curricula requirements and avoid possible risks of not preparing students sufficiently to the final exams. This was coupled with strong beliefs about students as rather inactive participants in the learning process: one of the teachers said during the interview that students actually want teaching-from-the-front. These teachers also practiced mostly gate-keeping mediation style and applied various techniques for structuring the students' use of computers during the lessons, e.g., by preparing detailed worksheets, giving closed-end tasks, preparing lists of "appropriate" web-sites to be used by students. Such practices were based on teachers' belief that students lacked skills and therefore needed guidance to use digital resources for serious learning purposes. These teachers also emphasized that they value high their established expert-of-ICT-use image, which was maintained through a set of activities: consulting colleagues on ICT-related matters, demonstrating special ICT skills (e.g., skills of filming and editing videos).

Reserved balancing act

Teachers in this group were rather cautious against the use of ICT. They did not fully neglect its educational value; rather their opinion was that technology can be integrated in teachers' work in some or another way, but always with utmost care and caution, keeping in mind in the words of one study participant that "less is better than too much". They had developed their attitude mainly due to their very strong relational goal orientation, which led them to beliefs that technology might seriously threaten their goals to establish and maintain warm and close relationships with their students, which, as they believed, was best developed with the help of face-to-face conversations and class interaction. At the same time, some relationalists had developed practices, which, they believed, helped deepening their relationships with students and lowering the hierarchy between students and themselves. E.g., they used to ask students help with finding some lesson materials online, help with

troubleshooting etc., thus trying to demonstrate that teachers are “not always the cleverest ones in the class”, as one of the teachers in Latvian sample said. Most teachers in this group rather firmly stated that they do not want to improve their ICT skills arguing they are not planning to intensify or modify their technology use. In addition, these teachers perceived their ICT usage skills and technological self-efficacy as moderate or pretty low (Karaseva, 2016b).

Hampered accommodation

Teachers in this group were convinced that they are possessing poor ICT skills, but at the same time they had positive general attitude towards technology use in teaching. They had developed different strategies, which were aimed to keep balance between maintaining teachers’ authority in the eyes of students, and at the same time integrating some technology “flavour” in their teaching. For example, one teacher told that she used to select digital tools and resources very carefully, trying to predict also the level of technological competence of the students she had to work with, and then adjusting her ICT use accordingly in order not to expose incompetence. Teachers in this group showed concerns about potentially harmful content that the students might see online, therefore they always checked all the resources beforehand and kept and updated lists of “appropriate” resources, thus mainly acting as gate-keepers for students’ use of digital technology (Karaseva et al., 2015). These teachers were keen on improving their ICT-related skills to keep up with the technological development.

Sceptic ritualism

This was a small group of teachers, mainly language teachers, who had developed a rather denying attitude towards ICT despite their overall good online skills (Karaseva, 2016b). The main claim among them was that they did not see the educational value of technology apart from being a tool, which can be used for relaxation, time passing, but not for serious learning. In the interview transcripts, it was labelled as well-justified resistance towards technology use based on teachers’ biases towards ICT (Karaseva et al., 2015). During the interviews teachers referred mainly to the specifics of their subject cultures as the main reasons for the very limited use of digital tools. Their main claim was that they do not see how the digital technology could “fit” in their subject teaching, which as several of them believed, required active student involvement, live conversation in the classroom. However, teachers in this group could tell about few occasionally applied practices, which, in their opinion, gave some technological flavour to their teaching and therefore did not make them look as if they rejected ICT tools completely. They were, for example, asking students to make presentations about some subject-related topics, or allowing the best performing students to do exercises in the computer lab while other students stayed in the classroom and did tasks with pen and

paper. Characteristic for teachers in this group was usage of ICT tools as substitutions of printed materials, e.g., textbooks, or turning on the smart board during the lessons, but only for demonstration, or using ICT as a relaxation tool, which students could play with after the “serious work”, in teachers’ opinion, had been done.

Discussion and conclusions

It is acknowledged that teachers are rarely involved in designing educational changes; however, their reaction to the changes and involvement are crucial determinants of the success of the change (Ketellar et al., 2012). This study revealed that teachers understand ICT and integrate the use of digital technology in their work in different ways, which definitely do not fit in the often applied rejection – to – accommodation continuum (Stilman & Anderson, 2015). As the findings indicate, teachers’ professional agency is resourced both socially and individually, and has also elements of “situational character” (Layder, 1997: 92). Personal factors such as perceived self-efficacy and various teacher beliefs belonging to the psychobiographical domain (Layder, 1997) work as mediators in the process of reasoning about the situated activity, and the social and structural context. And vice versa: the situational features such as the interaction between teacher and student, and teacher and technology (the domain of situated activity) in combination with contextual pressures have their role in shaping the features on the psychobiographical domain.

It has been argued previously, the more teachers feel pressured from “above”, being held responsible for students’ performance, the more controlling, critical, directive and less creative they become, compared to their colleagues who do not experience such pressures (e.g., see Flink et al., 1990; Pelletier et al., 2002). As this study indicated, the need to prepare students for high-stakes exams triggered practices of ICT use, which support acquisition of particular skills or knowledge from curriculum, which teachers knew, will be tested in the exam. Teachers, who did not face the exam burden, felt much more free and creative in applying technology in their work, compared to their colleagues who are to prepare students for the centralized exams. The need to be in line with the societal and cultural demands motivated some teachers to develop practices of ICT use which led to reception of external rewards, e.g. in the form of appreciation and approval by the teacher community and other stakeholders such as parents, students. In several cases, it was still evident that teachers struggle to find meaningful ways to integrate ICT in their work. Sometimes it was related to overall low perceived technological competence, in other cases – strong subject-related identity. Therefore, it can be said that subject cultures seemed to be an important influencer of ICT integration in teaching, especially for justifying why

technology does NOT fit in teaching the particular subject. Some teachers used references to subject cultures and particularly the subject boundaries as “bullet proof” arguments against the pressures to intensify the integration of ICT in their work.

To conclude, this study demonstrated that the interplay between different personal, situational, social and contextual aspects and their combinations shape and re-shape teachers’ ICT practices. Variations in teacher agency manifestations reveal the conflict between different values, pressures, and demands, which teachers try to balance in order to fulfil their professional roles and responsibilities.

The current meta-study illustrated that factors, which create variances in teachers’ responses to ICT policies, are not always necessarily directly linked to technology. This should be taken into account in designing the teacher training programs in future. For teacher trainers the results of this meta-study can serve as additional source of information to develop a better understanding of the variety of personal, situational, social and contextual factors, which influence teachers’ practices of ICT use. Based on the findings it can be suggested that professional development inside schools, subject based peer-to-peer learning and shadowing of colleagues’ work could help teachers to overcome fears about their technological self-efficacy or beliefs about limited affordances of technologies in education.

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INTEGRATION OF INTERACTIVE MEDIA INTO FOREIGN LANGUAGE LEARNING TO SUPPORT EFFICIENCY OF STUDY PROCESS

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Abstract. Contemporary society is actively engaged into technology innovations due to their multi-purposeful usage for personal, professional and educational reasons. Many new terms defining information communication technologies appear but the paper focuses on the interactive media, which may be considered as an integral part of the phenomenon. It is aimed to analyze and discuss the possibilities of integration of interactive media into language learning process to support the efficiency of the study process taking into consideration the needs and achievements of students. The lectures organized with traditional teaching material are getting old-fashioned gradually; therefore, new trends appear in the education process and technologies have to be successfully integrated by the teachers working in higher education institutions. Currently life pace is extremely fast, and rapid changes influence the life of young people who want to be well-educated and prepared for the further professional career. The research was organized to investigate whether the students of higher education institution demonstrate willingness to integrate interactive media into language learning process, i.e. students do not have to be passive users but actively apply and use interactive media in the learning process. Consequently, the teachers have to be familiar with the opportunities provided by the interactive media and acknowledge the necessity of its integration, but still some considerations and uncertainty exist. The methods used for the research are as follows: analysis of the scientific literature sources, content analysis, and questionnaires. Findings of the research are formulated after analysis of the collected data and they revealed the capabilities of the students to use interactive media and perception of the importance and usefulness of such measures. Majority of teachers demonstrate conservative attitude towards innovations and implementation of modern teaching/learning methods, but the situation will be improved putting the efforts in order to seek positive learning outcomes and modernize the study process.

Keywords: media, interactive media, innovative teaching/learning methods, foreign language teaching.

Introduction

In the current situation of rapidly developing technologies majority of citizens are more actively engaged into the network structure of the Internet.

Variety of casual situations has been transferred to the virtual medium – from the reading of books to the realization of ideas. Despite that, it still remains unclear whether the expansion of interactive media is stimulated by modern technological decisions and self-realization of human-beings, or newly established networks aim to involve new users just for reasons of communication and innovation. Stoll (1995) notes that a human-being is not able to survive in the “desert” of the Internet without changes in own nature. Media, which is a basis for the modern process of communication, transforms the construction of human thoughts, their formulation and the methods of communication. A human-being might be mistaken by thinking that he/she has entire control over any computer in the world; but unfortunately, it is very difficult to conceive the real essence and possible dangers of a computer usage, because devices constantly reprogram users, transform peculiarities of communication, and even arranges casual life activities (O’Keeffe and Clarke-Pearson, 2011). In 2006 the magazine “TIME” elected a person of the year “You”, who is any person sitting in front of a computer screen and surfing the Internet nearly in every destination of the world. A reviewer Grossmann (2006) asked a rhetorical question on the essence of “You”. According to him “You” is referred to a person who sits with a personal computer after a long working day, and instead of watching television programme he/she creates a movie about own life adventures or writes articles in own blog, searches for other virtual “You” aiming to form communities, share information, generate business ideas; consequently, that leads to virtual deformation of life. As Mwila (2015) noted virtual communication can diminish communication barriers and bring positive changes in society, on contrary that unlimited usage of technology can lead to addiction, violence and security issues.

Relevance and topicality of a study problem. Contemporary society is significantly engaged into usage of interactive media. This sphere has been analyzed implementing interdisciplinary researches by the specialists of various fields as sociologists, psychologists, linguists, information specialists and economists; Meyrowitz (1986) started to analyze media interaction with social behaviour, the impact of information technology on genders, appearance of new social roles and behavioural patterns, changes in environment. Valenzuela (2009) presents significant survey, and its data reveals students’ attitude towards usage of media. Challenges and opportunities provided by interactive media are analyzed by Kaplan (2010). The author presents integral parts of common phenomenon “social media” and reviews frequency of usage taking into account the target audience – the youth. Lithuanian researchers pay attention to the particular aspects of virtual communication and interactive media application, for instance, peculiarities of e-language (Ryklienė, 2000), virtual expressions of community (Drevel, 2009), social networking (Rutkauskienė and Gudonienė, 2010), establishing of identity (Savicka, 2011), political communication in social

networks (Šuminas, 2009), economical benefits (Urnėžiūtė, 2014). The application of interactive media into educational process, analysis of innovative teaching/learning methods, their combination with traditional methods, reviewing of application of computer technologies on the foreign language learning (Žegunienė et. al., 2014, Jankauskienė et. al., 2013, Leonavičienė and Salienė, 2013). Reviewing the foregoing, topicality of the problem analyzed in the paper is formulated as follows: integration of interactive media into teaching/learning process to support efficiency of study process needs further research.

Study problem may be formulated by asking a question “Why is not interactive media integrated into the process of foreign language learning?” It is considered as an extremely popular and attractive activity in the daily life (public or private) of almost each individual, but it is not positively evaluated as an educational tool.

Object of research – integration of interactive media into the foreign language learning.

Aim of research – to investigate the perception and attitude towards interactive media integration into the foreign language learning in order to support the efficiency of the study process.

Goals of research:

- To provide the basic characteristics of interactive media and peculiarities of its integration and usage to support the efficiency of the study process;
- To analyze the attitude of students towards learning with integrated interactive media;
- To reveal the attitude of teachers towards integration of interactive media into foreign language study process.

Methods: analysis of the scientific literature sources and generalization, content analysis and survey.

Interactive media: situation in the European context

The term “interactive media” was originated at the end of the 20th century. As England and Finney (2002/2011) define “It is the integration of digital media including combinations of electronic text, graphics, moving images, and sound, into a structured digital computerized environment that allows people to interact with the data for appropriate purposes.” Many disputes arise due to the classification of interactive media and its integral components, which are supplemented with new ones constantly. Generalizing the analysis of various authors Bates (1992), Wartella et.al (2000), Anderson (2011), Jurkevičienė (2012), Siudikienė (2013) the basic characteristics of interactive media might be

as follows: interactivity, communication, free access, divergence, flexibility, attractiveness, multi-formats of information and interactive active participation. Media provides people with assistance when they aim to exchange information and ideas on particular issues, create communities. Furthermore, the information is exchanged using different channels and methods such as written method of communication (blogs, comment, and chat rooms), visual information (short movies, games), graphical information (photos, pictures), audio (music files) and etc.

Variety of governmental documents of the European level demonstrates concern regarding interactive media usage and incorporation into educational systems and study process. Communication and media experts do not demonstrate positive attitude towards existing situation and emphasize necessity to make some improvements. Application of interactive media and promotion of media literacy is emphasized in Grunwald Declaration on Media Education (1982), UNESCO Paris Agenda (2007), Framework and Plan of Action for the Global Alliance for partnerships on media and information literacy promoting media and information literacy as a means to open and inclusive development (2013), Strategic Guidelines and Policy of Media and Information Literacy (2013), Global Map of Media Education Policy: Visions, Programmes and Challenges (2009). Situation in Lithuania is gradually improved due to the reaction and primary actions implemented by the secondary education schools and gymnasiums. Extra-curriculum activities are organized, where students may get familiar with information communication technologies, and peculiarities of interactive communication tools. Situation in the Lithuanian higher education institutions is still slightly uncomplimentary and progress is negligible.

Interactive media: new opportunities for foreign language learning

Having reviewed the European documents where usage of interactive media is emphasized, and having discussed the basic characteristics of interactive media, interactive media is significantly beneficial for the foreign language teaching/learning process. If interactive media was chosen for the study process, a student would be able to select from variety of learning methods (educational games, websites, chat rooms, forums, internet games, social networks etc.). Communication among students could be organized in more convenient and attractive manner. The study process can be organized outside usual teaching/learning environment, communication between a teacher and a student would not be limited by time, availability and place. Interactive media can be a platform that will be used as an educational environment for exchange of methodological aids, accumulation of multi-format information and links to the scientific sources used for the lessons and independent studies. Specialized

websites contain many useful links to the educational websites, which help to study any foreign language; forums, which are used for communication among native and non-native speakers; communities of teachers-volunteers who are engaged into online teaching.

As Leonavičienė and Salienė (2013) noted, language learning is referred to as an active process of foreign language skills formation and it has to be uninterrupted. The successful and efficient language teaching/learning process needs the combination of theory and practice, so environment of study process plays a vital role, and actually, that is a duty of a teacher to provide students with modern and interactive possibilities to support their positive achievements in foreign language learning; for instance, course books may be partially replaced with innovative methods, such as interactive media that comprises websites of newspapers or magazines, internet clubs, websites of business companies, forums, films etc.

Interactive media with its peculiarities becomes efficient tool for choosing appropriate level of language learning taking into consideration peculiarities of learners. Respectively, a student is able to select topics and activities, which may fulfill the needs and wishes of a young modern person. Reviewing possibilities provided by interactive media the teaching/learning process becomes more individualized, the material may be adapted in more flexible manner to meet requirements of various learners; the entire study process is continuously transformed in order to achieve positive learning outcomes. Furthermore, interactive media may be referred to both as a methodological aid and a platform for submitting students' assignments. There is a possibility to create a virtual class, club or blog for students and teachers, where students could upload their visual, written, audio material, presentations, papers, essays etc., and their submitted assignments can be assessed by peers and teachers. (Wilksch et.al 2006)

According to the TNS survey (2015) majority of respondents of 15 – 30 years old is active users of the Internet (15-19 years old – 99%, 20 – 29 years old – 98%). Currently the users of the Internet are members of at least two social networks and platforms. The development of new networks is still in process, because various networks are focused on the basic needs of users: communication, entertainment, receiving and managing of information and its administration. The huge group of users is interested in search systems and e-publications.

In generalization, a basic feature of interactive media is interactivity, because media may be developed by everybody and the content of information depends on the objects who are involved in the process of information share and exchange.

Students are extremely active users of interactive media. They acknowledge provided possibilities and know how to get benefit of interactive media usage. The virtual environment is attractive in educational perspective. Therefore teachers have to be ready to integrate interactive media into study process,

because this innovative method stimulates study process, makes it efficient and modernized.

Methodology of Research

The research has been organized and performed in 5 Lithuanian higher education institutions in order to analyze the attitude of teachers and students towards the integration of interactive media into foreign language teaching/learning process. The research has been initiated in 2016. There were two target groups: foreign language teachers (52 respondents representing higher education institutions in Lithuania) and students, who study any foreign language (198 respondents from education institutions in Lithuania). The instrument of the research – a questionnaire form comprising 15 questions. Questions were formulated diagnostically aiming to investigate and analyze respondents' perception of interactive media and positive aspects of its integration into foreign language study process. The most relevant data has been interpreted and elucidated.

Students' attitude towards the integration of interactive media

The interviewed students were asked to indicate two types of interactive media, which they use at least 3 times a week. (Fig. 1)

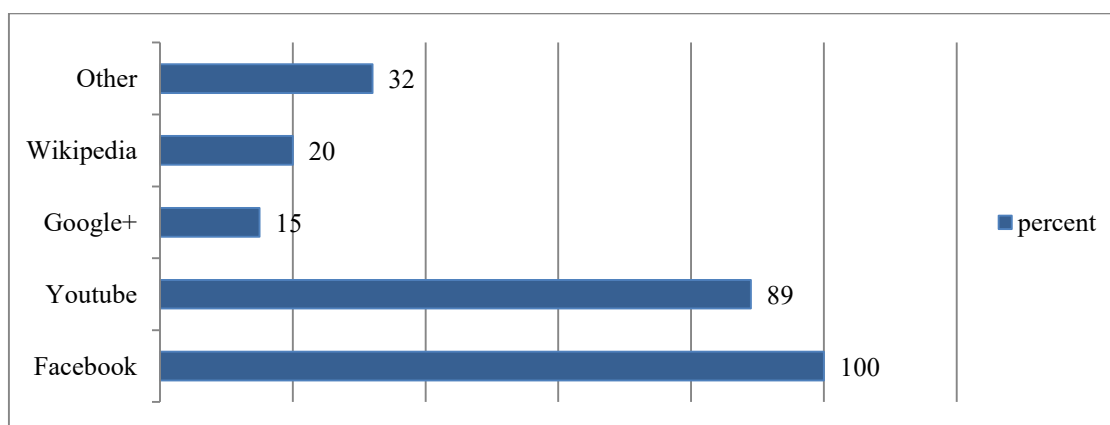


Figure 1 The most popular interactive media used by students

The illustrated data reveals the fact that all interviewed respondents (100%) spend their time in the Facebook network, 89% - in Youtube channel, 15% - use Google+, respectively the smaller amount of respondents noted that they use Wikipedia encyclopedia occasionally. Beside the most frequently used media, the students mentioned website “Flickr, network for Russian speakers “VK”, Lithuanian club for parents “supermama.lt”.

The analysis of the answers revealed that students perceive interactive media in a very narrow aspect. For instance, interactive media is identified with the social networks as Facebook, Google+. Informational portals and databases (Wikipedia) have been mentioned just by five respondents. Additional integral parts of interactive media have not been mentioned by the respondents, such as blogs, wikis, video games, online newspapers, websites, forums, on-line platforms, etc. That leads to conclusion that foreign language teachers are very limited with the selection of interactive media parts and their integration into study process. It is obvious that basically English language is used for the communication and information in the Internet, consequently, the perfect educational opportunity to develop foreign language (English, German, French, Spanish, etc.) skills is missed.

Students' leisure activities related to the usage of interactive media are elucidated in Fig.2

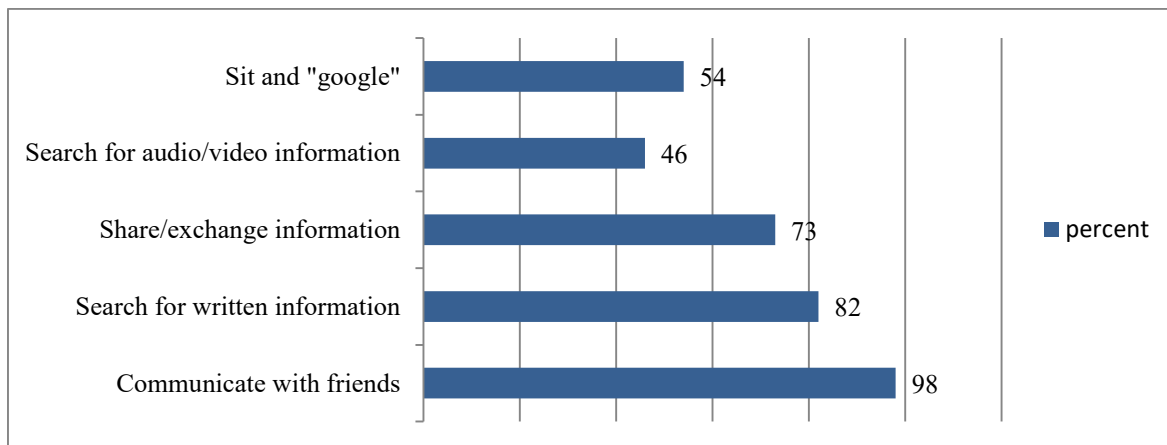


Figure 2 **On-line activities performed by students**

Majority of students (98%) noted that interactive media helps them to communicate with friends, part of them (82%) searches for written information (text, articles, essays, blogs etc.). More than half of the respondents (73%) shares or exchanges information, useful links and websites with others; less respondents (46%) search just for particular audio or video information. More than half (54%) of the interviewed students indicated that the main activity is just sitting in front of a personal computer screen and “googling” for any information.

Acquired answers do not include option of the interactive media integration into the teaching/learning process. The activities mentioned by the respondents are related to the leisure time but not study process. The aim of interactive media usage is not educational but more personal. That leads to conclusion that both the teachers and students are not interested in usage of interactive media while teaching/learning foreign language. According to the data the basic characteristics

of interactive media (communication, free access, active participation of the participants (students and teachers), exchanging of information, innovative teaching/learning methods) are not interrelated to success and efficiency of the foreign language study process and high achievements.

Further, the students were asked to express their opinion whether interactive media has to be integrated into the process of foreign language learning. (Fig. 3)

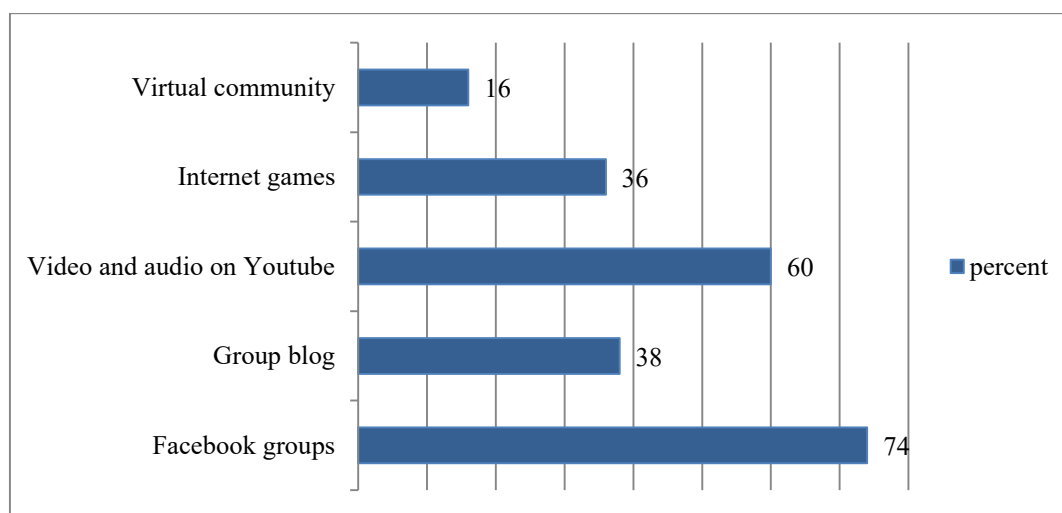


Figure 3 **Integration of interactive media into foreign language study process**

As the research data shows, majority of students (74%) noted that the study process can be more efficient and attractive integrating interactive media into the foreign language study process due to possibility to download their assignments in audio/video formats to websites or blogs, to comment on peers papers and submitted tasks. 74% of respondents suggested to search for information creating Facebook group, 38% proposed to create a blog, 60% mentioned usage of Youtube channel, 36% offered to play internet games for educational purposes, 16% thinks that development of virtual communities may modernize foreign language learning/teaching process.

Analysis of data revealed the positive attitude of students towards innovative and non-traditional methods of foreign language learning. Respondents showed willingness to integrate interactive media into the foreign language learning to support the efficiency of study process because multi-format content of the Internet sources allows efficient exchange of information between teachers and students for educational purposes. Modern teaching methods make study process available for each student with own personal characteristics. Usage of interactive media satisfies students' wishes to be independent, to use visual, audio or graphical formats for enhancement of their foreign language skills. On-line

simulations, games, quizzes make study process more entertaining, what reduces the level of stress and creates autonomy for every student.

Teachers' attitude towards the integration of interactive media

Foreign language teachers have been asked to select from a list of the Internet sources used for the foreign language teaching. (Fig. 4)

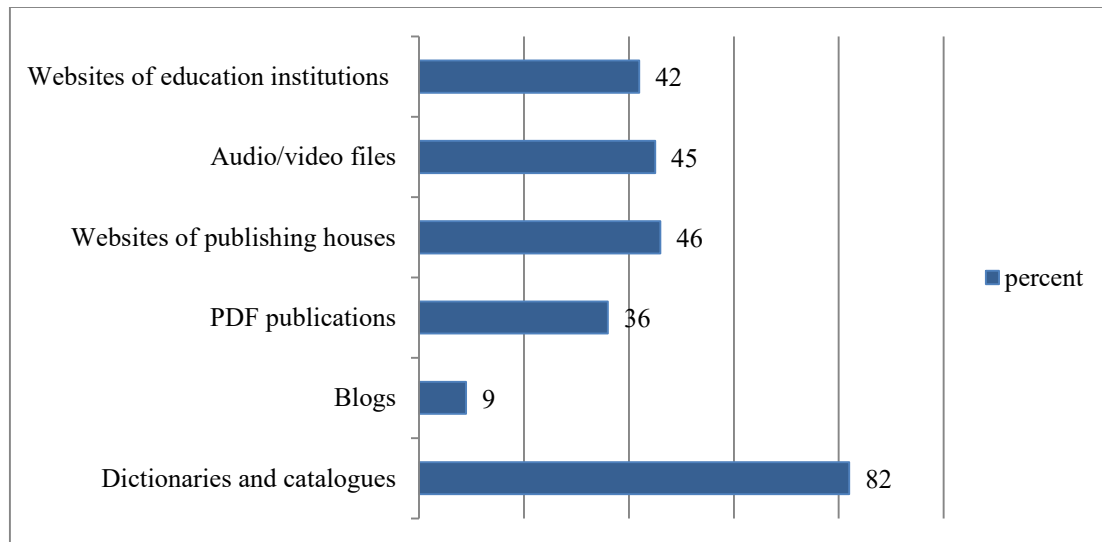


Figure 4 Internet sources used by teachers for foreign language teaching

Primary source for foreign language teaching indicated by teachers (82%) was dictionaries and catalogues, significantly smaller group of respondents (9%) mentioned personal blogs. Full-text PDF books and articles are used by 36% of foreign language teachers. Almost third of the respondents (45%) search for audio/video files, approximately the same number of respondents (46%) uses supplementary material for foreign language teaching provided by the publishing houses, and 42% search for information in the websites of education institutions.

As presented data shows teachers use the sources of interactive media preparing material for the lessons, but these sources and website links are not included into a list of recommended literature sources and not recommended to use for foreign language learning. The respondents indicated different sources of interactive media compared to the students. Students are familiar with more integral parts of interactive media and acknowledge advantage provided by social networks (Facebook, Google+), forums, chat rooms, on-line groups. They have mentioned on-line encyclopedias, Youtube channel, virtual communities, blogs used for their daily activities and some of these measures can be integrated into foreign language study process.

Despite the fact that teachers demonstrate positive attitude towards interactive media using it for lesson preparation, teachers do not tend to integrate interactive media into the foreign language lessons and give students interactive tasks. (Fig. 5).

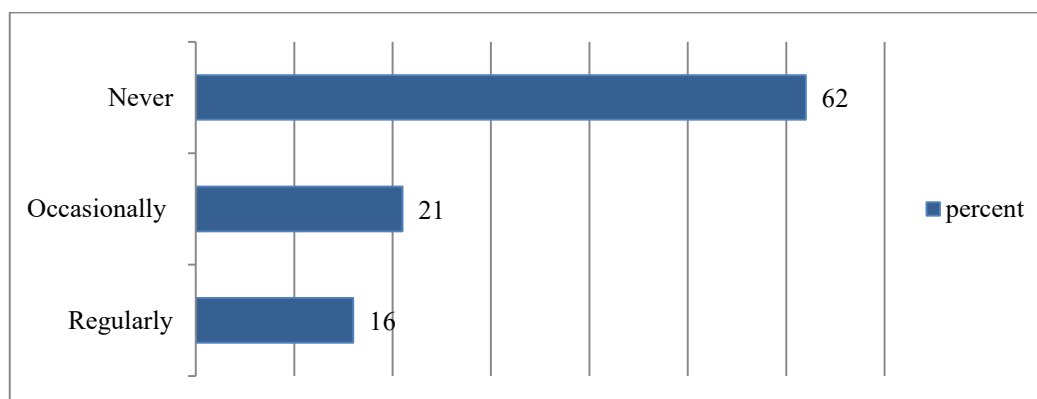


Figure 5 **Integration of interactive media into foreign language learning**

Just 16% of teachers assign interactive tasks for students during foreign language lessons. Occasionally such tasks are given by 21% of the respondents and majority of interviewed teachers (62%) do not show willingness to integrate interactive media into foreign language study process. Having analyzed teachers' attitude and responses it is assumed that teachers demonstrated negative attitude due to several factors, such as interactive tasks checking and assessment procedures, and there is some uncertainty about fairness of students. Interactive media still is considered to as a challenge for foreign language teaching/learning. Teachers' duty and responsibility is to get familiar with modern technologies and their educational opportunities. Modern (communicative, situational/natural context-oriented methods, community language learning methods innovative technologies, and interactive activities) and traditional teaching/learning methods (teacher-oriented, grammar translation method, aural-oral and oral-audio methods, reading methods) have to be combined in order to make study process more efficient.

Conclusions

Interactive media can be characterized mentioning the basic characteristics such as interactivity, communication, free access, divergence, flexibility, attractiveness, multi-formats of information and interactive participation, availability to share and exchange multi-content and multi-format information in order to communicate efficiently, to create communities, to comment on published information and to express own personality. Almost each person of

contemporary society can become an active user of interactive media. Updated information, various educational activities, different information sources provide users (teachers and students) with evidence that integration of interactive media supports efficiency of foreign language learning and teaching. The data of the research reveals that interactive media is used by both the teachers and students, but most cases of usage were not related with educational purposes.

On the research data basis the interviewed students are very active users of interactive media for their personal needs. Majority of the respondents are engaged into “googling” and communication with friends via Facebook or other social networks, in searching for information in various websites (Youtube), but mostly just for pleasure. On contrary, the respondents demonstrated willingness to have interactive media integrated into foreign language teaching/learning process. Educational platforms, blogs, forums, games and social networks have been mentioned as possibility to deepen foreign language skills in more innovative manner. Thus the study process may be more attractive and students could achieve positive learning outcomes if traditional methods will be combined with modern (communicative, situational/natural context-oriented methods, community language learning methods, innovative technologies, and interactive activities).

Comparing the answers of the both target groups, there is obvious evidence that interactive media is used differently. However, just few interviewed foreign language teachers use interactive media for educational purposes (preparation for lessons) but not as a virtual educational environment where students could take active participation. Majority of the respondents demonstrated negative attitude towards interactive media integration into foreign language learning process, and the situation has to be improved in the future.

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THE CONTRIBUTION OF TECHNOLOGY TO AN UNDERGRADUATE INTERNATIONAL LEARNING PARTNERSHIP: THE RITUAL PERSPECTIVE

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***Abstract.** This study is part of a research project on a learning partnership between undergraduates of ViA, Latvia and UMM, USA. During the joint media course in Spring 2016, students participated in Skype discussions, completed shared assignments and reflected upon their learning experience. The transcripts of these activities form the body of qualitative data. We employ the perspective of Ethnography of Communication (Hymes, 1962; Philipsen, 1997) and Cultural Discourse Analysis (Carbaugh, 2007) in order to answer the following research questions: (1) what is the nature of the studied technology-mediated learning discourse, and (2) how do the constructed meanings around the use of technology contribute to the variety of cultural norms in play? We propose to understand the studied discussion sessions as a ritual practice (Turner, 1980; Philipsen, 1992, 1997)-the correct performance of which the participants instantly co-construct and negotiate when employing locally-adopted norms associated with democratic education practice-and assess the use and function of technology in the experienced learning interactions.*

***Keywords:** Cultural Discourse Analysis, Ethnography of Communication, Ritual, Undergraduate Teaching.*

Introduction

In the center of this study is the technology-mediated learning interaction activities which happened during the planned, real-time pairing of two Media Studies undergraduate courses that took place at Vidzeme University of Applied Sciences (ViA), Latvia and University of Minnesota-Morris (UMM), USA in Spring 2016. Both schools are small but locally well-recognized regional institutions of higher education that offer a similar scope of study programs and host local as well as international students. The majority of students at both institutions are undergraduates, mostly aged 18-25. In our analysis we employ Ethnography of Communication (Hymes, 1962; Philipsen, 1997) and Cultural Discourse Analysis (Carbaugh, 2007) in order to systematically explore the

symbolic meanings constituting the communication practices that these participants used to take part in and to make sense of their joint learning process. The study is generally guided by following research questions: (1) what is the nature of the studied technology-mediated learning discourse, and (2) how do the constructed meanings around the use of technology contribute to the variety of cultural norms in play?

The qualitative data of this analysis include audiovisual recordings of Skype discussions between both groups of students (on average 60 participants in total); the written content of learning journals; audio-recorded student reflection-discussions, along with written group reflections on the process and content of the course's international components; and instructors' ethnographic observations of the overall experience.

The study is inspired by a recent debate in the communication discipline about whether globalization of education facilitates the equal exchange of ideas and culture or, on the contrary, perpetuates already determined power relations that stems from US-based intellectual politics and interests (Waisbord, 2016). While keeping in mind the potential implications of the aforementioned power dynamics for the studied communication practice, here we are first and foremost concerned with an in-depth description and interpretation of our data that forms the first stage of this ongoing project.

Theoretical Frame and Method

This study is primarily theoretically grounded in the discipline of Communication. We borrow from the field of Education research when considering that people will perform culturally and socially-constructed roles based upon their understandings of and interpretations of a relational situation, and that a classroom has situations and settings familiar to particular students and instructors. As Cazden (2001) suggests, the customary assortment of classroom discourse patterns are familiar and predictable for educated participants, involving the shared understandings of negotiated positions, relationships and values that make up the learning environment. It is also understood that participants perform within the context that pre-defines opportunities and possibilities created institutionally (e.g., Cameron, 2000) where teacher-lecturing courses, using "ordinary classroom talk" sometimes have the tendency to replicate hegemonic processes and reinforce power relationships (e.g., Alexander, 1999; Brasswell, 2015; Maybin, 2013, Damrow, 2014).

The perspective of Ethnography of Communication (Hymes, 1962) has been previously used to understand the communication in country-specific and culture-specific higher education contexts. For example, by comparing Blackfeet (Native American) communication in a Public Speaking classroom to Anglo-American

student performance, Carbaugh identifies a communication code of “expressive separateness” that, among other spheres, constitutes the heart of American democratic institutions, universities included. It presumes that persons are separate and extricable entities; social persons, positions and relations need to be built or worked upon; feelings stem from within; and communication is the means of connecting persons, forging relations, expressing feelings, and bettering one's social standing (Carbaugh, 1993).

Extending the Ethnography of Communication to critically examine pre-existing power struggles, Covarrubias (2008) described masked silence as a discriminatory practice in everyday college classroom activities. Furthermore, (e.g. Finnish-American communication studied by Carbaugh 2005, Carbaugh et.al 2006), it has been applied to understand the cultural differences in communication experienced by exchange students upon interacting with counterparts at their host countries. The commonality among these is the orientation towards a single physical context – a university environment with a variety of groups presented in the learning situation. Those situations are ideologically-specific to a particular national context where the studied communication takes place. Our study focuses on communication that has no singular physical place of existence, since the communication between groups of students from ViA and UMM is a product of technology-mediated real-time interaction-this construction foregrounds a set of cultural norms along with having the potential to creatively negotiate them.

The embedded assumptions of institutional powers are also important contextual factors shaping communication rituals, since we both teach at public/state-supported schools. Increasingly in higher education, it has been asserted that “in the U.S., citizens should be educated in ways that are consistent with the political ideals of the nation, including reasoned and rational civic engagement and a commitment to democratic ideals such as justice and equality for the promotion of an American identity” (Schildkraut, 2007; Spencer, 2011 cited by Obenchain et.al., 2016: 252). Historically Latvian higher education institutions had to adjust to new political situations repeatedly over a short period of time, adopting education models from other countries (Dedze & Rubene, 2016). The Post-Soviet period can be most characterized by the promotion of international cooperation with the democratic world and the purposeful internationalization of university activities. After joining the European Union in 2004, these processes led to the development of a local model of higher education in Latvia, namely, to the transformation of borrowed ideas to fit the context of local system of education (ibid.). Despite these factors, both ViA and UMM broadly can be characterized as having common general principles of democratic education, the learning interaction in the scope of our study focuses mostly upon the specific enactments and interpretations of the said principles that the studied partnership and created communication situation illuminates.

In this project, the notion of culture builds on ideas from Cultural Discourse Analysis (CuDA) and Speech Code Theory, both rooted in the discipline of Ethnography of Communication. They approach culture as a part and product of discursive systems. CuDA follows the definition of culture as a “potentially integrative and changeable system of symbols, symbolic meanings and forms that are mutually intelligible, commonly accessible, deeply felt and historically grounded” (Carbaugh, 1993, 2007). Philipsen defines culture as a code, “a particular system rather than a geographical or political unit in which it is found” (Philipsen, 1997: 125). We thus see discourse as “culture in conversations” (Carbaugh, 2005). The communication in which our participants engaged during their joint tasks is the conversation where one or more cultures are always in play - in other words, the conversation always belongs to wider cultural systems (ibid.).

Specifically, we build our analysis around Philipsen’s suggestion to focus on meta-communicative vocabulary or “talking about talk” as being a productive departure point for understanding peoples’ social realities. Philipsen defines speech codes as “system of socially constructed symbols and meanings, premises and rules, pertaining to communicative conduct” (Philipsen 1997: 126). For Philipsen, the significance of speaking depends on the used speech codes that allow interlocutors to constitute the meaning of a particular communicative act (ibid.).

Philipsen (1992, 1997) refers to ritual as one of the culturally distinctive forms of communication where one can hear a particular speech code being articulated. He notes that this rather routinized episodic sequences demand particular knowledge about cultural ways of speaking and interacting. Philipsen also uses Turner’s definition of ritual as “structured sequence of actions the correct performance of which pays explicit homage to a sacred group or culture” (as cited in Philipsen, 1997: 144). Hall (2005) notes that it is false to assume that rituals are essentially outdated, meaningless, hypocritical, reserved for special settings or performed by those less sophisticated than us. He points at the universal nature of the ritual since as a form of communication it is an inevitable part of humans’ mundane, everyday interaction. Ritual is repetitive as a type of communication but not by its content, thus, there is always room for creative expressions of all parties involved in the performance of the ritual in question (ibid.)

We use our participants’ repetitive descriptions of themselves and international partners as being “shy” at a number of situations during the joint technology-mediated discussion sessions as our departure point. Among the defined sites of speech codes, Philipsen (1997) suggests to look for the rhetorical invocation of meta-communicative vocabularies where the speech code elements are expressed in the naming, interpreting, explaining, evaluating and justifying of communicative acts (ibid.). We see our participants’ using of term “shy” as being

aforementioned invocation that allows us to access the cultural premises of existence (what is), and of value (what is good and bad) (ibid.) that pertain to the symbolic negotiation of the “correct performance” of the discussion session ritual.

In our analysis firstly, we explore the notion of “shy” as a meta-communicative term allowing us to describe and interpret the cultural premises that the use of the term brings to the surface of the studied discourse. Then, we approach the classroom interaction as a ritualized practice enabled by the discovered cultural premises that guide the participants’ performance and evaluation of it. Finally, we elaborate on the meanings associated with the use of technology, as they are understood by our participants. Like Foucault and Melican (2007) we see communication technologies as participating in the construction and maintenance the social life of the classroom by supporting and extending the already existing ritualized practices.

Results

Students and instructors who operate in a democratic higher education environment often use descriptions of the verbal engagement of themselves and others in discussion sessions in order to explain and assess their learning experiences. While there are variations across locations, institutions, study disciplines and subject cultures, group dynamics and individual practices, it is rather safe to say that generally both students and instructors routinely engage in discussion sessions and recognize a good one when they experience one. It is a popular practice to provide young teaching professionals and other interested parties training in how to lead a discussion session. It is also a common practice for universities to organize introductory seminars on local academic requirements for their exchange students, often including familiarization with the norms and rules associated with in-class participation. Bearing these notions in mind, we do not attempt to discover a novel ritualized practice of a university discussion session. Instead, we enter the analysis with the idea of a discussion session as an already-existing routinized and ritualized practice that celebrates the values associated with democratic education – sharing, equal participation, co-construction of knowledge, and egalitarian relationships. When both of our student groups communicated, they brought to their interaction culturally rich ways of communicating and interpreting the said ritualized practice. The cultural premises that our analysis will eventually define can be used as guidelines to understand the cultural specifics of the *content* of this structurally rather unified practice.

Description

In the following excerpts ViA (LV) and UMM (US) students invoke concerns when referring to their interaction in Skype discussion sessions as somehow not fitting into the unspoken yet expected pattern of classroom behavior, since participants came across to each other as being “shy”, unable to “speak much” or were “listening” when some other form of participation was apparently recognized as more suitable:

“[...] of course, the language issues stopped Latvian students from speaking much and American students were speaking more, but in other hand, discussions in English helped improve our language knowledge” (LV13 – Learning Journal).

“They [ViA students] were a little shy at first, their English tongues varying around the classroom, and were also kind and respectful, listening to our questions and answers intently (US6 - Learning Journal).

“[...] what was new for me – they [UMM students] were a little bit shy, no one of them did not want to sit in the front and sometime there were silent moments in their class after lector asked a question for them” (LV5 - Learning Journal).

In the first excerpt ViA student (LV13) describes his own group as not being able to “speak much” due to the “language issues”. While recognizing this situation as being problematic, the student is prizing a possibility to “improve” by being able to be present in classroom discussions. This suggests that a mere physical presence and listening to what has been said is somehow an insufficient form of participation yet points at it also as the possibility for growth.

Similarly, UMM student (US6) in the second excerpt problematizes the ViA side as initially being “a little shy” since different students had various degrees of English skills. However, the failure to deliver the proper amount of talk seems to exceed the scope of English proficiency since in the final evaluations of the courses’ international partnership component both sides expressed positive surprise about their capabilities to communicate in English and the language issue was never brought up as something that for participants would be a significant restriction for their ability to interact and learn.

The third excerpt speaks to “shyness” manifesting itself in the form of “silent moments” that followed the instructor’s questions as perceived by ViA student (LV5) on UMM side. This signal tells about shared classroom rules being at play and violated by a student failing to deliver the response in an expected timely fashion.

Additionally, the ViA student (LV5) in the third excerpt has noticed that UMM students were also “shy” since they avoided “to sit in the front” of the classroom. It has to be noted that Latvian students were also hesitant about picking

seats in the front lines, recognized their behavior as being problematic by joking about it off-record, and generally complaining about the class being held in large auditorium with fixed arrangement of seats and large distance between first and last lines of seats. However, “shyness” on the Latvian side was compensated by camera work with relevant focus adjustments and close-ups of these students who spoke up. Thus, it went unnoticed by American students whose learning studio classroom, while providing learners with various round tables, used fixed camera. This last excerpt speaks to the symbolic meaning associated with spatial alignment on one’s body, in this case, in the technology-mediated presence where “shyness” can be constructed but also avoided with the creative use of technology.

What we see in the above mentioned data excerpts is the reference to particular rhythm, content, and presence in the joint interaction that both sides recognize to be of a specific quality that does not exactly fit to participants’ ideals about what counts as a good discussion session. Interestingly, both groups of students pointed at the communicative behavior of themselves and others as being somewhat problematic or “shy”. The technological solutions suggested during the separate feedback sessions towards the end of the course were primarily aimed at fixing the shortcomings of the said “shy” communication:

“We didn’t know any of those students and perhaps students should be matched and chat online with each other [...]” (LV 2-Feedback notes).

“[...] there [in the class chat room] we could ask [...] questions that did not necessarily pertain to the course [...]” (US 9 TRANS end-of-term).

“[...] it would have been more beneficial if we could have zoomed in on our faces like the Latvian partners did” (US 4 Feedback notes).

The above-mentioned excerpts construct the ideal way of interaction, such as when the use of technology stimulates students “to know” (LV2) each other better by being “matched” (LV2) with each other or by being in smaller online groups that would ensure a possibility “to ask questions” (US9) that not necessarily correspond to the course topics.

While camera work on the ViA side compensated for the distance UMM students might otherwise perceive due to the larger classroom setting on the Latvian side, it was the UMM students who critically and negatively assessed their own visual position in relation to ViA students by comparing the use of close-ups on the ViA side with perceived visual qualities they were lacking on UMM side. The excerpts speak to perceived inferior ways of relating on the US side that create inequality in visual presence, since it is not as “beneficial” (US4) as it could potentially be if the UMM side would use the same technological solutions as their partners in ViA.

This reveals shared cultural ideals about a proper way of relating, where technology and content of interaction, thereby, should have a task to mimic the processes associated with building interpersonal trust and closeness, thus, assisting in setting up favorable pre-conditions for classroom discussion.

Interpretation

It is relatively common to hear ViA students criticizing themselves or being characterized by university instructors for being a rather difficult audience in comparison to, for instance, the students in a US university. Some Latvian classroom characteristics include being hesitant to speak up in discussion seminars or in taking the initiative of being first in providing verbal input, by avoiding a public disagreement with a majority opinion, and by having a minimum of nonverbal cues associated with active listening (e.g. often avoiding eye contact with a speaker in front of the audience, very minimal gesturing that signals understanding, agreeing or disagreeing with the said ideas of others). When compared with the UMM classroom, for ViA students during an interaction in their native tongue, having longer pauses and “moments of silence”, as well as maintaining a relatively slower rhythm of turn-taking and waiting for someone to speak up first are communication practices that belong to the ordinary mode of interaction. This style of communication was recognized by ViA students themselves as being problematic. They often joked among themselves about their performance before or after the studied discussion sessions and referred to it as “Latvian mentality”. Avoiding sitting in the first row, for participants, was also among typical manifestations of the said “mentality” that ViA students upon arriving to class often marked as somehow funny behavior. Still, they almost never opted for a change. Instead, the choice was made to perform more-familiar ritualized communication similar to previous and other classroom discussion experiences, despite the awareness of contrasting or other possibilities.

It has to be noted that the choice to sit in the front line for ViA students potentially presumes the social risks associated with a peer judgment where manifestation of such behaviors can be interpreted as eagerness to show off, to be noticed and be more-liked by the professor. The aforementioned sensibility usually leads to the whole group sitting close together in a somehow safe distance and moving to front seats individually or as a group only after the instructor invites them to do so. If the alignment of the room permits, an instructor instead typically accommodates and moves closer to the students. By contrast, UMM students are more instructed to sit in the front, to gain the instructor’s attention, and to raise hands or speak frequently to indicate that they are paying attention or following the ideas of the activity. Although in this course verbal participation was not quantitatively graded, in many courses at UMM it is a usual prerequisite

that counts towards the final grade. Bearing this in mind, UMM students may not be competitive directly, but are thus keenly aware when they are not given identical opportunities to others in their peer cohort, thus their reaction to the lack of close-ups during Skype discussion. The nature of their understanding of discussion norms became heightened, but not fully-modified to match those of Latvian students.

In the ViA context verbal participation sometimes counts toward the final grade, however, it is not a common practice. Thus, the ViA instructor typically includes alternative forms of participation besides speaking-up in discussions to accommodate for a majority of students who do not feel comfortable with active verbal engagement. If necessary, the instructor asks students to send in questions and comment in a written form, in a majority of classes only the physical presence is counted and becomes part of the final assessment. This provides ViA students with alternative, formally recognized and informally accepted resources for participation in the class activities, such as being present and performing “listening” – something that instructors also reward indirectly by calling out the behaviors that do not correspond with the “listening” such as excessive use of smartphones or laptops and conversing with peers without permission. While discussion sessions in ViA are nevertheless a rather popular learning format for students, it is seen that they can also pose several social risks. For instance, there is a peer/instructor pressure put on the quality of participation whereby one should speak up only if his/her contribution is somehow novel and had not been brought up in the same discussion before. Secondly, one has to be careful with posing questions since they have a potential to cast the inquirer in unfavorable light, e.g. if the question refers to something that the instructor already explained, or if it seems to be too simplistic in the eyes of other class participants. To sum up, there are group identity and status concerns involved for a Latvian student when he/she is put in the position to speak up in the classroom discussion. Finding oneself challenged to satisfy the aforementioned expectations can potentially threaten one’s social position. With the demand to interact in a foreign language, this pressure on the ViA side was possibly higher than usual.

In conclusion, when participants jointly problematize their own and each other’s communicative behavior as being “shy”, the particular cultural code has been relieved. We summarize it in the following cultural premises of existence. Participant counts as “shy” if he/she: (1) interrupts the ideal *rhythm of student-instructor interaction* by being silent for too long when asked to participate; (2) fails to provide the classroom discussion with the ideal *amount of talk*; (3) violates the rules associated with an ideal *spatial presence* in the learning space where the discussion takes place by avoiding to sit in the first line.

This kind of “shyness” then can be overcome by a particular choice and use of technology that ensures: (4) *equality in visual presence* by providing close-ups

of discussion participants; (5) *personal interaction* in a form of small group chatting and/or chatting about topics outside the course domain.

With these premises in mind, we can further conclude that the content associated with the correct performance of the ritualized discussion session is negotiated around culturally specific uses of silence, social and institutional pressures associated with the amount and content of verbal participation and use of physical space. Foucault and Melican (2007) see communication technologies as participating in the construction and maintenance of social life by, among other ways, supporting and extending the already existing ritualized practices. The technology in the context of the studied interaction is seen as pertaining to the ritualized aspects of the form and content of the face-to-face discussion session. Its task is to substitute the missing elements from interpersonal communication allowing for building closer and more equal relationships.

This report focuses on communication that has no singular physical place of existence, but which is instead a product of technology-mediated real-time interactions. There were several ways in which the intersections of norms from the local classrooms created a new type of co-constructed and moment-to-moment negotiated cultural rituals pertaining to the specific communication, “talk about talk” or cultural discourse that is produced during the learning interaction in our joint course. In planning to conduct future collaborations of this type, as instructors we will need to be increasingly mindful of recognizing and valuing these elements of the connections and processes that students develop. To foster inclusivity, equality and a democratic educational setting, it becomes necessary to see technical opportunities for international learning partnerships as the beginning of creating shared cultural moments, rather than the solutions themselves.

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APPLICATION OF FUZZY LOGIC TOOLBOX FOR MODELLING FUZZY LOGIC CONTROLLERS

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Abstract. Computer technology, which has been developing very fast in the recent years, can be also fruitfully applied in teaching. For example, the software package Matlab is highly useful in teaching students at Bachelor Programs of Electrical Engineering and Automatics and Robotics. Fuzzy Logic Toolbox of the Matlab package can be used for designing and modelling controllers. Thanks to a large number of pre-defined elements available in the libraries, it is possible to create even highly complicated models of systems without much effort. Fuzzy Logic Toolbox is especially useful for exploring the basic rules of designing fuzzy logic controllers. The rules involve selecting input and output membership functions, determining their location with respect to one another and defining their ranges. When the membership functions are introduced, a rule base is defined and a defuzzification method is selected. For any defuzzification method, a control surface is obtained, which can be modified by changing the rule base and/or the input and output parameters of the membership function.

Keywords: defuzzification method, fuzzy logic controller, fuzzy set, linguistic variable, membership function, rule base.

Introduction

Computer technology is nowadays widely applied in teaching students of BSc and MSc engineering programs. For instance, the program Matlab/Simulink has been applied for solving problems of modelling drive systems (Olesiak, 2014; Jakubiec, 2015), DasyLab offers computerised methods of carrying out measurements of selected physical quantities (Ptak, 2015), and interactive computer simulations have been applied in many ways in higher education (Praužner, 2016; Praužner, 2015).

From an analytic point of view, designing and tuning fuzzy logic controllers is a time-consuming and complex problem. This is caused by the specific properties of linguistic rules defining the controller algorithm, by the number of inputs and outputs, and by the various possibilities of selecting a membership function for the variables of the control process (Carvajal et al., 2000).

Fuzzy Logic Toolbox of the Matlab package can be used for designing simple fuzzy logic controllers of the SISO type (single-input single-output), as well as more complex controllers of the MISO type (multiple-input single-

output). It is possible to choose between the Mamdani and the Sugeno structure for a controller. In the former structure, the antecedents and consequents of rules take a fuzzy form, whereas in the case of the latter structure, only antecedents are fuzzy, with consequents being expressed as classic functions.

Input and output linguistic variables

The process of designing a fuzzy logic controller starts with selecting a structure and the number of inputs and outputs of linguistic variables. Subsequently, methods are selected for carrying out the product and sum operations on the fuzzy sets. This is done on the basis of the following dependences (Xu et al., 2000):

$$\forall x \in X: \mu_{A \cap B}(x) = \min(\mu_A(x), \mu_B(x)) \quad (1)$$

$$\forall x \in X: \mu_{A \cup B}(x) = \max(\mu_A(x), \mu_B(x)) \quad (2)$$

where: where: x – element, X – universe of discourse, μ_A , μ_B – membership functions of fuzzy sets A and B , $\mu_A(x)$, $\mu_B(x)$ – degree of membership for an element in fuzzy sets.

The next step is to select algorithms of implication and aggregation and to carry out a preliminary selection of a defuzzification method. As a result, a fuzzy controller of the MISO type can be obtained, as presented in Fig.1.

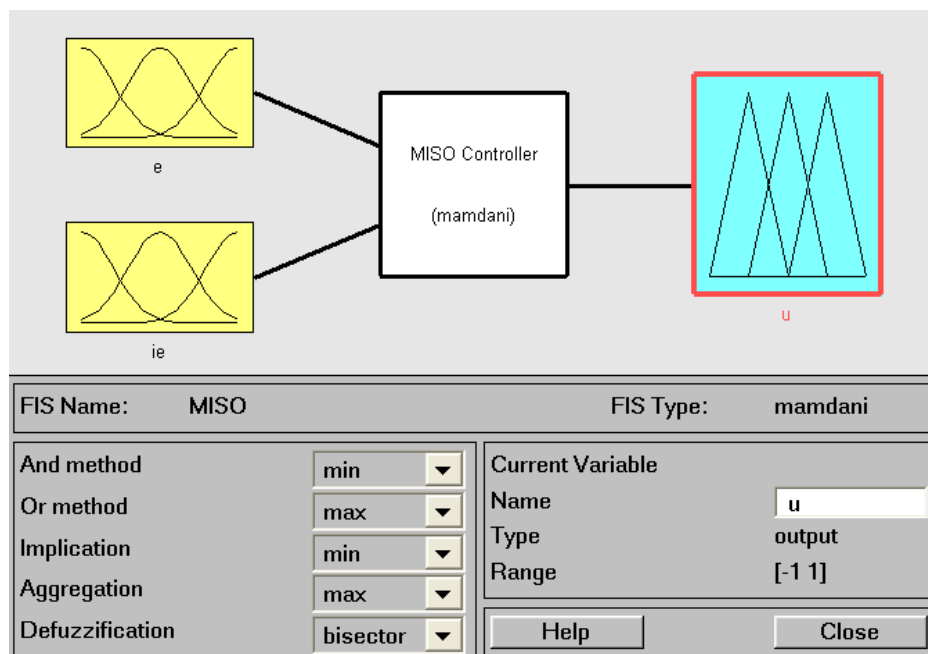


Figure 1 Fuzzy logic controller of the MISO type with linguistic variables modules

The controller has two modules of input linguistic variables e and ie , and one module of output linguistic variable u . For each of these modules, it is necessary to select a type of membership functions, their number and location with respect to one another, determined by the height of the intersection point of neighbouring functions. In the case of input linguistic variables, triangular functions were applied, as presented in Figs 2 and 3.

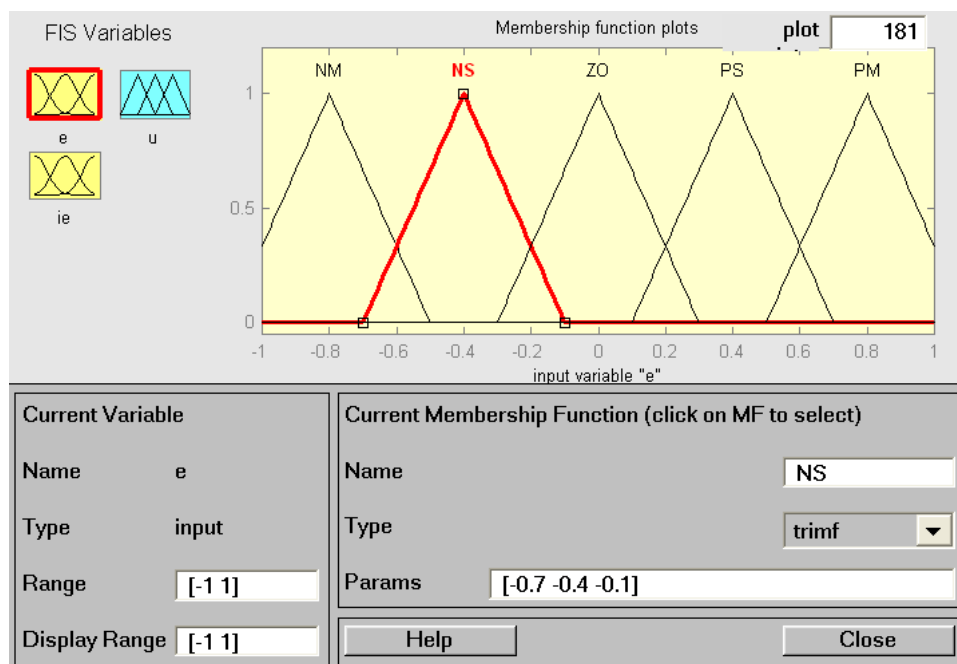


Figure 2 Input membership functions of the linguistic variable e

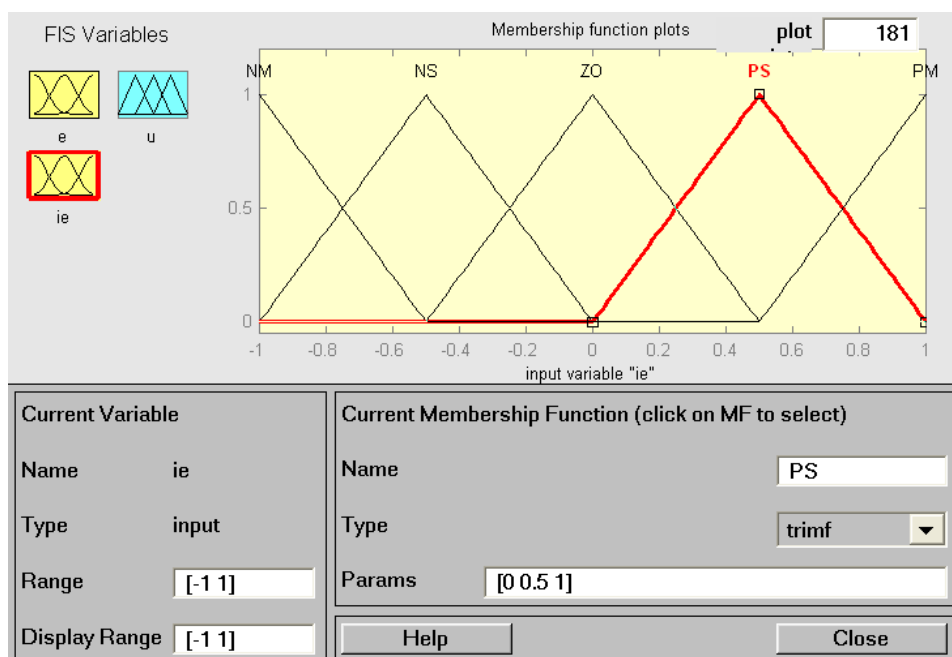


Figure 3 Input membership functions of the linguistic variable ie

Input linguistic variables presented in Figures 2 and 3 include 5 triangular membership functions defining the error e and the error integral ie . The notation used for the functions is as follows: NM – negative mean, NS – negative small, ZO - zero, PS – positive small, PM – positive mean.

For the output linguistic variable u , Gaussian membership functions were applied. The functions are distributed evenly in a standardised interval $[-1, 1]$. Seven functions were used altogether, with the following two symbols added to the previously enumerated ones: NB – negative big and PB – positive big. The output linguistic variable is presented graphically in Figure 4.

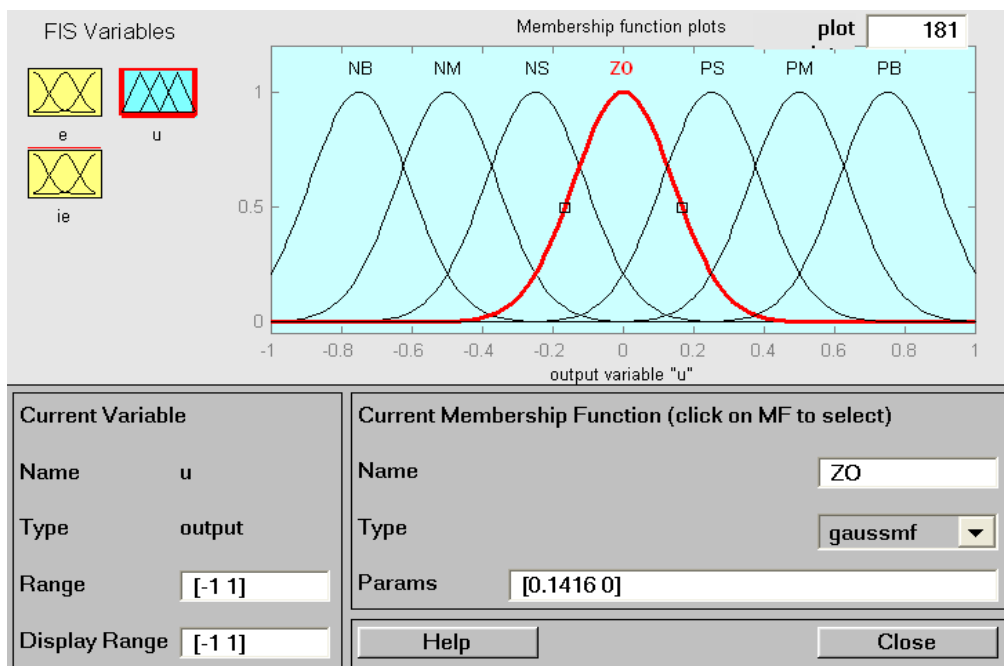


Figure 4 Output membership functions of the linguistic variable u

Once the input and output membership functions have been introduced, it is necessary to define the rule base of the fuzzy logic controller. To this end, a standard Mac Vicar-Whelan table was used after being modified taking into account the number of input and output membership functions defining linguistic variables. The rule base is presented in Table 1.

Table 1 Rule base of the MISO type fuzzy logic controller

Error e	Error integral ie				
	<i>NM</i>	<i>NM</i>	<i>ZO</i>	<i>PS</i>	<i>PM</i>
<i>NM</i>	NB	NB	NM	NS	ZO
<i>NS</i>	NB	NM	NS	ZO	PS
<i>ZO</i>	NM	NS	ZO	PS	PM

Error <i>e</i>	Error integral <i>ie</i>				
	<i>NM</i>	<i>NM</i>	<i>ZO</i>	<i>PS</i>	<i>PM</i>
<i>PS</i>	NS	ZO	PS	PM	PB
<i>PM</i>	ZO	PS	PM	PB	PB

A rule base defining the mutual dependences between input linguistic variables and the output linguistic variable has to be derived with the use of a rule editor suitable for the designed model of a fuzzy logic controller. With respect to all the rules, a weight coefficient equal to one was used, as well as a method of combining rule antecedents by means of the product formula. Even though the sequence of introducing the rules is insignificant from the viewpoint of control characteristics, they are typically introduced according to the row or column sequence. Ordering the rules when they are being introduced facilitates checking their correctness at a later stage. An illustration of the edited rule base is presented in Figure 5.

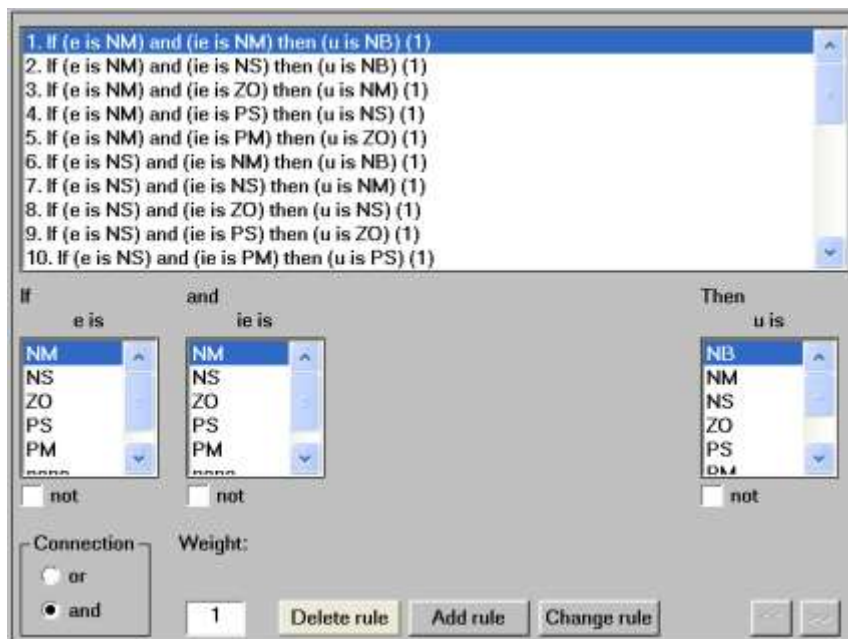


Figure 5 Rule base editor of the fuzzy logic controller

Defuzzification methods

The next step in designing a fuzzy logic controller is the choice of a defuzzification method for transforming a fuzzy set defined by a number of membership functions into a scalar value. Fuzzy Logic Toolbox offers five defuzzification methods, some of which are continuous and some discontinuous. With respect to defuzzification, continuity of a method can be defined by means of the following general dependence (Sivanandam et al., 2006):

$$\begin{aligned} &\forall \varepsilon > 0 \exists (\delta > 0 \wedge d > 0): \\ &|x_1(d) - x_1(d-1)| < \delta \wedge \dots \wedge |x_n(d) - x_n(d-1)| < \delta \\ &\Rightarrow |u(d) - u(d-1)| < \varepsilon \end{aligned} \quad (3)$$

where: δ – change of the input signals, ε – change of the output signal, d – selected discretization step, x_1, \dots, x_n – input linguistic variables, u – output linguistic variable.

Fuzzy controller surface is obtained by means of the Center of Sums method. This method is similar to the Center of Area (CoA) method, but much faster. It also provides continuity and participation in the inference process all active rules. Common areas of the membership functions are included in the defuzzification process more than once using the Center of Sums method.

For a discrete case, the following dependence is used (Sivanandam et al., 2006):

$$u = \frac{\sum_{i=1}^m u_i \cdot \sum_{k=1}^n \mu_{CLU(k)}(u_i)}{\sum_{i=1}^m \sum_{k=1}^n \mu_{CLU(k)}(u_i)} \quad (4)$$

where: u – output linguistic variable, $\mu_{CLU(k)}$ – compressed membership function for each k -th rule, u_i - functions of output fuzzy sets.

The application of the Centre of Sums method is illustrated graphically in Figure 6.

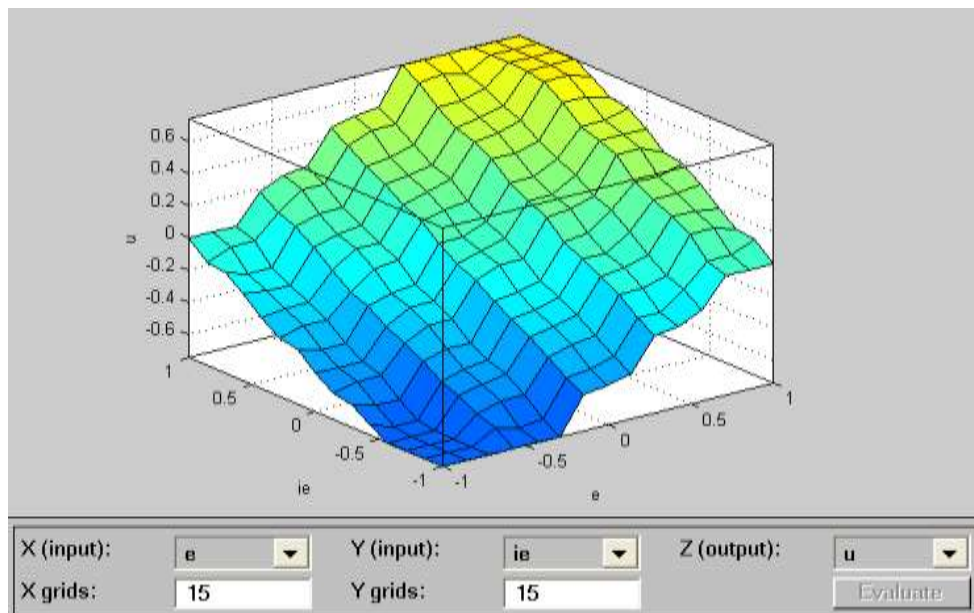


Figure 6 Dependence of the output signal on input signals in a fuzzy controller for the defuzzification method Center of Sums

In the fuzzy controller under scrutiny, the scalar value was also obtained by means of the Middle of Maximum method, represented by the following expression (The Math Works, 2012):

$$u = \frac{\inf \{ \mu_U(u) = hgt(U) \} + \sup \{ \mu_U(u) = hgt(U) \}}{2} \quad (5)$$

where: $\mu_U(u)$ – membership function of output signal, $hgt(U)$ – height of fuzzy set U .

The application of the Middle of Maximum method for obtaining the fuzzy controller surface is shown in Figure 7.

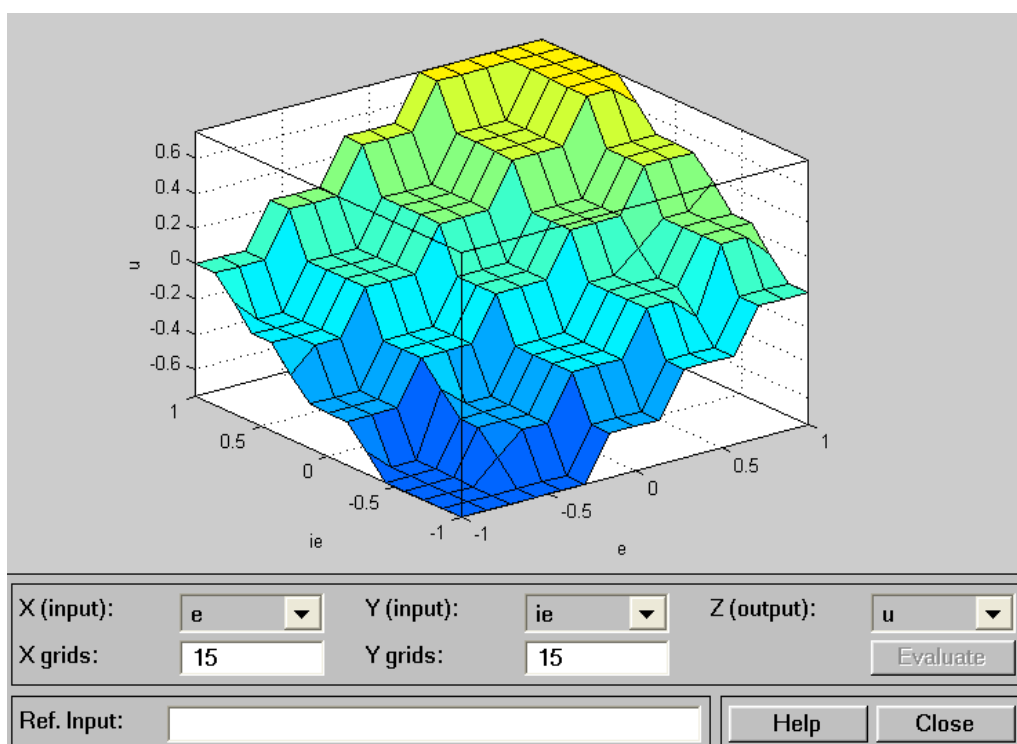


Figure 7 Dependence of the output signal on input signals in a fuzzy controller for the defuzzification method Middle of Maximum

Conclusions

The Fuzzy Logic Toolbox software offers a possibility of modifying a number of parameters, such as type of membership function, function location within a selected interval, height of the intersection point of neighbouring functions, the number of rules and the defuzzification method applied. By modifying these parameters, it is possible to observe their impact on the shape of the control surface of the fuzzy logic controller.

Due to the fact that there exists a wide spectrum of possibilities in designing and analysing the operation of fuzzy logic controllers, Fuzzy Logic Toolbox is a highly effective and helpful tool for performing various didactic and educational tasks. This explains why it is widely applied by instructors of various subjects taught at technical universities.

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INFORMĀCIJAS UN KOMUNIKĀCIJAS TEHNOLOĢIJU IZMANTOŠANA PAMATSKOLAS DABASZINĪBU UN BIOLOĢIJAS MĀCĪBU PROCESĀ

The Use of Information and Communication Technologies in the Basic School Science and Biology Study Process

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Rīgas Pedagoģijas un izglītības vadības akadēmija (LATVIJA)

Abstract. *The importance of Information and Communication Technologies (ICT) in educational process increases. The effective use of ICT in the study process could improve the knowledge of students and their interest about study process. The investigation was carried out in 5 Latvian schools. The questionnaire of 5-6 and 7-9 grade students about use of ICT during study process and attitude of students toward using of ICT in science and biology subjects was carried out. The results of the survey showed that the majority of students use ICT for study purposes until 1 hour or 1-2 hours during day but part of questionnaire students (14 %) even more than 4 hours in a day. Students use ICT for different purposes: keep in touch with e-class, communicate with classmates, use computers and mobile phones for searching information in educational purposes, comply home works using computer and so on. The majority of questionnaire students consider that using of ICT help them in different areas of study process. Students to some extent agree that using of ICT give them ability to better understand science and biology subjects and increase motivation to learn these subjects.*

Keywords: *students, information and communication technologies, learning motivation, science, biology.*

Ievads

Introduction

Informācijas un komunikācijas tehnoloģijas (IKT) ir ienākušas dažādās dzīves sfērās, tai skaitā arī izglītībā. Arvien nozīmīgāka kļūst informācijas un komunikācijas tehnoloģiju pielietošanas prasme mācību procesā. IKT ienākšana mūsdienu mācību procesā prasa jaunas teorijas, jaunus akcentus metodikās (Gorbāns, 2013). Lai jaunā paaudze veiksmīgi sagatavotos dzīvei strauji ekonomiski un tehnoloģiski mainīgajā laikā, nozīmīga ir skolēnu iegūtās izglītības kvalitāte, un gatavība turpināt izglītību visā dzīves laikā. To var panākt, izglītības procesā pielietojot IKT, tādējādi nodrošinot mācību mērķu

sasniegšanu, ievērojot gan sociālo pasūtījumu, gan skolēnu intereses (Lūsēna–Ezera & Bārdule, 2013).

Zinātnes un tehnoloģiju attīstība ir cieši saistīta ar sabiedrību, un tehnoloģijas var būtiski ietekmēt sabiedrībā notiekošos procesus (Facer, 2011). IKT pieaugošā loma ir atstājusi iespaidu uz daudziem skolēna personības aspektiem, tādēļ šo jautājumu var aplūkot arī no audzināšanas teorijas un prakses kā harmoniski attīstītas, sociāli aktīvas un atbildīgas personības veidošanās viedokļa (Špona, 2006). Izglītības paradigmas maiņā - no mācīšanas uz mācīšanās paradigmu būtiska loma ir IKT ieviešanai izglītībā. IKT ir svarīga loma arī skolēnu pētniecisko iemaņu apguvē (Winterbottom et al., 2006).

IKT izmantošana veicina skolēnu mācīšanās motivācijas veidošanos (Becta ICT Research, 2003). Skolēni, kuri plaši lieto IKT jūtas veiksmīgāki mācībās, paaugstinās viņu pašvērtējums. Tomēr IKT lietošanas efektivitāte lielā mērā ir atkarīga no tā, cik veiksmīgi pedagogi un skolēni prot izmantot modernās tehnoloģijas. Skolai ir jānodrošina skolēniem iespēja attīstīt nepieciešamās kompetences, lai viņi kļūtu par pilnvērtīgiem informācijas sabiedrības locekļiem (Mamani & Cipi, 2013). Daudzās bioloģijas nozarēs ar IKT palīdzību var labi parādīt dabā notiekošos procesus, kas dod iespēju tos labāk izprast (Van Rooy, 2012). Pieaugošās interneta iespējas paver iespēju izmantot virtuālās laboratorijas un citas modernas IKT (Lamanauskas, 2011). Tomēr, lai tās efektīvi izmantotu dabaszinātņu priekšmetu apguvē, nepieciešams pilnveidot to izmantošanas metodoloģiju. IKT līdzekļi dabaszinību un bioloģijas stundās var aizstāt daudzus tradicionālos mācību līdzekļus (Praulīte, 2008), tāpēc tos izmantojot ieguvēji ir gan skolēni, gan pedagogi. Latvijā par IKT izmantošanu dabaszinību mācību procesā ir samērā maz pētījumu.

Pētījuma mērķis bija noskaidrot 5.-6. un 7.-9. klašu skolēnu IKT pielietošanu mācību procesā un uzskatus par IKT izmantošanas ietekmi uz mācību procesu, 5.-6. klašu skolēnu attieksmi pret IKT izmantošanu dabaszinību mācību satura apguvē un mācīšanās motivācijas veidošanos dabaszinībās un 7.-9. klašu skolēnu attieksmi pret IKT izmantošanu bioloģijas mācību satura apguvē un mācīšanās motivācijas veidošanos bioloģijā.

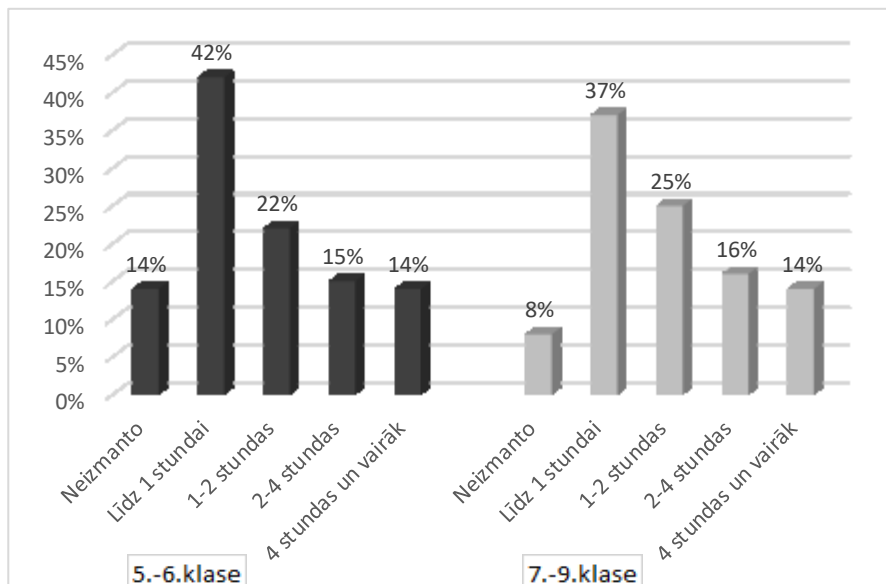
Metodika ***Methodology***

Pētījums tika veikts 5 Latvijas skolās: 3 Rīgas un 2 Latvijas mazpilsētu skolās. Tika veikta 5-6. un 7.-9. klašu skolēnu anketēšana par IKT izmantošanu mācību procesā un skolēnu uzskatiem par IKT izmantošanas ietekmi uz mācību procesu, par 5.-6. klašu skolēnu attieksmi pret IKT izmantošanu dabaszinību mācību satura apguvē un mācīšanās motivācijas veidošanos dabaszinībās un

7.-9. klašu skolēnu attieksmi pret IKT izmantošanu bioloģijas mācību satura apguvē un mācīšanās motivācijas veidošanos bioloģijā. Kopā tika anketēti 226 respondenti. Pētījuma rezultāti tika matemātiski apstrādāti.

Rezultāti Results

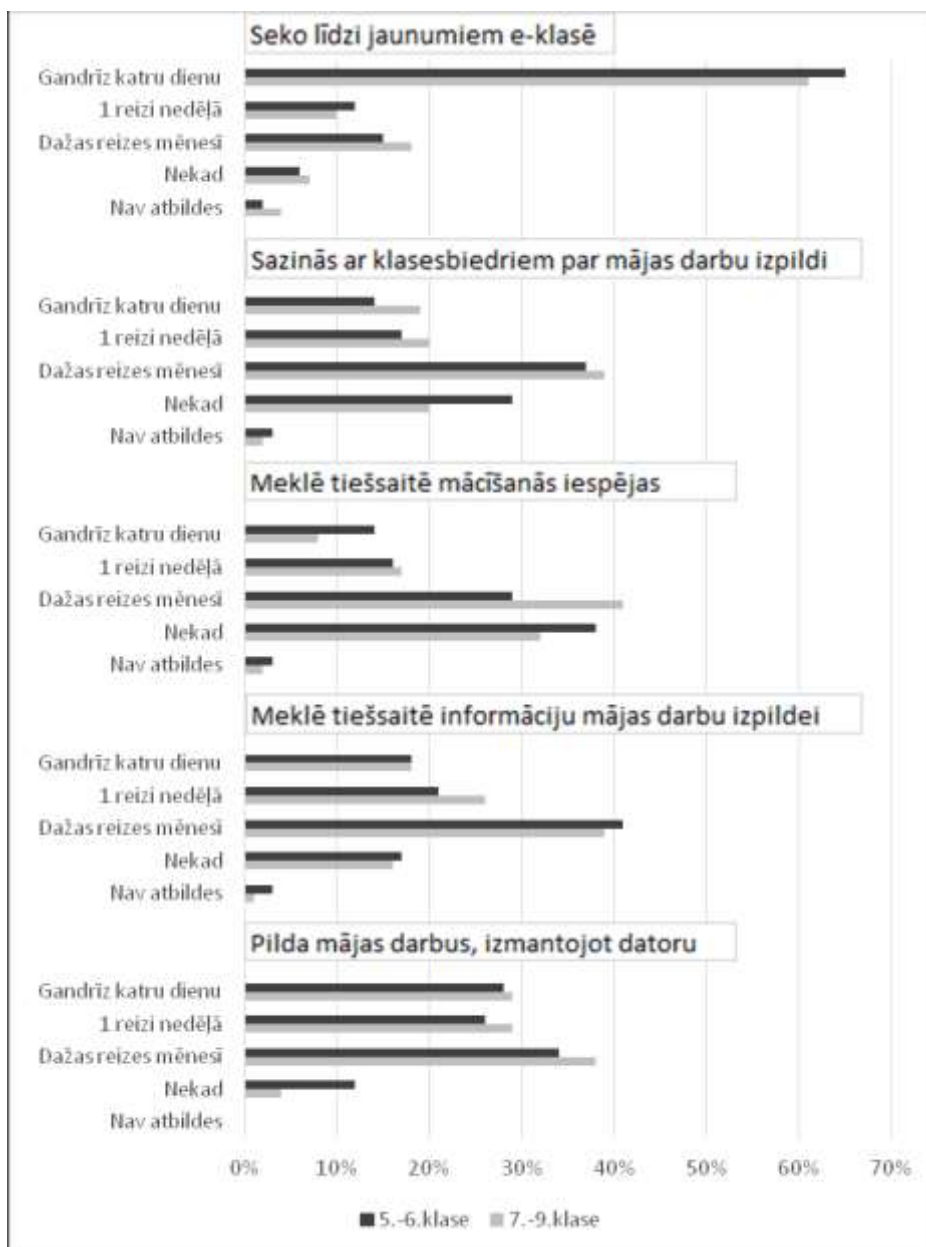
Anketēšanas rezultāti parādīja, ka lielākā daļa aptaujāto skolēnu IKT rīkus mācību nolūkiem izmanto līdz 1 stundai vai 1-2 stundas dienā (skat. 1. att.). 42 % 5.-6. klašu skolēnu un 37 % 7.-9. klašu skolēnu IKT rīkus mācību nolūkiem izmanto līdz 1 stundai, bet 22 % 5.-6. klašu skolēnu un 25 % 7.-9. klašu skolēnu 1-2 stundas dienā. Abās klašu grupās 14 % skolēnu IKT rīkus mācību nolūkiem izmanto vairāk par 4 stundām dienā. Salīdzinoši neliels ir to skolēnu skaits (14 % 5.-6. klašu skolēni un 8 % 7.-9. klašu skolēni), kuri IKT rīkus mācību nolūkiem vispār neizmanto.



1.att. Skolēnu IKT rīku izmantošanas ilgums mācību nolūkiem
(% no respondentu skaita grupās)

Fig.1 Duration of use of ICT tools by students for study purposes
(in % from number of respondents in groups)

Pētījuma rezultāti parādīja, ka skolēni IKT izmanto dažādiem mācību nolūkiem (skat. 2. att.). Gan 5.-6., gan arī 7.-9. klašu grupās vairāk nekā puse skolēnu (65 % 5.-6. klašu skolēni un 61 % 7.-9. klašu skolēni) gandrīz katru dienu seko līdzīgi jaunumiem e-klasē. 14 % 5.-6. klašu skolēnu un 19 % 7.-9. klašu skolēnu gandrīz katru dienu sazinās ar klases biedriem par mājas darbu izpildi.

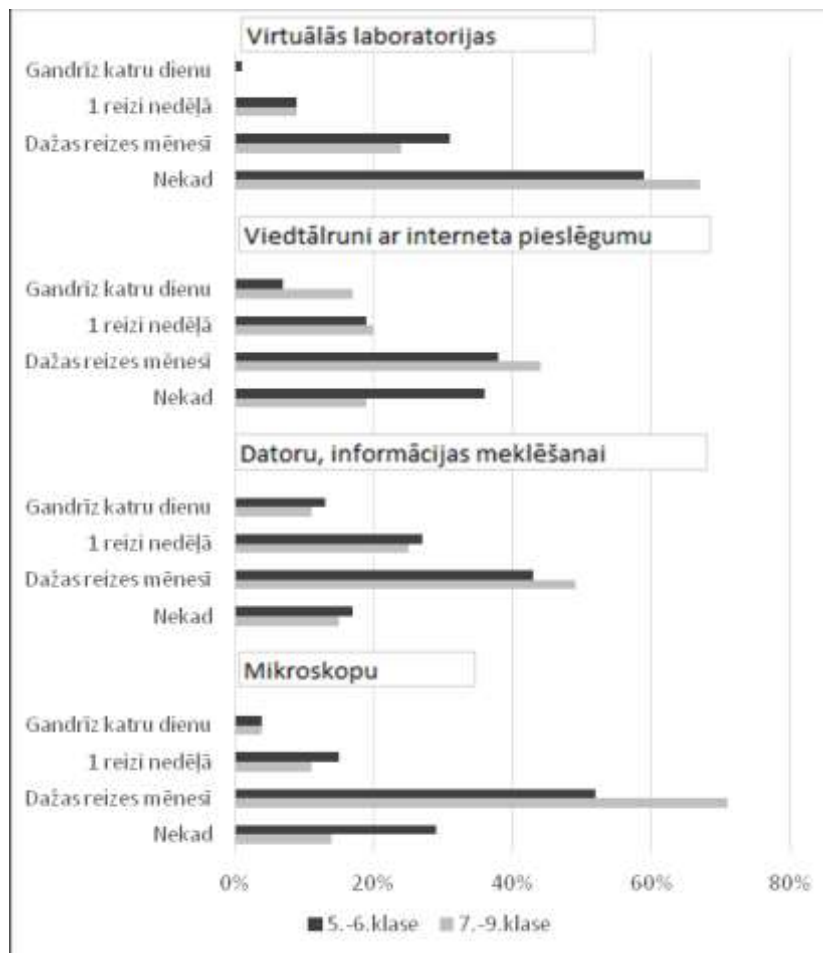


2.att. Skolēnu IKT izmantošana dažādiem mācību nolūkiem (% no respondentu skaita grupās)

Fig.2 Using of ICT by students for different study purposes (in % from number of respondents in groups)

Vairums skolēnu tomēr to dara retāk – reizi nedēļā vai dažas reizes mēnesī. 29 % 5.-6. klašu skolēnu un 41 % 7.-9. klašu skolēnu vismaz dažas reizes nedēļā meklē tiešsaitē mācīšanās iespējas, bet daļa skolēnu (14 % 5.-6. klašu skolēni un 8 % 7.-9. klašu skolēni) to dara katru dienu. 18 % skolēnu abās klašu grupās meklē tiešsaitē informāciju mājas darbu izpildei. Vairums skolēnu to dara reizi nedēļā vai dažas reizes mēnesī. Tomēr abās klašu grupās ir skolēni (17 % 5.-6. klašu skolēni un 16 % 7.-9. klašu skolēni), kuri atzīst, ka nekad nemeklē

tiešsaitē informāciju mājas darbu izpildei. 28 % 5.-6. klašu skolēnu un 29 % 7.-9. klašu skolēnu gandrīz katru dienu izmanto datoru mājas darbu pildīšanai. 26 % 5.-6. klašu skolēnu un 29 % 7.-9. klašu skolēnu datoru mājas darbu pildīšanai izmanto apmēram reizi nedēļā, bet 34 % 5.-6. klašu skolēnu un 38 % 7.-9. klašu skolēnu mājas darbu pildīšanai datoru izmanto dažas reizes mēnesī. Skolēnu, kas nemaz neizmanto datoru mājas darbu pildīšanai ir nedaudz (12 % 5.-6. klašu skolēni un tikai 4 % 7.-9. klašu skolēni). Kopumā skolēni dažādi intensīvi izmanto IKT mācību nolūkiem, tomēr starp abām klašu grupām izmantošanas intensitāte būtiski neatšķiras.

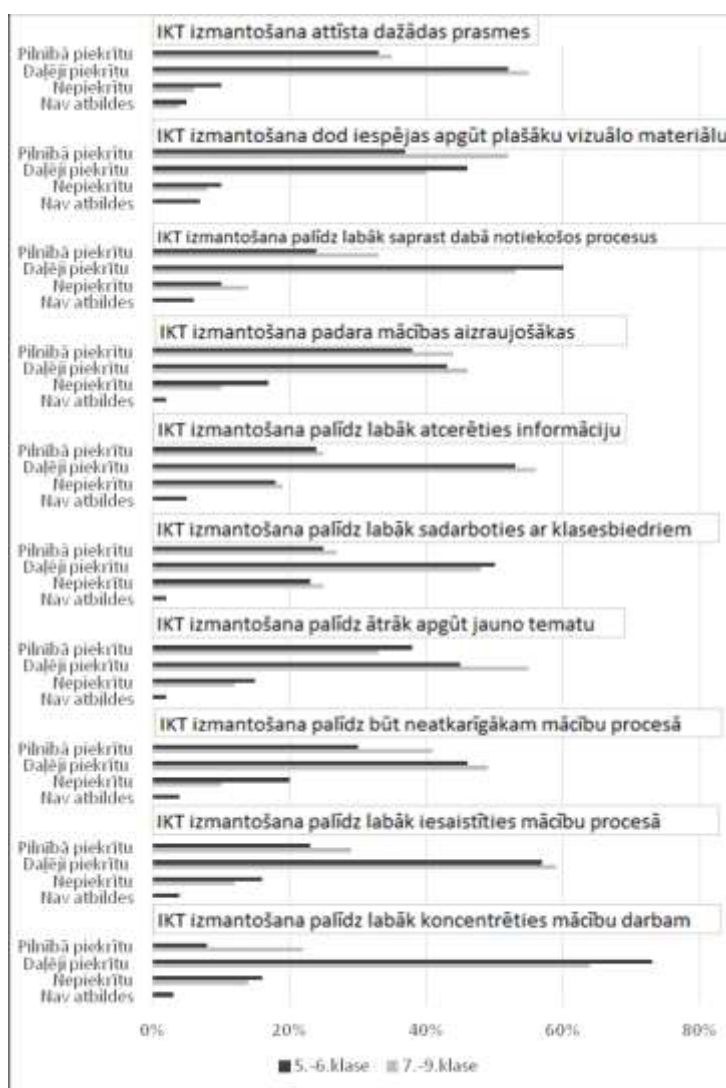


3.att. Skolēnu dažādu IKT rīku izmantošana mācību procesā
(% no respondentu skaita grupās)

Fig.3 Using of different ICT tools by students in the science and biology study process
(in % from number of respondents in groups)

Skolēni izmanto dažādus IKT rīkus mācību procesā (skat. 3. att.). 13 % 5.-6. klašu skolēnu un 11 % 7.-9. klašu skolēnu gandrīz katru dienu izmanto datoru, informācijas meklēšanai mācību nolūkos, bet 7 % 5.-6. klašu skolēnu un

17 % 7.-9. klašu skolēnu gandrīz katru dienu izmanto viedtālruni ar interneta pieslēgumu informācijas meklēšanai mācību nolūkos. Lielākā daļa skolēnu šīs tehnoloģijas mācību nolūkiem izmanto retāk. 43 % 5.-6. klašu skolēnu un 49 % 7.-9. klašu skolēnu dažas reizes mēnesī izmanto datoru, informācijas meklēšanai mācību nolūkos, bet attiecīgi 38 % un 44 % skolēnu abās klašu grupās dažas reizes mēnesī izmanto viedtālruni ar interneta pieslēgumu informācijas meklēšanai mācību nolūkos. Daļa skolēnu izmanto arī virtuālās laboratorijas. 9 % skolēnu to dara apmēram reizi nedēļā, bet un 31 % 5.-6. klašu skolēnu un 24 % 7.-9. klašu skolēnu dažas reizes mēnesī. Vairums skolēnu (52 % 5.-6. klašu skolēni un 71 % 7.-9. klašu skolēni) norāda, ka dažas reizes mēnesī izmanto mikroskopu.



4.att. Skolēnu uzskati par IKT izmantošanas ietekmi uz mācību procesu (% no respondentu skaita grupās)

Fig.4 Opinion of students about influence of using of ICT on the study process (in % from number of respondents in groups)

Skolēni uzskata, ka IKT izmantošana palīdz dažādās mācību procesa jomās (skat. 4. att.). 33 % 5.-6. klašu skolēnu un 35 % 7.-9. klašu skolēnu pilnībā piekrīt uzskatam, ka IKT izmantošana attīsta dažādas prasmes, bet 52 % 5.-6. klašu skolēnu un 55 % 7.-9. klašu skolēnu daļēji piekrīt šim uzskatam. Vairums skolēnu pilnībā piekrīt (24 % 5.-6. klašu skolēni un 33% 7.-9. klašu skolēni) vai daļēji piekrīt (60 % 5.-6. klašu skolēni un 53% 7.-9. klašu skolēni) apgalvojumam, ka IKT izmantošana palīdz labāk saprast dabā notiekošos procesus. Vairums skolēnu uzskata, ka IKT padara mācības aizraujošākas. Vairums skolēnu (53 % 5.-6. klašu skolēni un 56 % 7.-9. klašu skolēni) daļēji piekrīt uzskatam, ka IKT izmantošana palīdz labāk atcerēties informāciju. 50 % 5.-6. klašu skolēnu un 48 % 7.-9. klašu skolēnu arī daļēji piekrīt uzskatam, ka IKT izmantošana palīdz labāk sadarboties ar klases biedriem. Jāatzīmē, ka 23 % 5.-6. klašu skolēnu un 25 % 7.-9. klašu skolēnu nepiekrīt šim uzskatam.

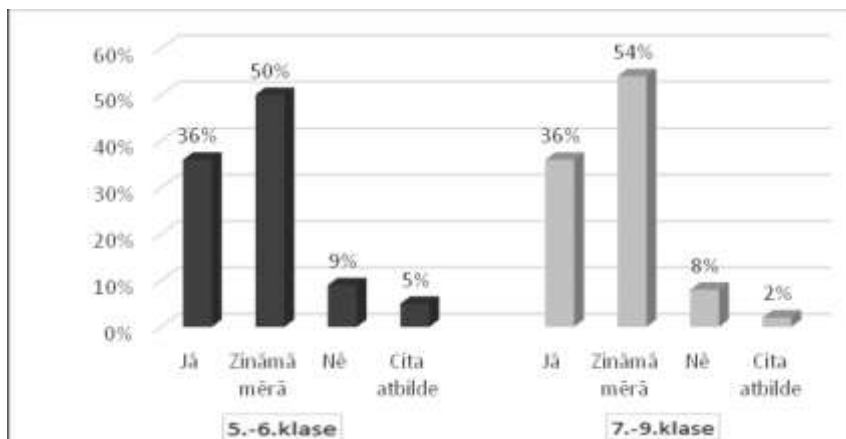
Vairums skolēnu uzskata, ka IKT izmantošana palīdz labāk apgūt jauno tematu. Skolēni arī atzīmē, ka IKT izmantošana palīdz būt neatkarīgākiem mācību procesā. 30 % 5.-6. klašu skolēnu un 41 % 7.-9. klašu skolēnu pilnībā piekrīt šim apgalvojumam. Vairums aptaujāto skolēnu (57 % 5.-6. klašu skolēni un 59 % 7.-9. klašu skolēni) daļēji piekrīt apgalvojumam, ka IKT izmantošana palīdz labāk iesaistīties mācību procesā. Tāpat lielākā daļa skolēnu (73 % 5.-6. klašu skolēni un 64 % 7.-9. klašu skolēni) daļēji piekrīt apgalvojumam, ka IKT izmantošana palīdz labāk koncentrēties mācību darbam. 16 % 5.-6. klašu skolēnu un 14 % 7.-9. klašu skolēnu nepiekrīt šim uzskatam. Kopumā lielākai daļai skolēnu ir pozitīva attieksme pret IKT izmantošanu mācību procesā, pie kam abu klašu grupu skolēnu uzskati būtiski neatšķiras. Daļa skolēnu gan nepiekrīt IKT izmantošanas pozitīvai ietekmei uz mācību procesu, bet šādi skolēni ir mazākumā.

Vairums aptaujāto skolēnu (50 % 5.-6. klašu skolēni un 54 % 7.-9. klašu skolēni) zināmā mērā piekrīt uzskatam, ka IKT izmantošanai ir pozitīva ietekme uz mācību satura apguvi dabaszinībās un bioloģijā (skat. 5. att.). 36 % skolēnu abās klašu grupās pilnībā piekrīt šim uzskatam. To skolēnu skaits, kas noliedz IKT izmantošanas pozitīvo ietekmi uz mācību satura apguvi dabaszinībās un bioloģijā ir salīdzinoši neliels (9% 5.-6. klašu skolēni un 8% 7.-9. klašu skolēni).

Lielākā daļa aptaujāto skolēnu (59 % 5.-6. klašu skolēni un 61 % 7.-9. klašu skolēni) norāda, ka IKT izmantošana zināmā mērā veicina, vai veicina mācību motivācijas veidošanos attiecīgi dabaszinībās un bioloģijā (skat. 6. att.).

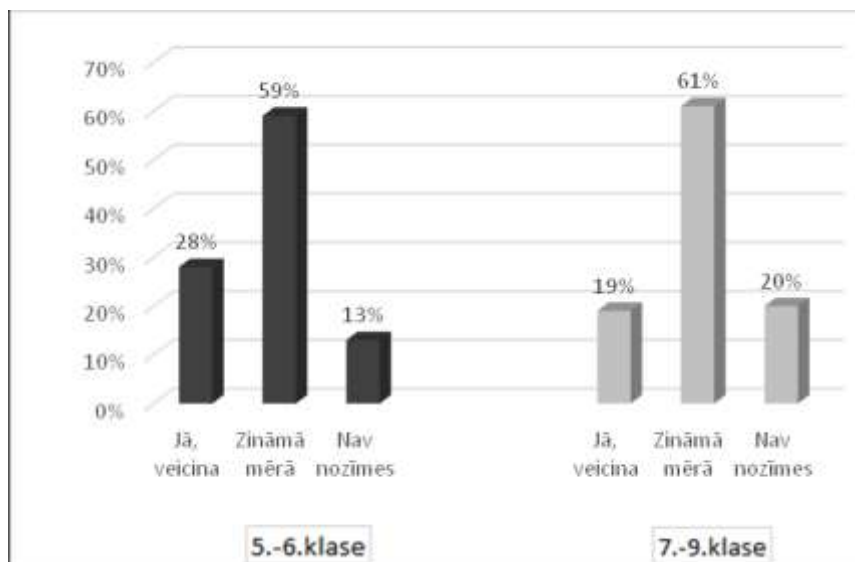
Pētījumā iegūtie rezultāti saskan ar citu autoru pētījumu rezultātiem par IKT ietekmi uz bioloģijas un dabaszinību priekšmetu apguvi. Taivānas zinātnieki ir noskaidrojuši, ka labiekārtots IKT aprīkojums ar plašām iespējām izmantot interaktīvo tāfeli veicina vidusskolas skolēnu bioloģijas priekšmeta apguvi (Yang et al., 2015). Viena no galvenajām priekšrocībām, izmantojot IKT ir tā, ka samazinās laiks, kuru skolotājs patērē izklāstot jauno vielu, un

skolēniem rodas iespēja uzdot skolotājam dažādus jautājumus. Tas veicina gan skolēnu līdzdalības palielināšanos mācību procesā, gan arī dod iespēju labāk izprast apgūstamās bioloģijas priekšmeta tēmas.



5.att. 5.-6. klašu skolēnu uzskati par IKT izmantošanas pozitīvo ietekmi uz dabaszinību mācību satura apguvi un 7.-9. klašu skolēnu uzskati IKT izmantošanas pozitīvo ietekmi uz bioloģijas mācību satura apguvi (% no respondentu skaita grupās)

Fig.5 Opinion of 5-6 grade students about positive influence of using of ICT on the acquisition of science educational contents and opinion of 7-9 grade students about positive influence of using of ICT on the acquisition of biology educational contents (in % from number of respondents in groups)



6.att. 5.-6. klašu skolēnu uzskati par IKT izmantošanas ietekmi uz mācīšanās motivācijas veidošanos dabaszinībās un 7.-9. klašu skolēnu uzskati par IKT izmantošanas ietekmi uz mācīšanās motivācijas veidošanos bioloģijā (% no respondentu skaita grupās)

Fig.6 Opinion of 5-6 grade students about influence of using of ICT on the formation of learning motivation in the science and opinion of 7-9 grade students about influence of using of ICT on the formation of learning motivation in the biology (in % from number of respondents in groups)

Konstatēts, ka uz IKT organizēta mācīšanās veicina pamatskolas un vidusskolas skolēnu sekmes un motivāciju apgūt bioloģijas un ģeoloģijas priekšmetus (El Asli et al., 2012). Noskaidrots, ka daudzveidīgu resursu, tai skaitā IKT un multivides izmantošana, veicina studentu labākas izpratnes veidošanos par nervu sistēmas uzbūvi un funkcionēšanu (Lopez-Aliaga et al., 2014). Konstatēts, ka lielākai daļai Serbijas Novi Sad skolas skolotāju ir pozitīva attieksme pret IKT izmantošanu bioloģijas priekšmeta apgūvē (Županec et al., 2014). Pētījumā noskaidrots, ka palielinoties skolotāju kompetencei IKT jautājumos, ievērojami uzlabojas skolotāju attieksme pret IKT izmantošanu bioloģijas priekšmeta apgūvē.

Secinājumi **Conclusions**

1. Lielākā daļa skolēnu 5.-6. un 7.-9. klašu grupās IKT rīkus mācību nolūkiem izmanto līdz 1 stundai vai 1-2 stundas dienā. Daļa skolēnu (14 % abās klašu grupās) tos izmanto ļoti intensīvi – vairāk nekā 4 stundas dienā, bet salīdzinoši neliels ir to skolēnu skaits (14 % 5.-6. klašu skolēni un 8 % 7.-9. klašu skolēni), kuri IKT rīkus mācību nolūkiem vispār neizmanto.
2. Skolēni IKT izmanto dažādiem mācību nolūkiem. Lielākā daļa skolēnu katru dienu seko līdzī jaunumiem e-klasē. 14 % 5.-6. klašu skolēnu un 19 % 7.-9. klašu skolēnu gandrīz katru dienu sazinās ar klases biedriem par mājas darbu izpildi. Vairums skolēnu reizi nedēļā vai dažas reizes mēnesī izmanto datoru un viedtālruni ar interneta pieslēgumu informācijas meklēšanai mācību nolūkos. 28 % 5.-6. klašu skolēnu un 29 % 7.-9. klašu skolēnu gandrīz katru dienu izmanto datoru mājas darbu pildīšanai. Daļa skolēnu izmanto arī virtuālās laboratorijas un mikroskopu.
3. Lielākā daļa 5.-6. un 7.-9. klašu skolēnu daļēji vai pilnīgi piekrīt uzskatam, ka IKT izmantošana palīdz dažādās mācību procesa jomās: attīsta dažādas prasmes, dod iespējas apgūt plašāku vizuālo materiālu, palīdz labāk saprast dabā notiekošos procesus, padara mācības aizraujošākas, palīdz labāk atcerēties informāciju, labāk sadarboties ar klases biedriem, ātrāk apgūt jauno tematu, būt neatkarīgākiem mācību procesā, vieglāk iesaistīties mācību procesā un labāk koncentrēties darbam.
4. Vairums 5.-6. (50 %) un arī 7.-9. klašu skolēnu (54 %) zināmā mērā piekrīt uzskatam, ka IKT izmantošanai ir pozitīva ietekme uz attiecīgi dabaszinību un bioloģijas mācību satura apgūvi. To skolēnu skaits, kas noliedz IKT izmantošanas pozitīvo ietekmi uz mācību satura apgūvi dabaszinībās un bioloģijā ir salīdzinoši neliels (9 % 5.-6. klašu skolēni un 8 % 7.-9. klašu skolēni).

5. Lielākā daļa aptaujāto skolēnu (59 % 5.-6. klašu skolēni un 61 % 7.-9. klašu skolēni) norāda, ka IKT izmantošana zināmā mērā veicina mācību motivācijas veidošanos dabaszinībās un bioloģijā. Liels skaits skolēnu (28 % 5.-6. klašu skolēni un 19 % 7.-9. klašu skolēni) uzskata, ka IKT izmantošana noteikti veicina mācību motivācijas veidošanos dabaszinībās un bioloģijā.

Summary

Nowadays ICT are widely used in different areas of life including education. ICT tools in science and biology lessons can replace many traditional learning tools. It is necessary to improve the methodology of using these technologies in order of effective using them. The investigation of the use of ICT in the basic school science and biology study process was carried out in 5 Latvian schools. The questionnaire of 5-6 and 7-9 grade students about use of ICT during study process and attitude of students toward using of ICT in science and biology subjects was carried out. 226 respondents were surveyed. The results of the survey revealed that the majority of students use ICT for study purposes until 1 hour (42 % of 5-6 grade students and 37 % of 7-9 grade students) or 1-2 hours during day (22 % of 5-6 grade students and 25 % of 7-9 grade students) but part of questionnaire students (14 %) even more than 4 hours in a day. Students use ICT for different purposes. The majority of students keep in touch with e-class, 14 % of 5-6 grade students and 19 % of 7-9 grade students almost every day communicate with classmates, the majority of students use computers and mobile phones for searching information in educational purposes some times during week or month. 28 % of 5-6 grade students and 29 % of 7-9 grade students almost every day comply home works using computer. There are students who regularly use virtual laboratories and microscope. The majority of questionnaire students consider that using of ICT help them in different areas of study process: develop different skills, give ability to better acquire visual material, it helps better understand the processes occurring in nature, it makes learning more attractive and so on. The majority of students (50 % of 5-6 grade students and 54 % of 7-9 grade students) to some extent agree that using of ICT give them ability better understand science and biology subjects. The majority of students point out that using of ICT to some extent (this view have 59 % of 5-6 grade students and 61 % of 7-9 grade students) or definitely (this view have 28 % of 5-6 grade students and 19 % of 7-9 grade students) increase students motivation to learn science and biology subjects.

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THE EFFECTIVENESS OF SCHOOL EDUCATION - FEATURED IMPLICATIONS CONSIDERATIONS

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***Abstract.** The main objective of the paper is to argue for a multidimensional character of effectiveness of school education and to discuss a number of factors that influence the outcome of education directly or indirectly. Assessing the effectiveness of school education sheds light on its current problems and indicated directions for future research on innovative approaches to solving such problems.*

***Keywords:** teaching, the effectiveness of education, modern teaching aids.*

Effectiveness of schooling – preliminary analysis

Effectiveness of school education is a highly complex issue. It has been addressed in a number of publications, for example by professor Kazimierz Denek, who assumes a broad perspective when dealing with effectiveness and his works can be an inspiration for further analyses. Effectiveness of schooling can be defined in a number of ways. The multifaceted character of effectiveness is a consequence of a new approach to education as a domain which is at the same time formalised and informal. The most widespread definition of effectiveness attested in the literature evokes the idea of a teacher's and student's didactic practice being successful. (Denek, 2011) This kind of perspective is however quite superficial as it does not take into account a number of factors, both overt and covert, having a direct or indirect impact on schooling effectiveness. Because of this, following the above-mentioned author's considerations, I prepared a graphical representation of the problem, which in my opinion, offers a more lucid illustration than a descriptive form (Fig. 1). The diagram draws attention to the variety of components and invites a subjective reflection on the problem. It points to the fact that there are numerous correlated factors affecting the education process. (Bereźnicki, 2007; Kupisiewicz, 2005). Effectiveness of schooling can be seen as a multivariable function, as was pointed out in the works of Franciszek Bereźnicki, Wincenty Okoń, Małgorzata Wieczorek-Tomaszewska and others.

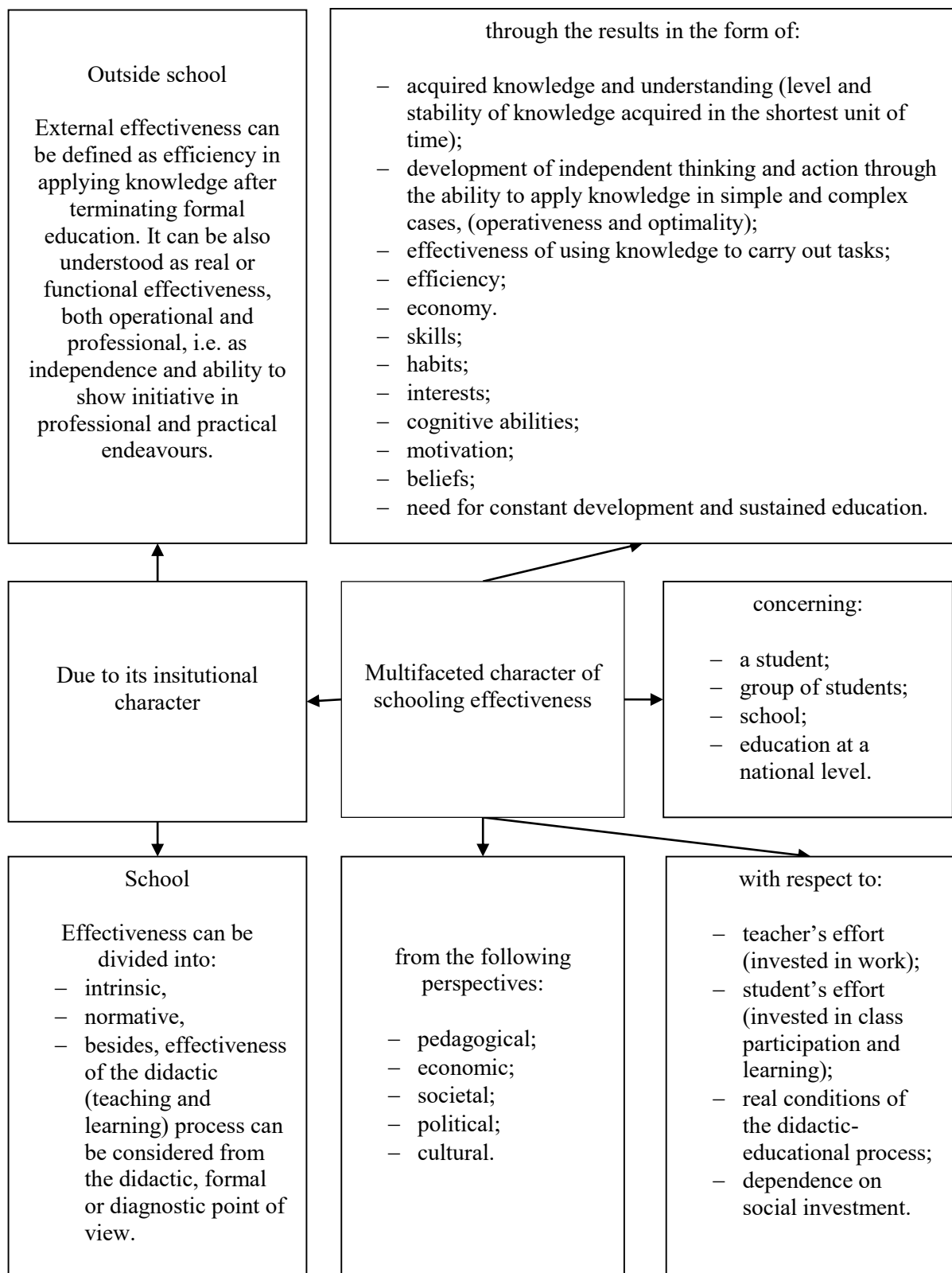


Fig.1 Multifaceted character of schooling effectiveness (based on Denek 1997)

Effectiveness of education vs. the current model of school

An interesting viewpoint on current problems of school education was presented by the renowned British philosopher, educational expert, writer and world-acclaimed authority on creativity, innovation and human resources Ken Robinson. He described the currently functioning educational system in a highly convincing and appealing way, by analysing it in the framework of philosophy, sociology and economics. (Robinson, 2010) The main message of these analyses is *“Education needs revolution, not evolution”*.

The author’s reflections provide a very faithful and adequate account of the current educational system and its effectiveness. The main criticism against it is that its structure is outdated and unsuitable for the present-day social expectations and demands. As the author points out, *“...we are confronted with a new situation, so we have to act and think accordingly..., we have to liberate ourselves from the existing dogmas from the tranquil past, which do not fit the turbulent present. There are few opportunities for a change, so if there is one, we have to grab it.”* This thought is quoted after Abraham Lincoln (1862) but it still appeals to modern people and is relevant for the present topic. Robinson also observes that the current educational system perpetuates patterns that originated in the industrial era, the main aim of which was to support the production of goods, and which promoted linearity, conformism and division of individual into social classes. All children are assigned to classes only on the basis of the age criterion (by analogy to the “best before date” on products) and the educational process is shaped in a synchronous frame with fixed stages (as the production cycle in a manufacture). The school is becoming increasingly unified and standardised – identical curricula and examinations. As Robinson puts it, *“...we are slaves to ideas that we consider obvious, natural and stable...”*. The author suggests that a new pattern should be adopted, analogous to agriculture, where growth is not seen as a mechanical but organic process, the outcome of which may be difficult to predict, yet the farmer is responsible for providing conditions conducive to growth. This metaphor represents the model that should be implemented in education, which should be personalised to match an individual learner’s personality and potential. This task should be undertaken by teachers, who are responsible for designing and practical implementation of solutions offering teaching on an individual basis. The challenge of this task can be faced by talented teachers with open minds, who are not afraid of innovations and who are familiar with information technology, using Internet and multimedia applications. A student at any stage of the education process should be treated as a member of society with which he/she will cooperate using a variety of his/her assets (and not just one). Another point raised by the author is that education operates only on “the upper part of the body”. This means that priority is given to science,

especially maths and foreign languages whereas art is very much neglected. What is subject of education is not the body as a whole but only the mind. The body is only a carrier of the mind, which is considered the centre of human intelligence. An individual's mental resources are decisive in classifying him/her as intelligent or not. As is emphasised by the author, most of the important inventions that revolutionised the world were contributed by geniuses who did not hold a university degree but who were creative and capable of connecting facts. The key to success is therefore creativity and not knowledge resources. These considerations make it evident that the role of philosophical trends known as constructivism and connectivism is increasingly recognised. Discoveries made within the cognitive science also play a significant role. Besides, the recent development of neurodidactics sheds new light on the assessment of an individual's features impacting on his/her cognitive skills. (Prauzner, 2016)

Much criticism levelled against the current education model stems from the fact that the primary aim of present-day schooling is to provide a young person with a certain amount of information, the usefulness of which may be dubious after some time. Considering the speed of changes in the world, it is difficult to make definite predictions concerning the validity and usefulness of knowledge resources. It is likewise difficult to anticipate which disciplines of studies will be given priority in the future. The didactic process has to be constantly modernised and the school should prepare students to face challenging situations, the exact circumstances of which cannot be defined or predicted at this moment, rather than offer a certain amount of encyclopaedic information. The basis for promoting creativity is multidirectional and divergent thinking, enabling a student to notice a number of possible solutions, as opposed to linear or convergent thinking. To develop the skill of divergent thinking, it is necessary to work in a group and learn to cooperate. Most products or ideas nowadays are created collectively and not by an effort of an individual. Since every member of the group contributes creativity of a different type, the effect can be achieved. In this way, collective work enhances the skills of an individual and contributes to achieving a desirable effect thanks to joint ideas at the same time. In this kind of innovative approach to education, a new question arises concerning educational policy and the assessment of its effectiveness. (Ptak, 2016) One of the ways of implementing a new system of education is adopting a pragmatic model based on the assumption that the subject of education should include all such content that is likely to be useful as input for creating new ideas in the future. In the light of innovative information and computer technologies, new methodological solutions become available in the educational system. Modern didactic aids and methods can offer new possibilities of experimenting in the educational space, the examples being new multimedia programmes or deterministic computer simulations employed in technical education and in other disciplines. (Ptak & Prauzner, 2011)

Turning again to the considerations offered by Robinson, there are two types of thinking that can be distinguished: divergent and convergent. The former is related to what is known as fluid intelligence, i.e. the type of intelligence that affords an individual's adaptation to a specific problem. The author believes that fluid intelligence decreases with age, and explains this as a result of the inhibitory effect of the educational system in its current shape. A new system of education should therefore be based on new practical didactic solutions so that a student would be able to find information, verify its source and to be able to understand and utilise this information. (Ptak, 2015) As is evident, the fundamental effect of institutional schooling should be the effectiveness of education.

There are a variety of educational models distinguished in didactics on the basis of their form and attractiveness. It is noted that each method can be suitable for dealing with a specific situation. Methods can be modified and combined within one class unit in order to increase the effectiveness of education. Especially interesting in this respect are information-processing models, social models, personality models and behavioural-cybernetic models. A common property of these models is that they present a human being as subject with its own individual cognitive predispositions who at the same time participates in interactions with the social environment. Besides, special significance of communication is underscored, together with the fact that the precondition for successful communication is the mutuality of experience and cooperation. Communication techniques are recognised as an important element of educational models. They are thought of not only in terms of a variety of forms of communication but also in terms of didactic means fostering the development of the cognitive system. (Kozík, Noga, & Depešová, 2015) The main criterion deciding about the choice of the teaching method is the didactic result achieved, i.e. the knowledge gained by the student. For the didactic viewpoint, the more varied the methods, the better effect can be expected. (Noga, 2009) Besides, the student can be trusted to be able to assess whether a method is attractive and effective for him/her. In the didactic process, the knowledge in the student's mind is reconstructed. Being aware of this, cognitive psychology and general pedagogy jointly point to the complexity of the notion of knowledge and its dependence on the personal cognitive, emotional as well as socio-cultural factors. (Joyce, Calhoun, & Hopkins, 1999)

According to Wiczorek-Tomaszewska, the main problem of education in the era of the Internet and wide access to technology is the lack of established teaching modern methods so that „*new technologies win over teaching methods*”. (Fyfe, 2011) Morbitzer, in turn, refers to the present teaching methods as “*instruments of enslavement*”. (Morbitzer, 2013) At the same time, it is noted that at the stage of “*applications and integration*” (Sysło, 2003) of special importance is to integrate teaching methods with the digital world, which determines the character of the whole didactic process. (Wiczorek-Tomaszewska, 2013)

Concluding remarks

Effectiveness of school education is a complex phenomenon and, as the diagram presented in this article indicates, it can be understood in different ways. It can be defined on the basis of various criteria but regardless of the theoretical models the most important issue for practising pedagogues is the final result of education, that is, the didactic effect. As previous research by the author has demonstrated, in the current situation of the technical schools, the most effective method for implementing a constructivist-connectivist education model is auxiliary teaching employing modern information technology. (Prauzner, 2013) This effect must reflect a pragmatic approach to the educational process by being feasible in the first place. Unfortunately, the gap between the theoretical model and its practical application is very often large, which results in low effectiveness of the process. This is pointed out in numerous opinions, such as that of Robinson cited above, reflecting the widespread opinion of many teachers. To sum up the present considerations, let us once again turn to the words of Kazimierz Denek, postulating further steps towards innovation in education: „*Education for tomorrow should be based on the good school, being a place of creative, open and active education, introducing students into collective and social life, fostering the skill to actively participate in all kinds of activities and providing an individual approach to each student*”. (Denek, 2007)

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APPLICATION OF COMPUTER PROGRAMMES IN RESEARCH PROJECTS AND TEACHING

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Abstract. *Integrated software packages, such as National Instruments Multisim or DasyLab can be successfully applied in developing research projects and in teaching. Thanks to their intuitive use and wide potential they can be utilised as support for simulation and other programmes. They are also often applied for comparative analysis of real measurement results with computer simulations. Apart from that, they can also be useful in a research or experimental lab.*

Keywords: *software packages, simulation, teaching.*

Introduction

With the development of Information Technology, it has become possible to create software aiding design of electronic systems used for carrying out measurements in research and in teaching. This kind of software can be divided into two categories: one includes programmes for improving and automatising measurements and further processing of data, and the other includes programmes for constructing and simulating virtual electronic and digital systems and circuits (Winiecki, 2001; Rak, 1999).

DasyLab belongs to the first category. It offers facilities for connecting function blocks to represent the data flow. In this way, a measuring environment is created, which can be used both for simulations and for real measurements. Simulations, in turn, may improve measurements as well as data processing without access to the object under test. A measuring system constructed in this way can be used for real measurements when a measuring card is connected with the computer and data are collected from such an object (Ptak & Prauzner, 2013). Individual icons in the programme, the settings and parameters of which can be adjusted at any time, represent particular function blocks (Ptak & Prauzner, 2010). The blocks representing single measuring functions can be connected in a number of configurations, which can be modified and expanded as needed. Data obtained in real or simulated measurements can be saved in files so that they can be used for mathematical or statistical analyses at a later time (Ptak & Borowik, 2012). Having been processed, the measuring data can also be

analysed in a number of ways and the results obtained are available for further processing by means of special software dedicated to data analysis (Ptak & Prauzner, 2014). Additionally, they can be used for development and expansion of the measuring system.

The programme offered by National Instruments Multisim Education is an example of software from the other category. It can be used for constructing many complicated electronic and digital measuring and test systems. They consist of both real electronic components as well as models of ideal components which could be used in the designed measuring system. Each type together with corresponding flow paths is marked with a different colour, so that it is possible to use either real elements only, or virtual elements with ideal parameters only, or both at the same time. Operation of a complete measuring system can be analysed by studying output signals and operation of a simulated system. The software package includes real measuring instruments and a representation of the front panel with control systems, which look and operate in the same way as real ones.

As evident, both DasyLab and Multisim software packages can play an important role in the process of designing a research project, in measurements carried out as part of such a project, as well as in the simulation and modelling of real digital and electronic systems (Ptak, 2015). The two packages can complement each other. Multisim can be used for designing electronic systems and for analysing data from measuring sensors, used for data acquisition and preliminary processing. The operation of such systems can be tested at the design stage by simulating and modelling their operation under real measuring conditions (Ptak, 2016). DasyLab, in turn, can be used for automatizing the measuring process by eliminating the need to operate the system by a user. Besides, it can be applied as a programme supporting data acquisition from measuring systems and for subsequent processing of that data. Applying both software packages at once offers a possibility of designing an electronic system for preliminary data processing by means of Multisim and for their further processing by means of DasyLab, with the whole research and testing process being fully automatic (Ptak & Borowik, 2014). Thanks to the fact that the system can operate both under simulated and real conditions (Ptak & Borowik 2015), it is possible to design and test it in a laboratory and then to expand and adapt it to real measuring and research conditions (Klajny et al., 2007; Migo & Noga, 2015).

Applications of the Multisim and DasyLab packages

Electronic filters are widely applied in various research projects. The most typical construction includes an operational amplifier employed in various

systems, typically with a band-pass (low-, high- or medium-pass) filter. Fig. 1 presents a diagram of high-pass filter based on an op-amp type TL072A, which has been designed by means of Multisim. Two modules are added to the system: the module of functional signal generator and the module of oscilloscope for displaying an output signal.

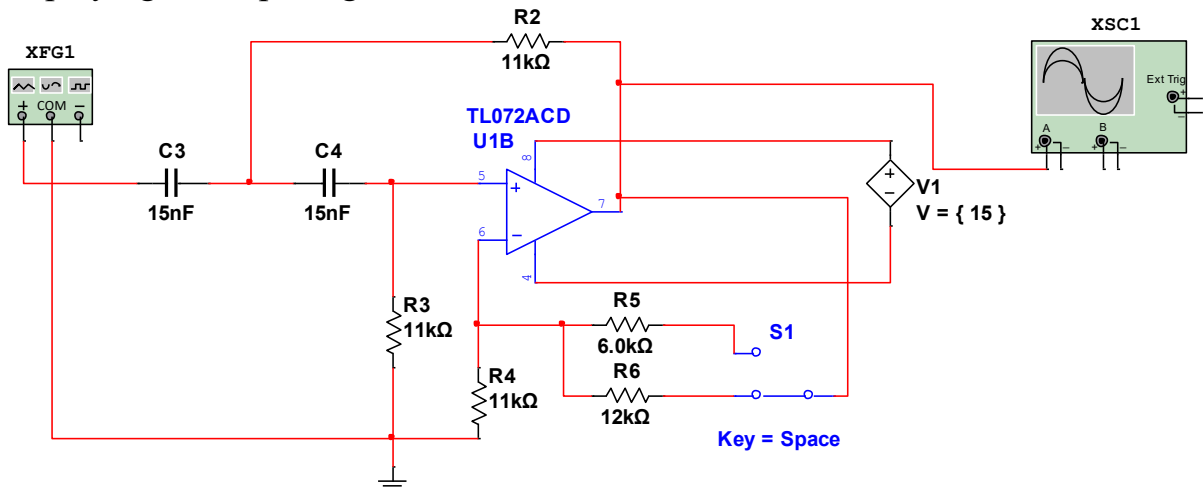


Fig.1 Diagram of a high-pass filter system constructed by means of Multisim

Fig. 2 presents a working simulation of the high-pass filter system with an input signal curve displayed on the oscilloscope and with the control elements of the function generator.

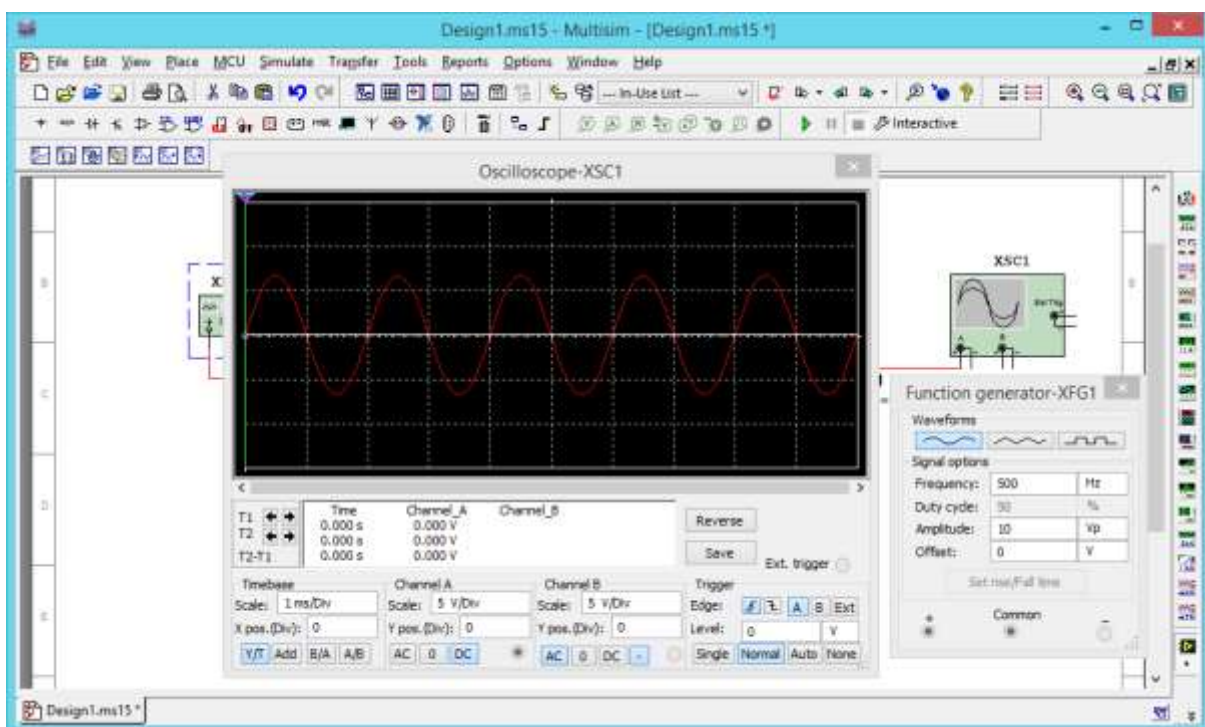


Fig.2 Simulation of the high-pass filter system, the input signal curve and the control elements of the function generator

All the components of the filter, such as resistances and capacities, can be modified at the stage of designing and when the simulation programme is running. It is also possible to modify the parameters of the function generator powering the high-pass filter system. A signal simulated by the generator is variable in time and is modified by the electronic filter system. When the generator is replaced by signals received by a measuring card, the system can be applied for filtering real data obtained from objects under test. In this way, the programme Multisim can be utilised for constructing the filter system, starting from a design, through simulating its operation, to its practical applications.

The DasyLab package has been used for designing a measuring system for examining parameters of signals varying in time. Such signals are often utilised in inductive sensors, which can be applied for testing the thickness of protective coatings or other material parameters in power, automotive or machine industry. The system constructed by means of the programme DasyLab is used for data acquisition from measuring sensors and for the further processing of the data to obtain characteristic parameters of the object under test. In order to simulate signals from measuring sensors, function generators with adjustable operating parameters were used. Fig. 3 presents a measuring system constructed by means of DasyLab. The icons correspond to modules performing specific functions in the simulation.

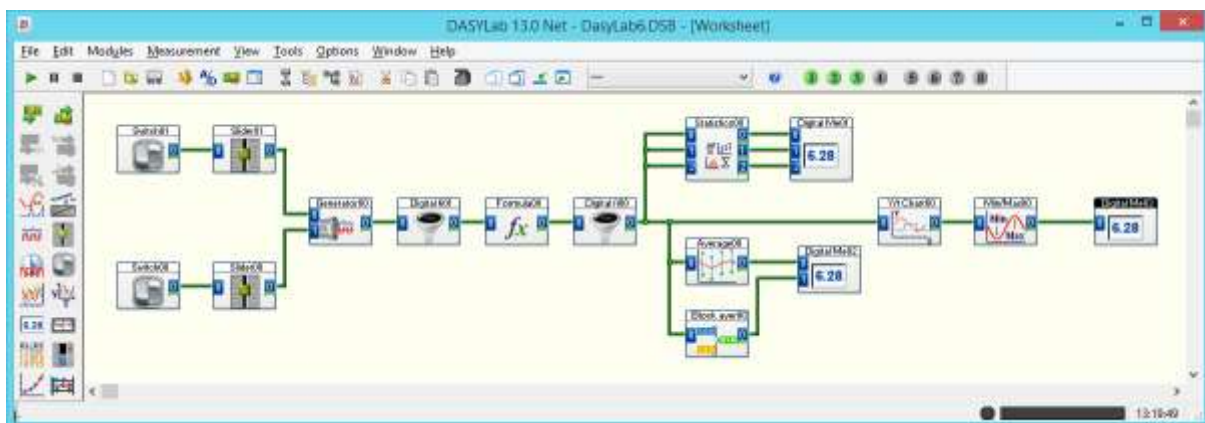


Fig.3 Diagram of a measuring system constructed in DasyLab

The modules represent the system operation. Starting from the left-hand side with measuring signal simulation together with control elements, then signal filtering, amplification, averaging, performing statistical operations on the package of data and ultimately representing the results graphically, so that the maximal and average values of a signal are shown.

Fig. 4 presents a running simulation of the DasyLab-based measuring system. Apart from the block diagram of the system, there are control elements,

digital displays showing the current results of running operations and a virtual oscilloscope displaying the measuring signal after being processed by the consecutive functional blocks.

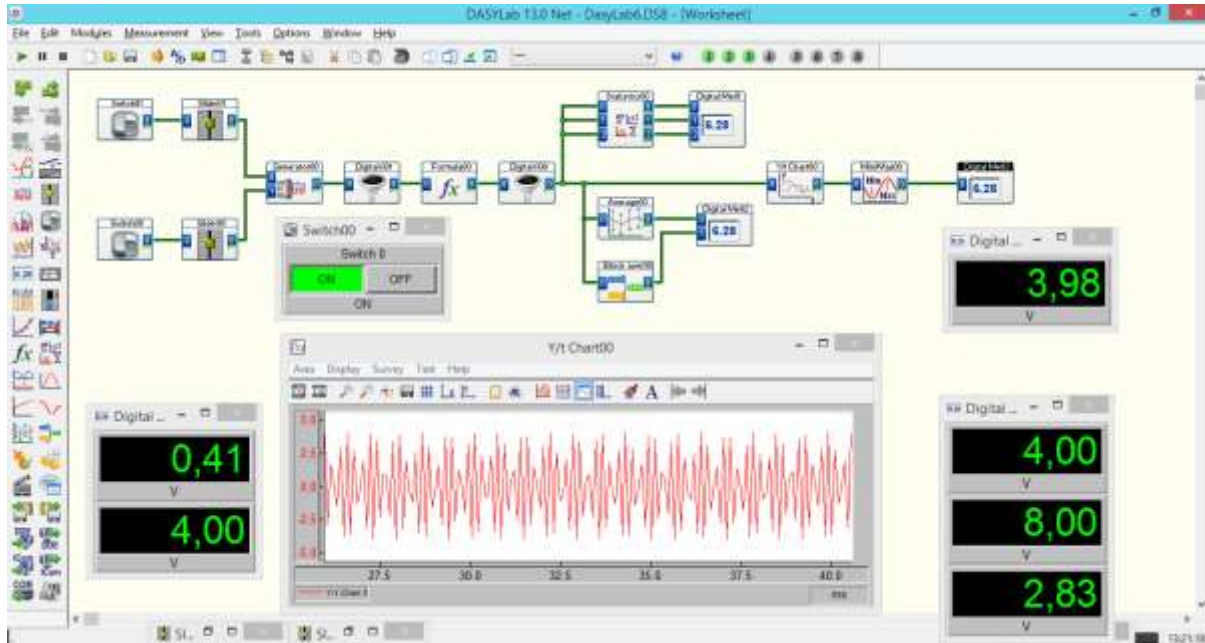


Fig.4 A running simulation of the DasyLab-based measuring system

Fig. 5 illustrates an expanded version of the diagram presented in Fig. 2, with an additional module of averaging the measuring signal on the basis of a data block of a certain length. Fig. 6 presents operation of this system simulated in the programme DasyLab.

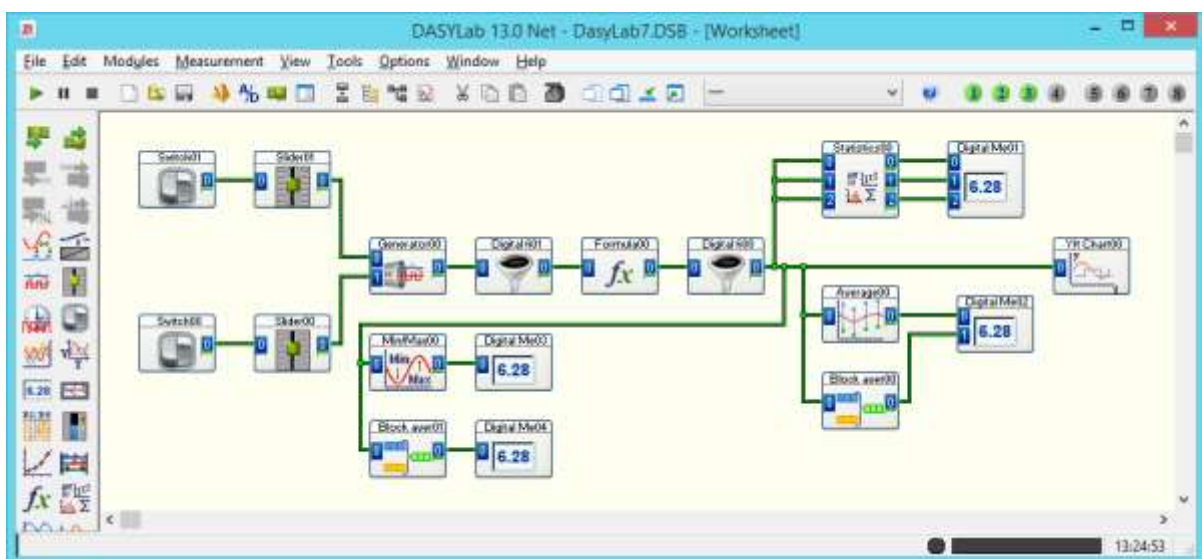


Fig.5 A modified measuring system constructed by means of DasyLab

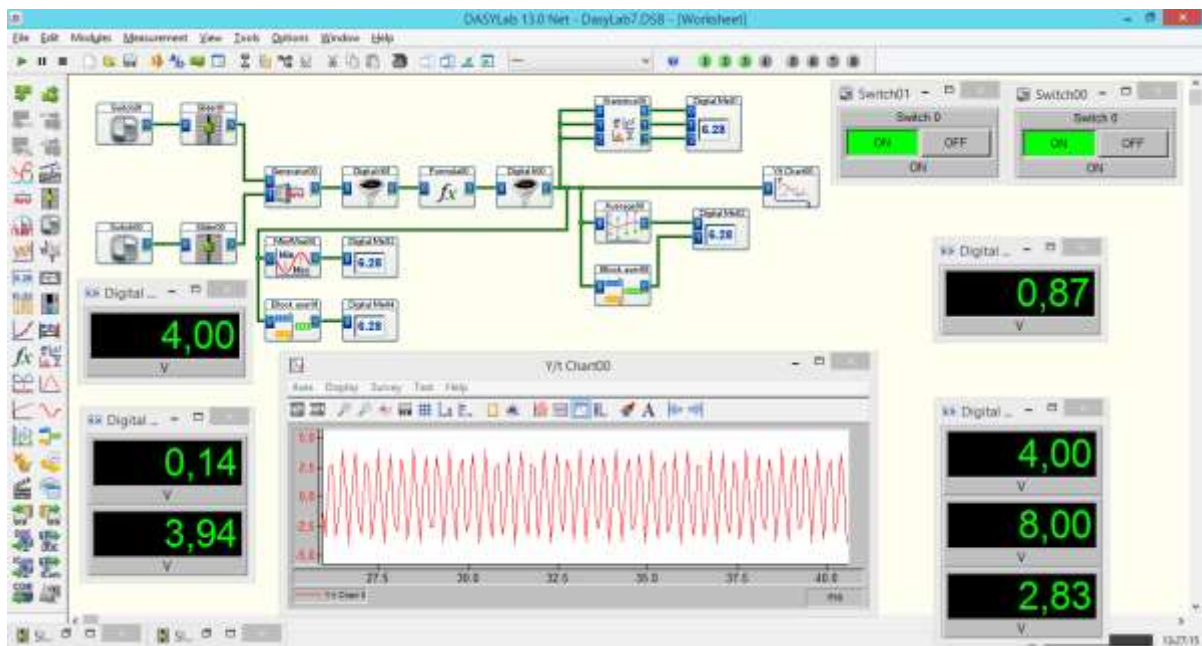


Fig.6 The modified measuring system operation simulated by means of DasyLab

Fig. 7 presents simulated operation of another expanded version of the measuring system, with a module of measuring data presentation in the form of a data matrix and with a block of saving the measuring data in a file. Measuring data saved in a file can be further processed by means of programmes dedicated especially to the analysis of research data, or they can be used as a starting point for further investigations.

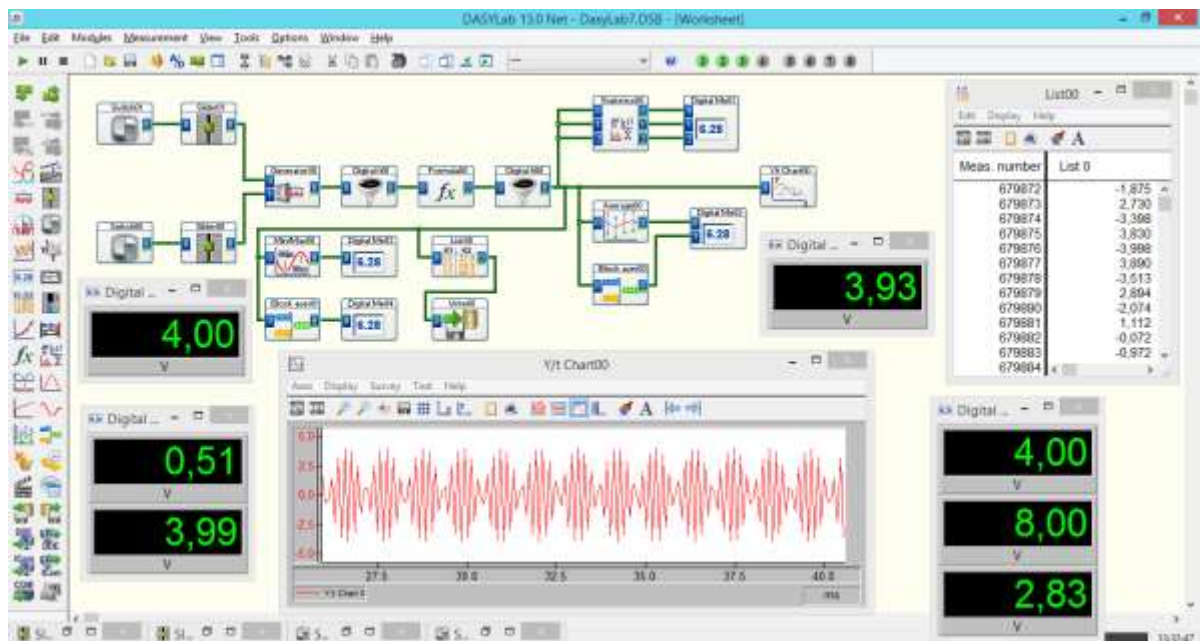


Fig.7 The expanded measuring system during simulated operation in the DasyLab environment

The subsequent screens present further expansion of the measuring system. This time a FFT module has been added for performing a frequency analysis of the measuring signal consisting of a number of component frequencies. The components of such a signal constitute a percentage share in the total power of a complex signal and their by analysing them by means of the function block FFT it is possible to assess the values of the components of the measuring signal received from an object under test. Fig. 8 presents a diagram of the function blocks of the system, and Fig. 9 shows operation of the system simulated in the DasyLab environment.

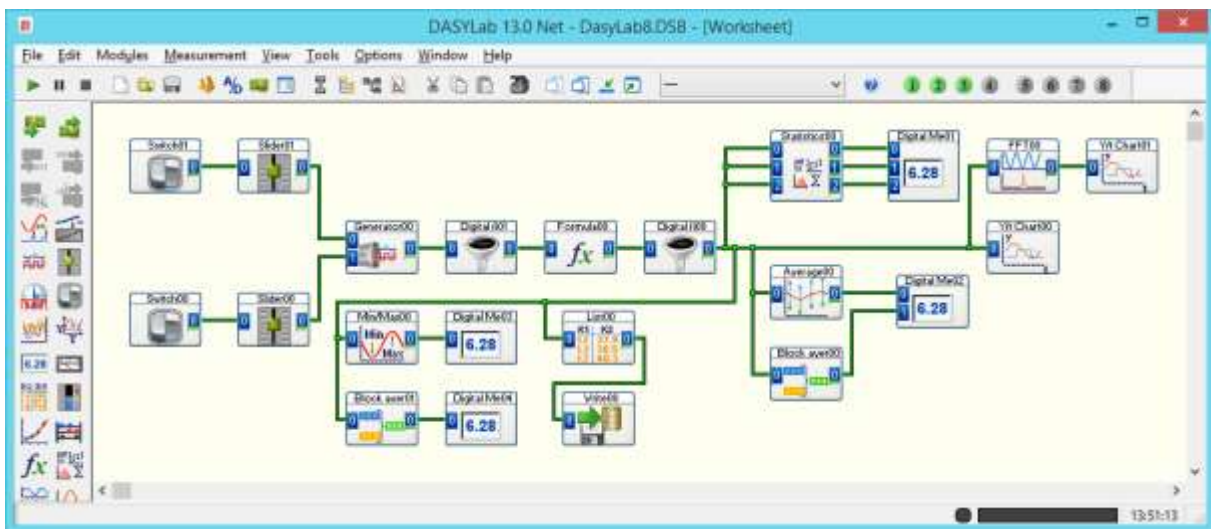


Fig.8 Another expanded version of the measuring system constructed by means of DasyLab

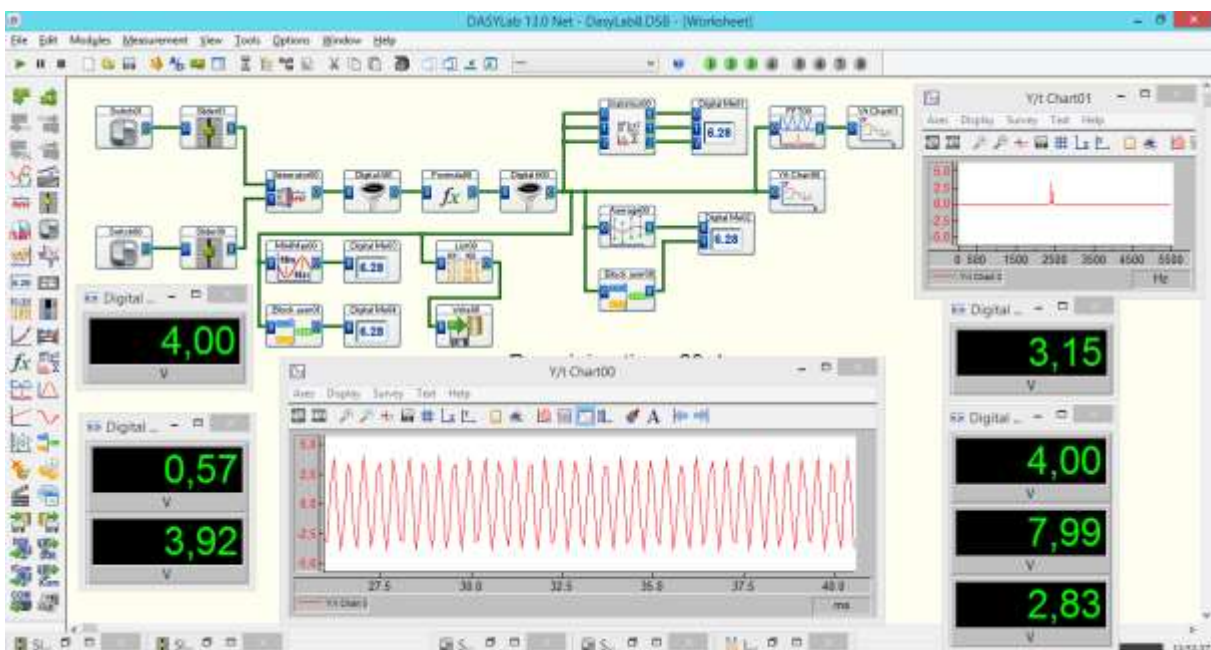


Fig.9 The final version of the measuring system operating in the DasyLab

The figures present selected stages of designing and simulation of the measuring system constructed in the DasyLab environment. During the process of designing the system it is possible to introduce modifications and to test how they impact its operation. Modifications can involve changes in selected connections between the function blocks or adding new functions to expand the system's scope of applications. The parameters of individual function blocks can be modified as well, so that they optimally meet the user's requirements.

Modelling the investigation process or designing measuring systems is an indispensable part of teaching of technological subjects and also a part of research projects (Olesiak, 2013; Jakubiec, 2016). Simulations are often applied as preliminary research methods, which are subsequently verified by real measurements of an object under study (Prazner, 2014; Prazner, 2015; Zloto et al., 2012). Simulations can also be applied for verifying the effectiveness of modelling used as a teaching method, as mentioned above (Prazner, 2012; Prazner, 2016). Simulations can be used as an independent method, when there is no access to measuring equipment or an object under test, or they can be treated as supplementary with respect to the classical method based on empirical testing (Depesova et al., 2008; Noga, 2009; Noga et al., 2014).

Concluding remarks

- The design of the measuring system can be modified by students as their individual assignment and as preparation for the class (Prazner, 2015). This task does not require a laboratory; it can be performed using any PC with Multisim- or DasyLab – type software.
- The measuring system can be easily tested virtually by carrying out a simulation. Then, should there be such a need, it can be adapted to the requirements of empirical measurements.
- Software packages, such as Multisim and DasyLab, are very useful in designing a measuring system using only a computer, if for some reason, e.g. high cost or equipment availability, it is not possible to do so in the real research or didactic laboratory conditions.
- Modifications of the measuring system can be simulated without altering the setup of the research equipment, which makes it possible to test the results of such modifications without risking a damage of the equipment.

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INFORMATION COMMUNICATION TECHNOLOGY FOR PROFESSIONAL DEVELOPMENT OF ADULT EDUCATION STAFF MANAGEMENT: CHALLENGES AND PROSPECTS IN THE SILESIA REGION

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Abstract. *This research focuses on the professional development of Adult Education Staff through the implementation of Information and Communication Technology skills. We present the data from a desk and field research carried out in the Silesia Region - Poland, on a sample formed of Adult educators working in different Non - formal Education Institutions. The research tool used in our paper is an online questionnaire developed withing the ERASMUS+ project “Upskillead – 2016-1-SI01-KA204-021588” KA2 - Strategic Partnership in the field of Adult Education. The final research objective is to find solutions useful to develop digital competence of adult people through in-house training's, seminars and informal learning applications. Moreover, this paper illustrates benefits, limitations, challenges in using digital resources and tools in adult education.*

Keywords: *Adult education; Cooperation for innovation; Erasmus+; Information and Communication Technology; Strategic Partnerships.*

Introduction

Information and communication technologies [ICT] uses a combination of devices and communication technologies. ICT include microelectronic and data transmission as well as fax machines, mobile phones, computers, cable television, information networks, video-Tex, software and online databases. Today's technological progress forces the society to becoming a knowledge-based society. Related to this fact we are confronted to the need of continuing necessity to acquire knowledge, science, technology and information.

The target group of “Upskillead - Upskilling Adult Educators Digital Lead” project, funded by the Erasmus+ Programme, KA2 - Strategic Partnership in the

field of Adult Education, is Adult Educators involved in adult learning who will upgrade their digital skills and use of technology, whereas the indirect target group is adult learners, who will benefit from digitally literate teachers through the provision of high quality adult learning (UPSKILLED, 2016). Based on the above the project is in line with the Erasmus+ priorities for:-extending and developing educators' competences, particularly in the effective use of IT in adult learning, for better outreach and improved learning outcomes.

The first output is to benchmark research on Adult Learning: Mapping of Adult Learning provision and policies, adult learners' and adult educators' digital needs and requirements, professional development programmes for AE, digital needs of the labour market to be acquired by adult learners.

Adult educators are aware that one ought to learn throughout their entire life, gaining daily experience that will impact in their future activities. To prevent an aging society, to prevent them from social exclusion, governments propose a number of programs and solutions that allow continuous education in adult generations.

Some examples of this action are showed in the table below:

Tab.1 Adult education programs

Action	Objective	Description
Solidarity between generations	to increase the activity of people aged 50+ .	It is a package of governmental actions aimed at increasing the employment of elderly people in Poland.
Strategy for Europe 2020	to develop of all kinds of Education System and activation.	Among the 5 goals proposed, one of them deals with the possibility of lifelong learning, regardless of the age.
Governmental Programme for Active Aging	to create favourable conditions for developing social activity of older people to maintain them in good psycho-physical condition, with potentials, qualifications and ready to contribute with their experience.	Among the priorities about education we can find: Priority I. Education of older people - includes activities aimed at developing the educational offer addressed to seniors, exploiting the potential of mutual learning and the development of innovative forms of education, including informal and non-formal, promoting the so-called. volunteer competences

Source: Based on information from „Government Program for Social Activity Ageing for 2014-2020” The Ministry of Family, Labour and Social Policy [<https://www.mpips.gov.pl/seniorzyaktywne-starzenie/rzadowy-program-asos>] (retrieved 31.01.2017)]

In Poland, the seniors' Policy Department at the Ministry of Labour and Social Policy established under Ordinance No. 68 of the President of the Council of Ministers dated 16th August 2012 is the responsible for the creation and development of activities related to seniors, improving the system of support, implementation of activities and tasks that support seniors activities, their education and activation in the society (DPS, 2016).

There are many organizations, associations, non-profit organizations, scientific circles operating in cultural centres that offer courses and training for elderly people (Budny et al., 2013). These organizations operate on the basis of their own regulations, statutes, contracts, but are not subject to the legal regulation in the field of the Education Act and Higher Education, but they have a Ministry that look after their activities and are able to control and ask for any information on their activities.

Research methodology and presentation of field research

The survey presented in this paper is the Polish partners' collection of data (qualitative and quantitative) within the Upskilling Adult Educators Digital Lead project, funded by the Erasmus+ Programme, KA2 - Strategic Partnership in the field of Adult Education. The project is been coordinated by Razvojno Izobrazevalni Center based in Novo Mesto (Slovenia) and involves 5 European partners. The electronic questionnaire, using SurveyMonkey, was passed to 55 teachers of Adult non-formal education Institutions in the Silesia region in Poland. The research was conducted in January 2017 and involved 34 women and 21 men. The age range within 20 to 64 years old.

Descriptive statistics were used for data analysis (descriptive statistics) and quantitative techniques (Little, 2013). To verify the hypothesis, that two qualitative characteristics of the population are independent the test χ^2 was used, comparing the frequency of observed frequencies with the expected.

Where:

O_i = the number of observations of type i

E_i = the expected number of observations of type i

Also the Mann-Whitney U test which is a non-parametric alternative to the t-test for independent samples:

Where:

R_1 means the sum of ranks allocated to the values of the first attempts

R_2 means the sum of the values of ranks awarded second attempt

n is the total number of observations ($n = n_1 + n_2$)

To the question "How long ago was your last training /education activity to which your employer appointed you?" Almost 50 % has determined that this was no more than a month earlier. Another 25 % of respondents chose the

option that approximately 3 months ago and an additional 11 % that it was about a year ago. Arises from the result that 84 % of staff was trained in the last year. A very good result. This can be explained, among others, that even school principals have special funds for training teachers

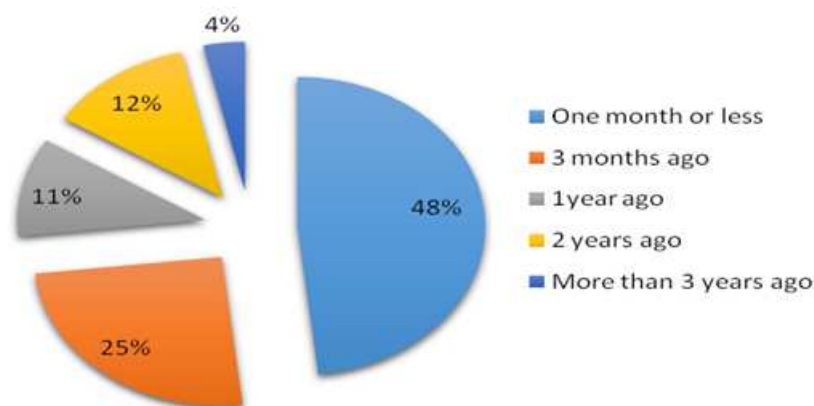


Figure 1 Participation in a training activity

This thesis is confirmed in the next question: „Name your reasons for your lack of knowledge regarding your job position” (see figure 2). Only 4 percent of respondents marked as the biggest obstacle the "limited financial resources of the company". What is alarming is that 15 % of respondents consider that there is no need for further training. In times that it is dynamically changing and every person should be updated [continues learning].

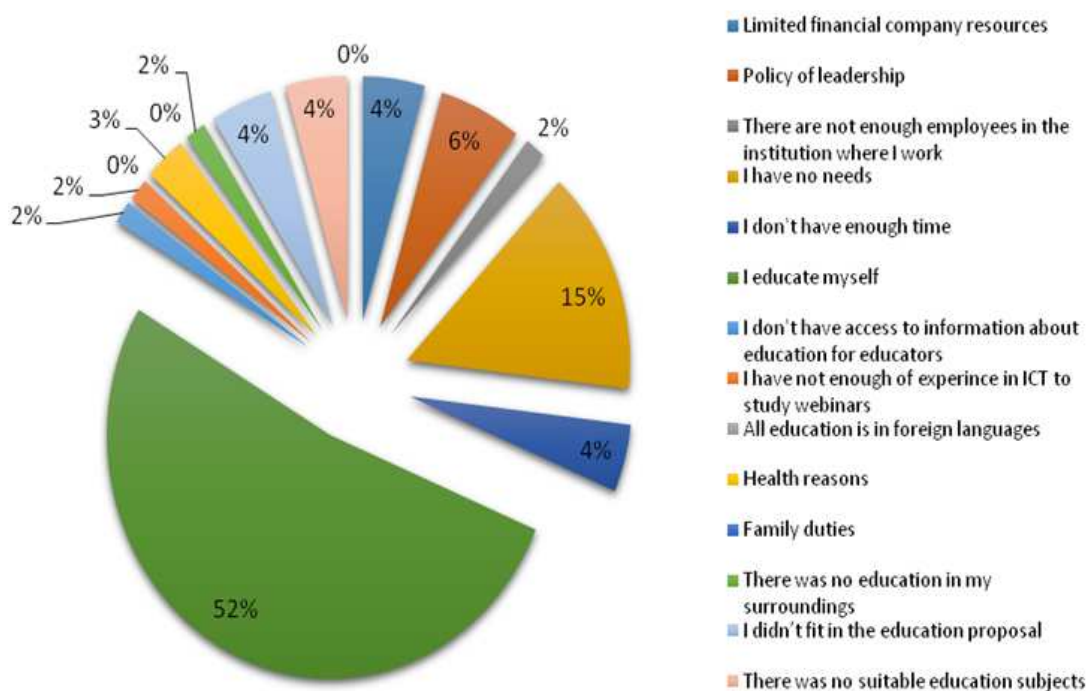


Figure 2 Lack of knowledge to perform a job

It is surprising statement, that more than half of respondents (52 %) to the above question that they educate themselves. This would suggest that although the training, there is not enough knowledge on the specific area they should work. The reason for this lack of knowledge can be because there was not adequately tailored educational tools to be used by trained teachers.

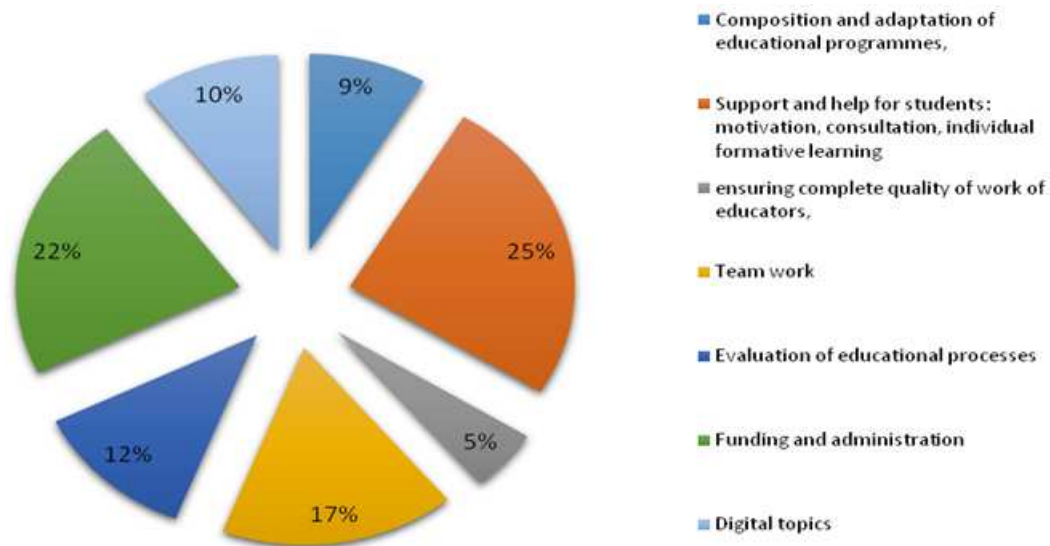


Figure 3 Lack of knowledge to perform a job

Moving on to the questions related to the issues of ICT can be interesting to point out that employees involved in adult education feel not very comfortable. In the responses to the question „At which tasks and competences at work do you feel weak, and you think that you need to be educated on most in order to be successful” there is not definitely a factor. However, most people (25 %) believe that their biggest problem is support and assistance for students, such as motivation and consultation. Can therefore be specify that the so-called. soft skills as even the ability of verbal and nonverbal communication, empathy, which are defined as significant in leading the training groups to success are still needed to develop them. On the other hand, 22 % of respondents think that their biggest problem is the possibility to rise founding for preparing and providing courses to seniors. The problem as the third in order of choice, and that 17 % of respondents chose once again lack of soft skills. Teamwork so important in achieving success should be widely developed (Czapiński, 2015).

In another question, respondents were asked to self-determination on their knowledge related to the use of electronic equipment on a scale of 1 to 7

The chart below has been shown response rate of 6 or 7 or people who have defined their competence as high.

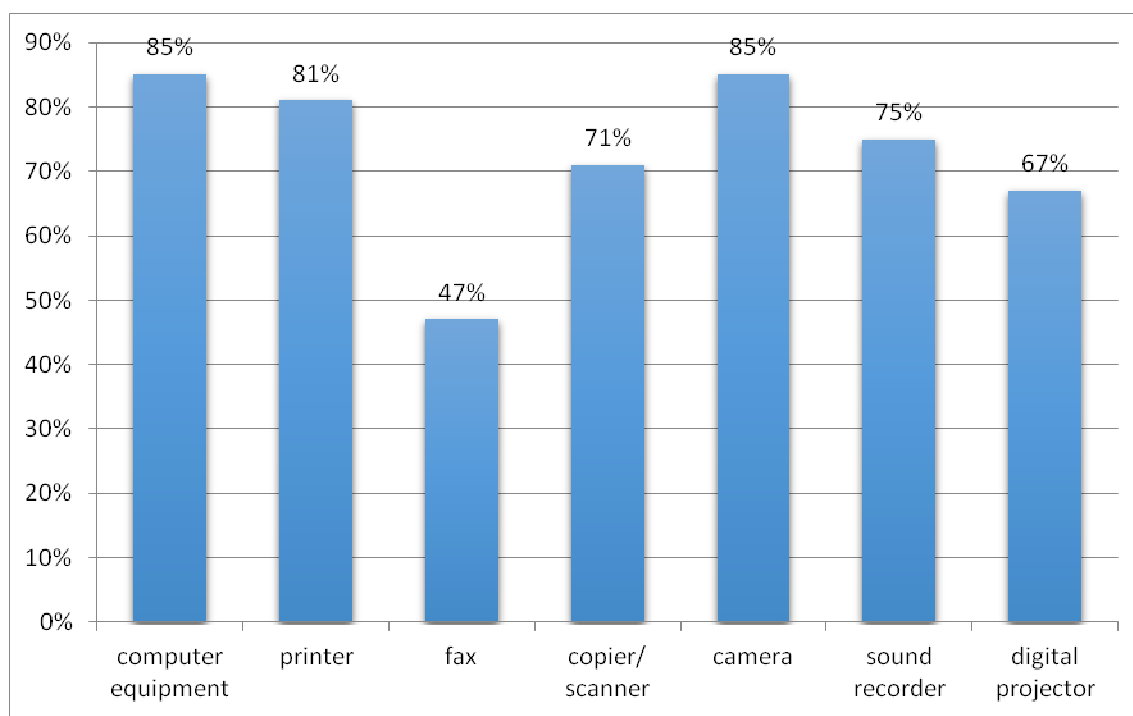


Figure 4 Self-assessment of digital competences

The responses show that employees of Adult education can very well handle the various types of electronic equipment used in education.

It should not be surprising that teachers feel very good to use a computer (85 %), cameras (85 %), printers (81 %). In the end, this is the equipment used by them during their lessons. Also, the fact that less than half (47 %) of teachers can handle the fax is not surprising. This is the kind of equipment "out of date".

Deeper analysis, however, brings interesting thesis. General findings may suggest that women above assess their technical competence of men. This is surprising when confronted with opinions that technical knowledge is greater extent reserved for men. The biggest differences in this section are reflected the self-assessment of knowledge about the sound recorder (χ^2 9,24886, $p=,009809$). 88 % of women and just over 52 % of men rate their skills of highly.

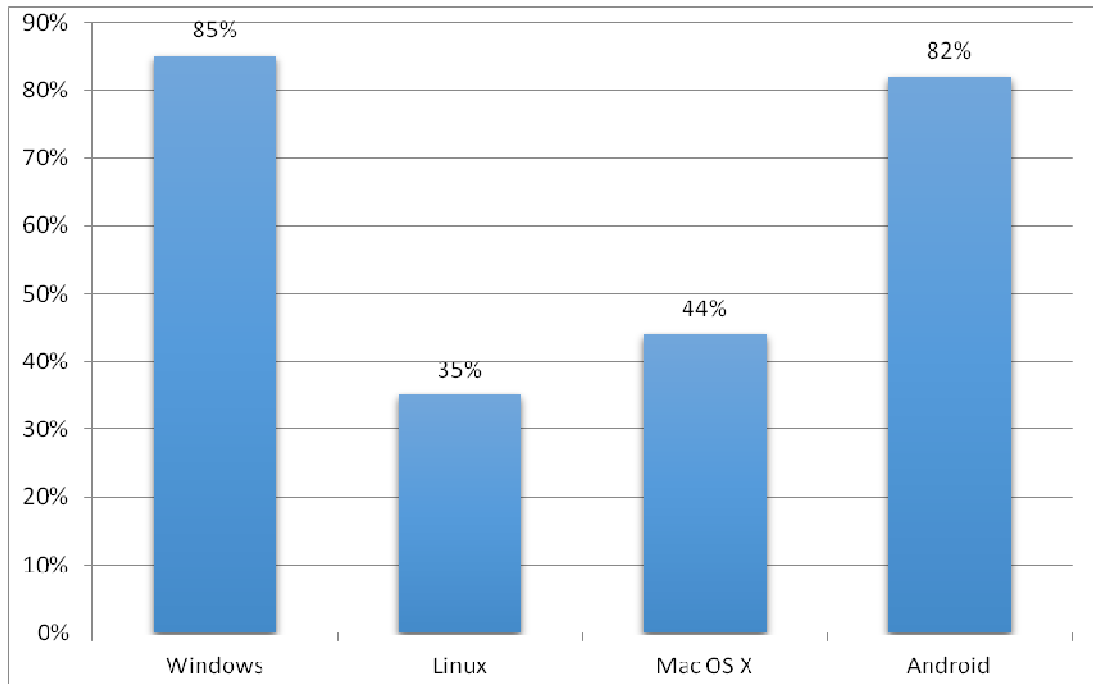


Figure 5 Use of operating systems

Self-assessment using a variety of operating systems for teachers is not surprising. Windows as the operating system installed on the vast majority of PCs and Android as the main system used in mobile phones is widely known in the teaching community. Something to point out is that teachers do not use much Linux even though it is as a free alternative of operating systems.

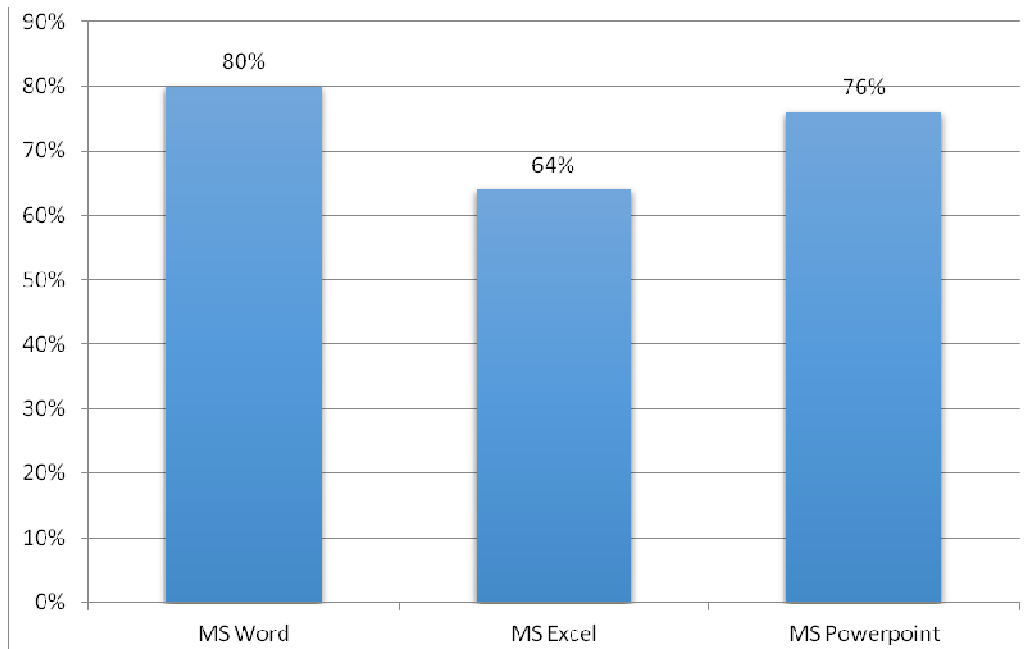


Figure 6 Use of programmes

Also competence in the most popular office programs do not raise surprise. 80 % of respondents defines its competence as high in the case of a text editor which is MS Word. A little less see them self as an "expert" in preparation for a presentation in PowerPoint (76 %), but only a little less than two-thirds of educators feel very good in working with a spreadsheet which is MS Excel.

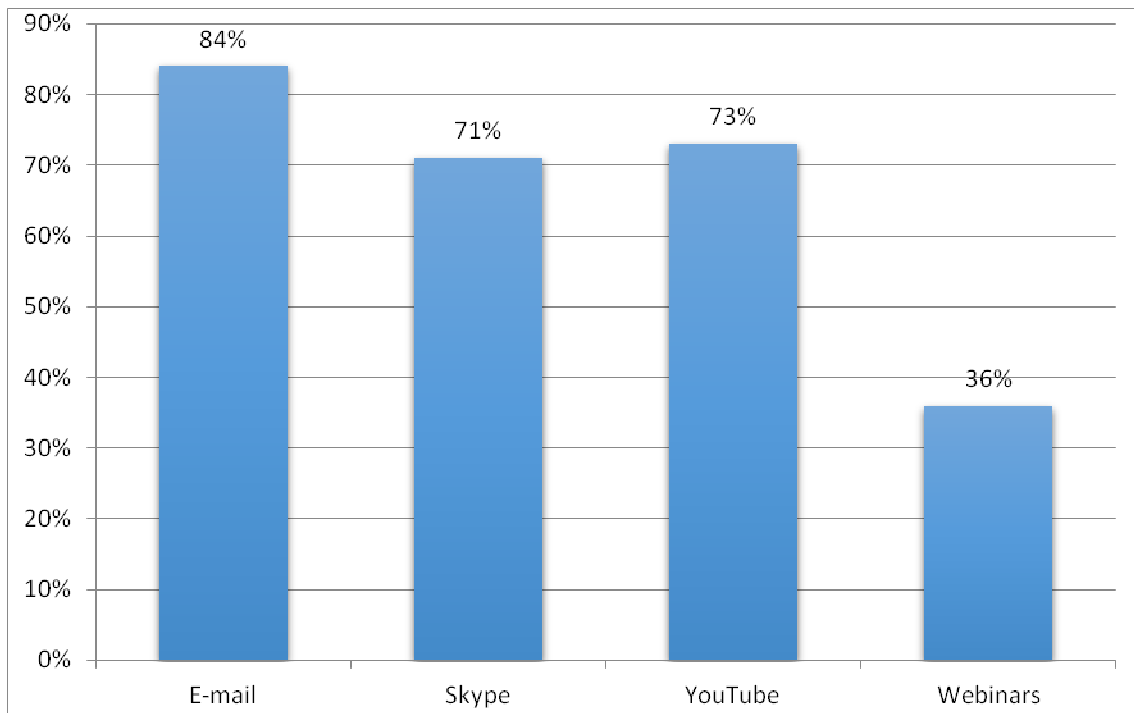


Figure 7 **Internet applications**

Another issue is dealing with web applications. E-mail in this regard is very well known by 84 % of respondents. The tool is in a very effective way supplanted nowadays traditional mail for obvious reasons. Normal user irritates spam in this tool, however, the advantages of effectively "overshadow" the disadvantage. Skype and YouTube as another contemporary applications for communication and presentation are also highly evaluated the same - at the level - 71 – 73 %. What should certainly be highlighted in the course of self-improvement is the ability to use webinars or technology to create a presentation or even a conference on-line. Only slightly more than one-third (36 %) determines its competence in this area as very good.

The last questions cover issues related to social networking.

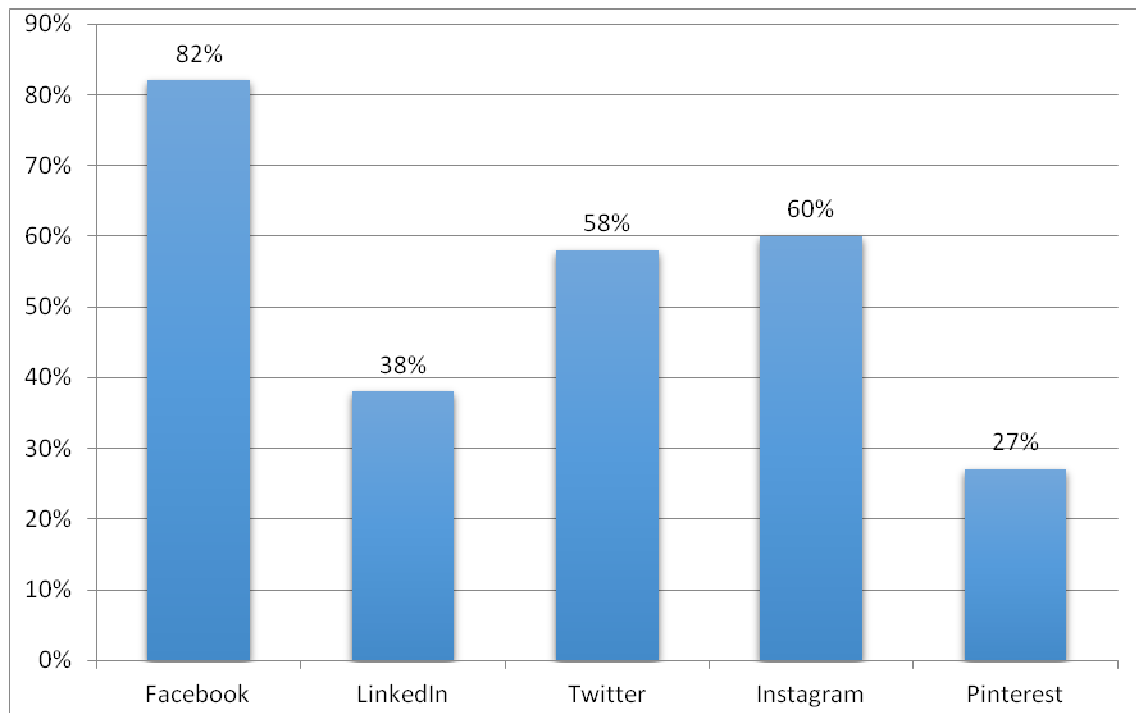


Figure 8 **Social networks**

The answers confirm today's dominance of the portal which is Facebook. 82 % of respondents identified their knowledge at 6 or 7 in a seven scale on the above subject. Pretty many teachers also recognizes Instagram or web-pages on which shows their photos or short videos.

Conclusion

The research presents some important outputs necessary for the development and implementation of the second face of the project Upskilled, that is the design of the Open Badges Digital Competence Code for Adult Education. The consortium will design and analyze the Digital Code with inbuilt benchmarks and indicators to define and classify the digital skills necessary for Adult Educators in order to better support and empower adult learning provision especially the ones that are not well served. An on-line survey and consultation with stakeholders will be organized to support the proposed Framework.

What should certainly be highlighted in the research is that our target group has some limitations on e-learning activities and needs of self-improvement on the use of webinars or technology to create a presentation online or even a virtual conference.

Even though the Education System is present at every stage of the Adult Education and has an important impact on the learners, teaching - learning methodologies should be updated. The right to education is guaranteed to each

person by all kinds of regulations from the Polish Constitution, but activities implemented by governmental and non-governmental organizations, associations and other formal or informal groups must be developed taking into account the target group. It is important also to underline that the Government continuously improve the access and quality of the education for elderly people, who, despite the fact that they do not have a suitable physical condition, still remain efficient mentally and looking forward to gain knowledge and be socially active, follow trends and modern forms of communication.

The research is part of the needs analysis of the target group of the project Upskilled that aims to create an interactive platform which will provide adult learners with the skills in e-learning, e-connectivity and e-communication.

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ДИСТАНЦИОННОЕ ОБУЧЕНИЕ МУЗЫКАЛЬНЫМ ДИСЦИПЛИНАМ В ВЫСШЕЙ ШКОЛЕ: ПРОБЛЕМЫ И ПЕРСПЕКТИВЫ

Distance Learning for Music Disciplines in Higher Education: Challenges and Prospects

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Abstract. *As a worldwide trend of the modern education distance learning gives the possibility to study many disciplines, nevertheless of the fact, is there a practical component in them, for example music disciplines. Among the Ukrainian universities, at the moment only at the Borys Grinchenko Kyiv University has been developing the system of distance learning using the Moodle platform, including the study of special music disciplines. Distance learning for music disciplines associated with a number of specific difficulties, which increases the requirements for the content of the training online course. Even the best and technologically perfect online course does not guarantee that the student will pass it to the end, if there is no threat to disrupt the implementation of the academic plan. Academic results of passing the online training course about modern classical music, that is already tested at Grinchenko University, gives the opportunity to distinguish the basic qualities of effective distance course for music disciplines, that focuses on students; to outline the basic problems related to its implementation into the educational process, as well as their solutions.*

Keywords: *distance learning; blended learning; flexible learning; music disciplines; effective distance learning course indicators; Moodle; integrative; focus on practice; creativity; dynamic; dialogic comprehension of music senses; modern classical music.*

Введение *Introduction*

Необходимость модернизации высшего образования в Украине и стремление высшей школы соответствовать европейским образовательным стандартам диктует использование инновационных методик, мобильных и динамичных форм обучения, к которым относится дистанционное обучение, доказавшее свою эффективность в процессе подготовки

специалистов из различных отраслей, в том числе гуманитариев и представителей творческих профессий.

Однако в силу спецификации музыки как наиболее абстрактного из искусств, а музыкальных дисциплин как дисциплин преимущественно практической направленности, возможность включения или полного перехода студентов-музыкантов на дистанционное обучение в высшей школе представляется проблемным и неоднозначным. Цель данной статьи – на основе анализа ключевых принципов и проблем дистанционного обучения обосновать перспективность использования технологий дистанционного обучения в процессе профессиональной подготовки студентов-музыкантов высших учебных заведений. Материалом для исследования послужил авторский электронный учебный курс о современной академической музыке, созданный для студентов-магистрантов Института искусств Киевского университета имени Бориса Гринченко. Методологическую основу исследования составили теоретический анализ и метод обобщения, а также эмпирические методы исследования (анкетные опросы, рейтинговый анализ, статистический метод и метод моделирования). В результате исследования нами предложена теоретическая модель эффективного дистанционного курса музыкальной дисциплины, который удовлетворяет сразу нескольким параметрам: курс ориентирован на практическую деятельность студента, стимулирует индивидуальный творческий потенциал обучающегося и открывает ему путь деятельного постижения музыкального искусства как единственно возможной формы его осмысления и диалогического взаимодействия с ним.

Дистанционное обучение: «за» и «против» ***Distance learning: pro and contra***

Вопрос о том «быть или не быть» дистанционному обучению сегодня уже не кажется дискуссионным. Все больше людей во всем мире стремятся получить не только дополнительное, но и основное образование, в том числе высшее специальное, онлайн. С каждым годом растет число образовательных центров и сетевых платформ, предлагающих самые разные учебные курсы, все большее количество университетов внедряет в свою практику отдельные элементы дистанционного обучения либо полностью переориентирует свою деятельность на концептуальную модель дистанционного образования, формируются центры мониторинга и контроля качества предоставляемых дистанционно образовательных услуг. Все чаще высказывается мысль, что дистанционное обучение как «образование будущего» способно стать альтернативой академическому,

окончательно сменив образовательную парадигму современного информационного общества (Смульсон, 2012).

Такие качества дистанционного обучения, как *мобильность, доступность и демократичность* – когда все, что нужно для получения специальных знаний либо повышения профессиональной квалификации в любое удобное для студента время это персональный компьютер и доступ к сети Интернет, – наилучшим образом отвечают потребностям современного человека, успешная самореализация которого зависит от его умения учиться и самообразовываться в течение всей жизни – а значит, его умения гибко мыслить, быстро реагируя на динамичные изменения в глобализованном социуме, и в случае необходимости менять не только место жительства, но и профессию. Эти преимущества дистанционного обучения довольно часто перекрывают такие его негативные стороны, как отсутствие непосредственного, «живого» общения педагога и студента, то есть в определенной мере его монологичность, которая нередко провоцирует пассивность обучающегося; недостаточность практических занятий и отсутствие должного контроля, что особенно важно в случае невысокого уровня самоорганизации и мотивированности студента, получающего образование дистанционно.

Да, благодаря развитым интернет-технологиям сегодня можно без отрыва от рабочего места и без нарушения привычного жизненного ритма не только расширить свои представления о различных областях гуманитарного и естественнонаучного знания, но даже выучить иностранный язык и обучиться основам игры на музыкальном инструменте. Однако ситуация в корне меняется, когда речь заходит об узкой профессиональной специализации, ориентированной в первую очередь на практическую деятельность. Совершенно очевидно, что подготовить высококлассного кардиохирурга – выпускника медицинского университета исключительно средствами дистанционного обучения (даже при наличии различного рода виртуальных тренажеров, имитирующих условия, близкие к реальным условиям будущей профессиональной деятельности) невозможно – вопрос практического навыка, связанного, в том числе, с тренированной мышечной памятью, здесь оказывается ключевым.

Дистанционное обучение специальным музыкальным дисциплинам, которые являются нормативными для профессиональной подготовки музыкантов-исполнителей и учителей музыки, – такого же рода проблемная зона в украинской системе высшего образования. Активное внедрение в образовательный процесс дистанционных технологий провоцирует целый ряд вопросов и оправданных сомнений, причина которых – практическая ориентированность специальных музыкальных дисциплин. Можно ли научить студента профессионально играть на виолончели инструктивными

наставлениями в процессе виртуального общения в сети или видеодемонстрациями в Skype? Можно ли развить музыкальный слух средствами онлайн-курсов, если при этом теряется индивидуальный подход к обучению? Насколько реально научить студента понимать и самостоятельно выявлять композиционную логику того или иного музыкального текста, диалогически постигать и интерпретировать невербальные смыслы музыкальных произведений в процессе прохождения им дистанционного курса анализа музыкальных форм или истории музыкальных стилей, содержание которых ограничивается традиционными для такого рода образовательных ресурсов информационными либо аналитическими выкладками? Иными словами, можно ли сформировать профессионального музыканта в академической среде исключительно средствами дистанционного образования?

Смешанное и дистанционное обучение музыкальным дисциплинам *Blended and distance learning for music disciplines*

Постановка вопроса может показаться спекулятивной, а авторы статьи – противниками самой концепции дистанционного обучения. Однако все ровно наоборот, и главный исследовательский вопрос в данном случае – как, какими средствами и путями возможно осуществление концепции дистанционного обучения специальным музыкальным дисциплинам в высшей школе? Для начала необходимо определиться с границами понятий, поскольку теоретический уровень проработанности проблемы дистанционного обучения в отечественной науке пока остается низким. Об этом свидетельствует, в частности, отсутствие единых требований к содержанию и чрезмерная гибкость критериев оценивания электронных образовательных курсов, равно как и к уровню предварительной подготовки студента, которому предлагается такой курс; возникают вопросы и с авторским правом разработчиков дистанционного курса, а также с сертификацией готового продукта, процедура которой подвержена частым изменениям.

Дистанционное обучение (distance learning, в русскоязычных версиях также – онлайн-обучение, дистанционная технология обучения, технологически-базируемое обучение) – это обучение, основанное на использовании информационно-коммуникационных технологий, в первую очередь таких, как Интернет (Морзе & Глазунова, 2008). Подразумевается, что студент проходит учебный курс в удобное для него время с установленным педагогом конечным сроком, получая доступ к материалам на образовательном сервере либо на электронных, реже печатных информационных носителях. Текущее оценивание и итоговая аттестация в

таким случае также осуществляется в онлайн-режиме с помощью веб-ресурсов. Иными словами, дистанционное обучение – это одна из *технологий* обучения, которая в потенциале способна стать самостоятельной системой (Евсюкова, 2011).

Чаще всего, если речь идет о высшей школе (и именно такая модель внедряется в Университете Гринченко), дистанционное обучение оказывается частью *смешанного обучения*. Модель смешанного обучения базируется на использовании пропорционально распределенных информационно-образовательных ресурсов в стационарном обучении с подключением дистанционной технологии. Таким образом, в самом общем виде смешанное обучение состоит из трех этапов: освоение теоретического материала выносится в дистанционное обучение (электронные учебные курсы), практическое же освоение материала и закрепление практических навыков происходит непосредственно на аудиторных занятиях с педагогом, и наконец – подготовка и защита индивидуального либо коллективного проекта (экзамен, зачет), формы которых также варьируются (Морзе & Глазунова, 2008).

Данная модель уже успешно интегрируется в Университете Гринченко при обучении студентов музыкальных специальностей; отметим, что Университет является одним из немногих высших заведений Киева и Украины, где целенаправленно разрабатывается система смешанного, в том числе дистанционного обучения музыкальным дисциплинам с использованием электронных учебных курсов, разработанных на платформе Moodle. Так, большая часть специальных дисциплин историко-теоретического цикла, которые содержат лекционные (теоретические) и семинарские часы, такие как история музыки, анализ музыкальных произведений, теория музыки, гармония, предполагает освоение студентами теоретического материала дистанционно. Это представляется логичным и оправданным, учитывая приоритетное направление в образовательной парадигме университета – проектная и ориентированная на практику учебная деятельность студентов. Использование дистанционных технологий в данном случае не только экономит такой ценный ресурс как время, но обеспечивает гибкость и мобильность образовательного процесса (*flexible learning*), который фокусируется в первую очередь на студенте.

Но как быть с музыкальными дисциплинами, которые содержат только практический компонент – например, сольное пение, сольфеджио, основной музыкальный инструмент? Наш опыт показывает, что успешное дистанционное освоение студентами практических музыкальных дисциплин, по крайней мере некоторых из них, вполне возможно при соблюдении некоторых условий, главное из которых – качество

дистанционного учебного курса, который выполнен с учетом специфики музыкального творчества.

Понятно, что творческая деятельность студента во время индивидуальных либо групповых практикумов, эмпатические и эстетические переживания, которые осуществляются только в условиях «живого» музицирования либо создания музыки, не могут быть заменены дистанционным курсом, пусть и блестяще выполненным. Однако же в случае его диалогичности и ориентированности на те формы деятельности, которые напрямую связаны с музыкальным творчеством, активным взаимодействием с учебным материалом, может стать действенной альтернативной формой освоения дисциплины.

Отметим, что тут же возникает и другая проблема: как свидетельствует статистика¹, только относительно небольшой процент из всего контингента студентов обладает высоким уровнем самоорганизации, а это значит, что даже самый интересный и инновационный курс не может быть гарантией того, что студент пройдет его, если перед ним нет угрозы срыва выполнения академического плана. Следовательно, необходимо усиливать момент контроля и предлагать такие его формы, которые не довлеют над студентом, а мотивируют его к учебной деятельности, обеспечивая тем самым успешное усвоение материала.

Эффективный дистанционный курс специальной музыкальной дисциплины: от теории к практике
Effective e-learning course for special music discipline: from theory to practice

На наш взгляд эффективный дистанционный курс, ориентированный на студента-музыканта, должен обладать такими качествами, как *интегативность, динамичность, креативность и сфокусированность на практической деятельности*. Выделить такие его параметры мы смогли на основе работы с электронным учебным курсом «Современная музыка», созданным на платформе Moodle одним из авторов данной статьи. На данный момент курс успешно прошли и показали высокий академический результат более ста (104) студентов Университета. В процессе работы над курсом была проведена серия опросов и тестов, что позволило определить, какие формы, предложенные студентам в электронном курсе, являются наиболее действенными и стимулирующими; именно они и вошли в основное тело курса.

¹ Подробнее статистику и рейтинги MOOCs (Massive Open Online Courses) см. <http://www.katyjordan.com/MOOCproject.html>

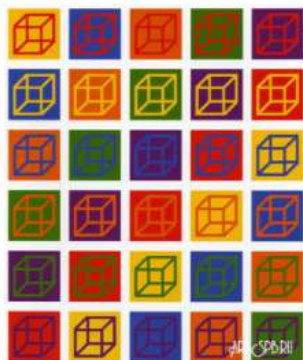
Дисциплина «Современная музыка» является логическим продолжением университетского курса истории музыки и его своеобразной тематической надстройкой. В дисциплину включаются темы, которые обычно не входят в тематический план основного курса истории музыки (американский минимализм, алеаторика, сонористика, полистилистика)². Ключевая задача дисциплины – углубление уже полученных знаний о различных новациях композиторского письма первой половины XX века, которые определили вектор творческих поисков композиторов второй половины столетия. *Интегративность* самой дисциплины проявляется в том числе в ее тесной взаимосвязи с другими дисциплинами музыкально-теоретического цикла, в первую очередь со стилевой гармонией, анализом музыкальных форм, основами музыкальной композиции. В конечном счете, это определило и *образовательную стратегию курса*, которая кратко может быть обозначена как постижение музыкального творчества через непосредственное овладение студентами важнейшими композиционными техниками XX века как инструментами создания смыслов и музыкальных артефактов в условиях нового и постоянно меняющегося культурного, социально-политического контекста современности.

Акцентировано *практическая направленность* дисциплины выдвинула перед студентами особые требования. Так, дисциплина рассчитана на студентов магистерской программы, которые имеют достаточную музыкально-теоретическую, историко-культурологическую подготовку, а также некоторый опыт научно-исследовательской и творческой работы. Практическая направленность дисциплины оказалась определенной сложностью и для создания дистанционного курса. Каким образом изложить материал, чтоб студент его воспринял, а после выполнил необходимую практическую работу? Тем более, что под практической работой, как уже было сказано, понимается не только традиционное выполнение анализа музыкальных произведений XX века, написания эссе на заданную тему или активное слушание, но в первую очередь *сочинение музыки в той или иной композиционной технике*. То есть теоретический материал должен быть освоен деятельно, а практическая работа должна быть выполнена *творчески*. А для этого необходимо дать студенту достаточное количество теоретического материала в самой разной форме.

² На изучении дисциплины отводится 36 часов, что соответствует одному кредиту ECTS. Из них 14 часов — практические занятия, тогда как 2 часа отдано на проведение модульного контроля и 18 часов оставлено для самостоятельной работы студентов. Формой контроля является дифференцированный зачёт. Оценивание осуществляется по модульно-рейтинговой системе, в основе которой лежит принцип накопления баллов, являющихся показателем уровне обретенных студентами знаний и компетентностей. Так формируется рейтинг успешности, выраженный в оценках по шкале ECTS.

Широкие возможности в этом смысле предлагает платформа Moodle³. В Moodle теоретический материал может быть изложен несколькими способами: как лекция, как видео или аудио-лекция (с использованием сторонних веб-ресурсов, например, YouTube). Для лучшего раскрытия тем в курсе были использованы все эти возможности, но доминантным остался формат лекции, где необходимый материал кратко излагается в виде текста, схем, рисунков и прочей инфографики.

Мінімалізм: передумови виникнення



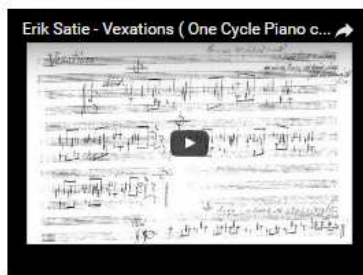
Мінімалізм — поняття, яке використовується не тільки по відношенню до музики, а й інших видів мистецтва, зокрема живопису. Вираз *minimal art* з'явився в американському художньому середовищі у 50-60-ті роки, й пов'язувався з аскетизмом у виборі засобів виразності: обмежена палітра кольорів, аж до монохромності, прості абстрактні побудови у вигляді геометричних фігур тощо.

У літературі прикладом мінімалізму може слугувати так звана конкретна поезія:

Солнце мужчина
луна женщина
солнце женщина
луна мужчина
солнце луна
мужчина женщина
ребенок.

(Ю. Гомпінгер /Eugen Gomringer/)

Музичний мінімалізм виник у середовищі американської експериментальної музики (50-60-ті роки), лідером якого був Джон Кейдж. Проте перші зразки мінімалізму можна знайти у творчості Еріка Саті, зокрема в його творі 1893 року «Непримності» («Роздратування» /«Vexations»/) для фортепіано. Саті написав цей твір у стані великого роздратування, який викликала його норвільна кохана Сюзан Валадон. Твір був невеликий, але мав одноманітним. Композитор вимагав у піаніста виконати цей твір «840 разів, а то і більше». Цей новий музичний напрямок у 1918 році Саті назвав Мебельованою музикою.



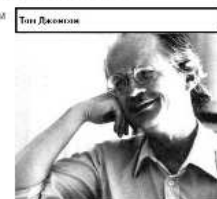
Певною мірою американський музичний мінімалізм 60-тих років став реакцією на складну хроматизовану, атональну європейську музику. Відповідно американського мінімалізму європейській музиці стало:

1. складність змінити простоту, яка виражається мінімумом засобів;
2. дисонанс — консонанс
3. хроматика — діатоніка
4. замість динамічного принципу, який пов'язаний з ідеєю поступового становлення форми, ідеєю постійного оновлення приходить статичний принцип поступового розгортання.



Як термін "мінімалізм" був уведений в обг. незалежно один від одного двома композиторами: Майклом Найманом та Томом Джонсоном.

Приклад Майкл Найман "Chasing Sheep is Best Left to Shepherds" з фільму "The Draughtsman's Contract"



Питання до розділу "Мінімалізм: передумови виникнення".

Рисунок 1. Пример оформления первой страницы и контрольный вопрос к ней по теме «Минимализм: понятие, фигуры, подходы»
Picture 1 Start page example and the control question to the topic "Minimalism: concept, figures, principles"

³ Подробнее о платформе, ее инфраструктуре, инструментах и «социальном конструктивизме» см. Семенюк, В. (2013). *Moodle і соціальний конструктивізм*. <http://escuela.ucoz.ua/Kuzbyt/Moodle.pdf>

Структура «Лекция» состоит из набора веб-страниц с блоками информации по заданной теме. Студент имеет возможность проверить себя, ответив на контрольный вопрос в конце каждой страницы. Важно, что этот вопрос является не только инструментом самопроверки, но и ключом, открывающий следующую страницу с новым информационным блоком (рис. 1).

Большим достоинством такого формата оказывается то, что помимо встроенных на платформе различных инструментов визуализации учебного материала Moodle позволяет выкладывать также аудио-примеры. Таким образом теоретический материал обретает наглядность благодаря встроенным на странице аудио-фрагментам изучаемых сочинений, принадлежащих тому или иному художественно-стилевому направлению, а сам процесс обучения оказывается значительно более динамичным.

Динамичность, креативность и ориентированность на повседневную музыкальную практику студентов определяет и формы контроля в курсе. Проверить степень усвоения материала студент может, пройдя тест, который сопровождает каждую тему дисциплины. Moodle предоставляет возможность создавать разнообразные тестовые задания как по виду, так и по сложности. Для музыкальных дисциплин наиболее действенными оказываются задания, ориентированные на *слуховой анализ музыки*, а также на умение сопоставить графическую запись партитуры с внутренними слуховыми представлениями о конкретном музыкальном сочинении. Таким способом даже в пределах теоретической части курса сохраняется ориентация на практическую учебную деятельность студента и непрерывность образовательного процесса.

Приведем несколько примеров таких тестовых заданий: два из них — слуховые, два — визуальные. Целью слуховых заданий является определение того, как студент ориентируется в пестрой палитре художественно-эстетических направлений музыки XX века, а также музыкальную реализацию той или иной техники композиции (рис. 2). Визуальные тесты направлены на выявление знания студентами нотной графики XX века (и техники, в которой она используется), а также крупнейших композиторских фигур (рис. 3).


Тестове завдання 1
Поки немає відповіді
Бал: 1,00

До якого художньо-естетичного напрямку належить цей твір?

Виберіть одну відповідь:

- 1. До експресіонізму
- 2. До музичного убранізму
- 3. До неофольклоризму
- 4. До імпресіонізму
- 5. До неокласицизму

Яку техніку використав композитор, коли писав цей твір?



Виберіть одну відповідь:

- a. Розширену тональність й модальність
- b. Додекафонію
- c. Розширену тональність
- d. Сонористику
- e. Сонористику й алеаторику
- f. Алеаторику
- g. Модальність

Рисунок 2. Пример слухового теста
Picture 2 Hearing test example

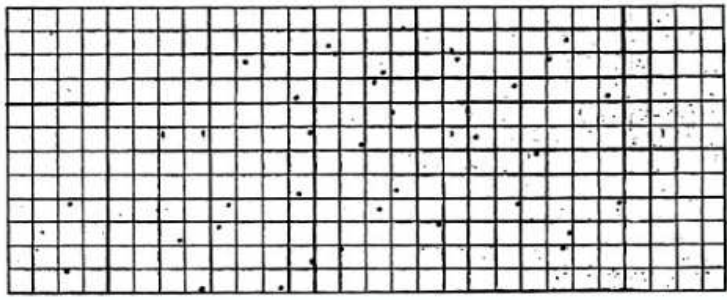
Лишь после того, как студент успешно проходит теоретическую часть курса, выполняет тестовые задания и самостоятельную работу, которая включает в себя проработку необходимой литературы по теме, он может приступать к творческой работе.

Поскольку творческим заданием в курсе является сочинение музыки с использованием принципов той или иной техники музыкальной композиции, разработанной в XX веке, возникает вопрос оценивания результатов. Для того, чтобы студенты могли продемонстрировать освоение таких композиционных техник, как додекафония, техника фазового сдвига, аддитивность, алеаторика, сонористика, на соответствующей странице курса им предлагаются на выбор, в том числе примеры исполнения задания.

Свои творческие работы, выполненные на бумаге, могут быть отсканированы и приложены к страничке с заданием (Moodle предоставляет такую опцию), их также можно записать как аудио/видео материал и также приложить к страничке, что, безусловно, стимулирует учащихся к совершенствованию их информационно-коммуникационной компетентности.

Тестове завдання 1
Поки немає відповіді
Бал: 1,00


Зразком якого типу алеаторики є твір Джона Кейджа "Музика для дзвонів" (див. нижче партитуру)?



Виберіть одну відповідь:

- a. матеріал мобільний — форма мобільна
- b. матеріал стабільний — форма мобільна
- c. матеріал мобільний — форма стабільна

Тестове завдання 1
Поки немає відповіді
Бал: 1,00



Назвіть композитора.

Відповідь:

Рисунок 3. **Пример визуального теста**
Picture 3 Visual test example

Кроме того, студентам предлагается осуществить анализ музыкальных произведений, выполненных в этих техниках, а также сыграть некоторые сочинения (например, Clapping music Стива Райха); записав свое исполнение, студент также может прикрепить файл в соответствующем разделе для оценивания педагогом.

Наконец, финальный этап прохождения курса — модульная контрольная работа, которая выполнена в виде аналогичных тестовых заданий, а также индивидуальная учебно-исследовательская работа. В

качестве последней студент должен раскрыть особенности творческого метода того или иного композитора-новатора XX века (Арнольда Шенберга, Оливье Мессиана, Пьера Булеза, Альфреда Шнитке и др.), представив небольшое эссе на указанную тему.

Таким образом, для дисциплины объемом всего в один кредит дистанционный курс, выполненный в Moodle, предлагает множество самых разнообразных форм работы, реализация которых носит интегративный характер, однако центрирующим звеном оказывается практическая работа творческого свойства, которая направлена на стимуляцию и раскрытие креативного потенциала каждого студента в соответствии с его индивидуальным уровнем профессиональной подготовки. Динамизм и гибкость курса обеспечивает включение мультимедийных элементов, аудио, видеотрейлеров, иллюстрирующих то или иное положения теоретической части курса. В результате чего изложение теоретического материала, тестовые задания оказываются подготовительными, дополняющими, вспомогательными инструментами, поскольку музыкальное искусство, так или иначе, постигается диалогически, только в непосредственном активном, деятельном соприкосновении с ним.

Выводы ***Conclusions***

Дистанционное обучение при условии адаптации его к специфике музыкального искусства и творчества вполне способно стать интегративной частью и альтернативной формой обучения в высших специализированных учебных заведениях. На данном этапе развития дистанционных технологий обучения музыке это наиболее перспективно в условиях смешанного обучения, при котором теоретическая и практическая составляющая дисциплин «разведены» в различные информационно-образовательные блоки. Однако же и в случае дистанционного обучения практическим музыкальным дисциплинам, эффективность обучения и освоения учащимся материала зависит от того, насколько удачно и полно дистанционный учебный курс опосредует формы профессиональной и творческой деятельности студентов. Предложенные в статье параметры эффективного дистанционного курса специальной музыкальной дисциплины, безусловно, могут быть дополнены, что открывает горизонт для дальнейших эмпирических наблюдений в области дистанционного обучения.

Summary

Distance learning for special music disciplines, which are normative for the training of musicians and future music teachers is an actual problem in the Ukrainian higher education. Active implementation the distance learning technologies into the educational process provokes a number of appropriate questions and doubts. The point is in the practical orientation of special music disciplines.

Most often, when it comes to higher education, distance learning is a part of blended learning. Blended learning model based on the use of information and the apportionment of educational resources in a stationary training connecting remote technology. Thus, in its most general form blended learning consists of three stages: the development of theoretical material is carried into the distance learning (e-learning courses), consolidation of practical skills takes place directly in the classroom with the teacher, and finally - the individual or a collective project (exam, test). This model has been already successfully integrated into the educational process at the Grinchenko University for students of musical specialties; the University is one of the few higher institutions of Kyiv and Ukraine, where purposefully developed a mixed system, including distance learning for music disciplines, using the e-learning courses developed on the Moodle platform. Most of the special disciplines of historical and theoretical cycle that contain lecture (theoretical) and seminar hours, such as the history of music, analysis of musical texts, music theory, harmony, involves the development of theoretical material students remotely. It corresponds to the priority in the educational paradigm of the university - the design and practice-oriented learning activities of students. Using remote technologies in this case not only saves valuable resources such as time, but provides the flexibility and mobility of the educational process (flexible learning), which focuses primarily on the student.

As for the music disciplines, which contain only a practical component, experience shows that successful distance development of practical music disciplines, at least some of them, is possible under certain conditions, the main of which - the quality of the distance learning course, which is made taking into account the specifics of musical creativity. Its main characteristics are integrativity; focus on practice; creativity; dynamic, that give students an opportunity to dialogic comprehension of music art.

Distance learning under the adaptation to the specifics of music art and creativity is fully capable to become the part of the integrative and alternative form of training in specialized higher education institutions. At this stage of development of the distance learning technologies for music is the most promising in terms of blended learning, in which theoretical and practical components of the disciplines are placed in a different educational units. However, as in the case of distance learning practical music disciplines, the effectiveness of learning and development of the material depends on how well and fully online learning course mediates forms of professional and creative activity of students. The proposed indicators of effective distance course for special music discipline can be supplemented, it opens the horizon for further empirical observations in the field of distance learning.

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INNOVATION IN LANGUAGE EDUCATION

SELF-ASSESSMENT OF LANGUAGE SKILLS AND EVALUATION OF PERFORMANCE IN ENGLISH FOR SPECIFIC PURPOSES CLASSROOMS

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Abstract. *Although evaluation has been increasingly used in education for a long time, attention to evaluation and its uses in English language teaching is relatively recent. Essentially, evaluation may be carried out to determine if the students achieved a certain level of language proficiency. Recently self-evaluation of language skills has been used to find out how students assess their accomplishments in language learning. On the other hand, formal testing is the most common way to measure achievement and proficiency in language learning that teachers conduct during an academic year. Formal testing is considered to be an effective tool that can help teachers identify students' strengths and weaknesses and evaluate the effectiveness of teaching. This article focuses on student's perceptions of success in learning English for Specific Purposes (ESP) and formal evaluation of their performance in class activities. The methods of the research include the administration of the designed questionnaire, analysis of students' responses and their statistical treatment by a means of the Statistical Package for Social Sciences (SPSS 19). The self-evaluation data are compared with the results of formal testing. The conclusions are drawn on the merits of self-evaluation in learning ESP.*

Keywords: *English for Specific Purposes, formal testing, self-evaluation.*

Introduction

Assessment and self-assessment have become an important part of learning and teaching foreign languages. Methods of assessment are based on learners' evaluation of their own learning. The importance of self-assessment is demonstrated by a number of publications in this area (Frank, 2012; Stoyhoff, 2012; Kavaliauskienė, 2005). Motivation is one of the most important factors for success in learning. Lack of interest to class activities leads to de-motivation in learning. Self-evaluation has been widely used in assessing the effectiveness of education at tertiary level (Douglas, 2000): the key features of assessment are learners' active participation in the evaluation of their own learning and the development of reflective thinking. The outcome of self-assessment shows what learners have learned in communicative classrooms. Self-evaluation is often used as the application of non-traditional ways of judging students' performance.

Literature background

According to the Oxford Advanced Learner's Dictionary (2012), "assessment is a carefully considered opinion or judgment" (p. 61), and "evaluation is an assessment of the amount, quality or value of something" (p. 394). Overall, both concepts are often used interchangeably, and their application is usually contextualized. It should be mentioned that the 'assessment' is commonly used with a variety of different meanings (Bachman, 2005, p. 7). In language research it is the process of collecting information about an object of interest. Moreover, an outcome of this process is also referred to as an assessment. Another term that is often associated with assessment is 'evaluation' (Bachman, 2005, p. 9). It involves making judgments and decisions. The use of assessment for evaluation is common in educational programs, when information is used to assign grades or marks. A conventional view of language assessment considers the notion of self-assessment. Self-assessment derives its theoretical justification from a number of well-established principles of second language acquisition (Douglas Brown, 2004). The principle of autonomy stands out as a primary foundation of successful learning. It is quite common among linguists to use terms 'self-assessment' and 'self-evaluation' interchangeably. There are various types of self-evaluation. Students typically monitor either their particular competence or specific performance. Researchers view self-evaluation as **informal assessment**. Self-assessment is closely linked to instruction because it can reveal weaknesses in instructional processes. Students' reflections offer the teacher an in-depth knowledge of the student as a learner and allow the teacher to individualize instruction for the student. The most common areas of student reflections noted by Nunes (2004) are: syllabus (7 %), instruction (36 %), learning (43 %), and assessment (14 %). The students' preferences in learning were investigated by examining their written reflections (Beckett & Slater, 2005). It was found that only 20 % of the 73 participants enjoyed project work; 25 % had mixed feelings, and 57 % perceived it negatively. Moreover, the high drop-out rate from the course existed because some students found the course too difficult or believed English classes should be limited to the study of language and resented being asked to accomplish non-linguistic tasks. It has been claimed that the challenges of assessment to language learners include lower comparability and reliability and difficulty ensuring standardized testing conditions. It was pointed out by D. Nunan (1988), there is a considerable extent of the mismatch between teacher and learner perceptions of the usefulness of different activities.

Formal assessment of students' learning is testing. It is the most common way to measure achievement and proficiency in language learning that traditionally carried out by teachers (Frank, 2012). Formal testing is a tool that

can help teachers identify students' strengths and weaknesses and evaluate the effectiveness of programs, i.e. how well students have learned what they were taught. In a discussion of language assessment, Bachman (2007) reviewed testing practices over the past five decades and categorized them into seven approaches: skills and elements, direct testing/performance assessment, pragmatic language testing, communicative language testing, communicative language ability, task-based performance assessment, interactional language assessment. A good example of progress in large-scale language self-assessments is recently reported DIALANG technique (Stoynoff, 2012). It is a self-directed assessment available for 14 languages including English that is accessed for free via the internet. Examinees are able to assess their reading, writing, listening, grammar, and vocabulary abilities in a foreign language, and they receive feedback on their strengths and weaknesses as well as their language level based on the Common European Framework of Reference for Languages (CEFR).

This research focuses on investigation of students' self-assessment of language skills, self-evaluation of their performance in class activities and its comparison with formal testing data.

Respondents

The respondents in this study are the students of Klaipeda University (60 students, 2 samples), who studied English for Specific Purposes (ESP) in 2016. The students are mother-tongue speakers of Lithuanian and entered the university after having studied general English at secondary schools. The design of the ESP course reflects the students' future needs in professional language. The course is adjusted to the requirements for a Bachelor of Social Science degree. The level of students' proficiency is either B2 or C1 according to the Common European Framework of Reference for Languages.

Research methodology

The findings have been obtained from the survey completed by two samples of respondents. The questionnaire was designed in accordance with accepted standards of constructing surveys (Dornyei, 2003). It contained statements on students' self-assessment of their language skills, self-evaluation of their performance and evaluation of formal testing. The survey is presented in Appendix. It is comprised of the statements, to which students responded on a 5-point Likert's scale ranging from 1 "very difficult" to 5 "very easy". The responses were processed by a means of Software Package for Social Sciences (SPSS 19). Formal testing of students' performance by teachers aimed at clarifying the point of how realistic students are of their own evaluations.

Results and discussion

This part of the article reports the findings of the survey and analyzes the key points that emerged. The results of students' self-assessment of language skills are shown in pie Charts 1 to 11. It is essential to mention what is meant by positive, negative and neutral responses. The positive responses refer to "easy" and "very easy" points (i.e. numbers 4 and 5 of the questionnaire). Negative responses refer to "very difficult" and "difficult" points (i.e. numbers 1 and 2 of the questionnaire), and neutral responses refer to "unsure" (i.e. number 3 of the questionnaire).

Self-assessments of reading skills are displayed in two charts: sample 1 in the pie Chart 1, and sample 2 in the pie Chart 2. In spite of differences in percentages of responses, visually charts seem similar.

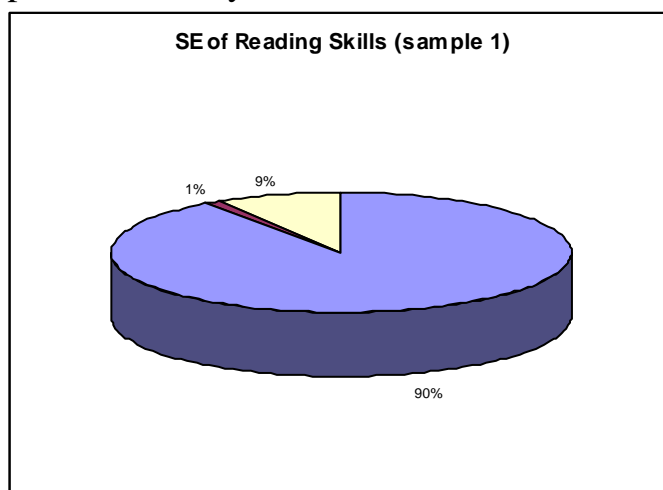


Chart 1 Self-assessment of reading skills (Sample 1). Positive 90 %, negative 1 %, neutral 9 %

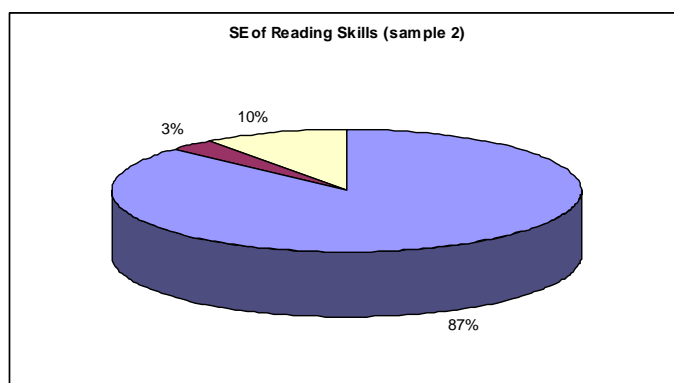


Chart 2 Self-assessment of reading skills (Sample 2). Positive 87 %, negative 3 %, neutral 10 %

The pie Chart 3 and the pie Chart 4 show the students' self-assessment of listening skills. There is a noticeable difference between these charts: there are no neutral responses by the students of the 1st sample.

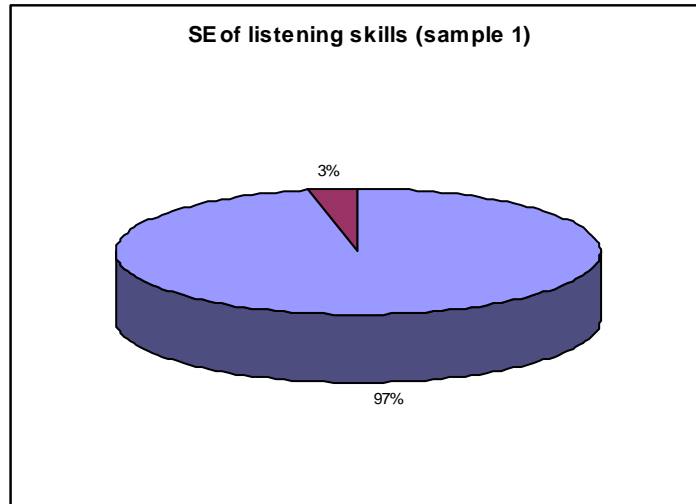


Chart 3 **Self-assessment of listening skills (Sample 1). Positive 97 %, negative 3 %**

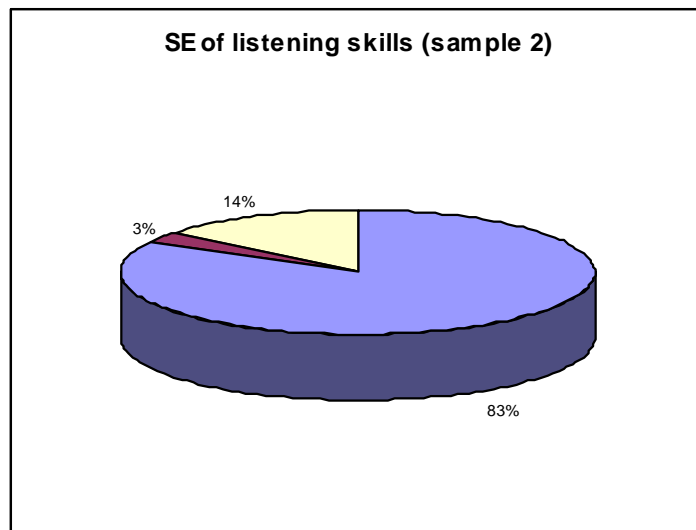


Chart 4 **Self-assessment of listening skills (Sample 2). Positive 83 %, negative 3 %, neutral 14 %**

The pie Chart 5 and the pie Chart 6 display the self-assessment of speaking skills. It can be seen that the percentage of positive responses is similar, but negative and neutral responses amount to quite a significant discrepancy.

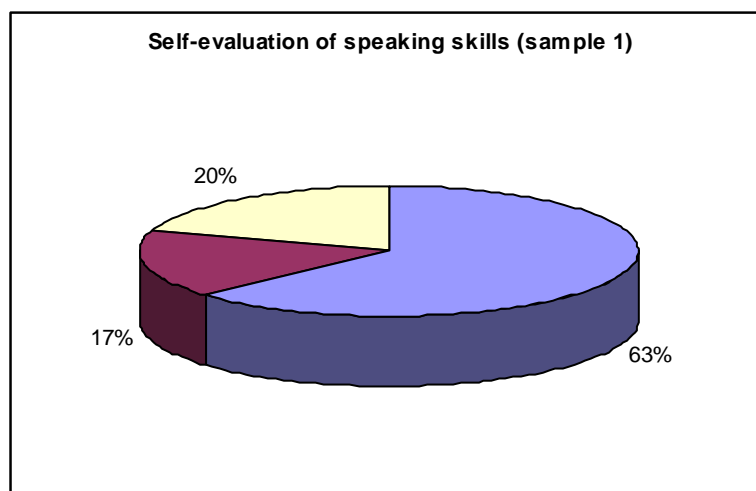


Chart 5 Self-assessment of speaking skills (Sample 1). Positive 63 %, negative 17 %, neutral 20 %

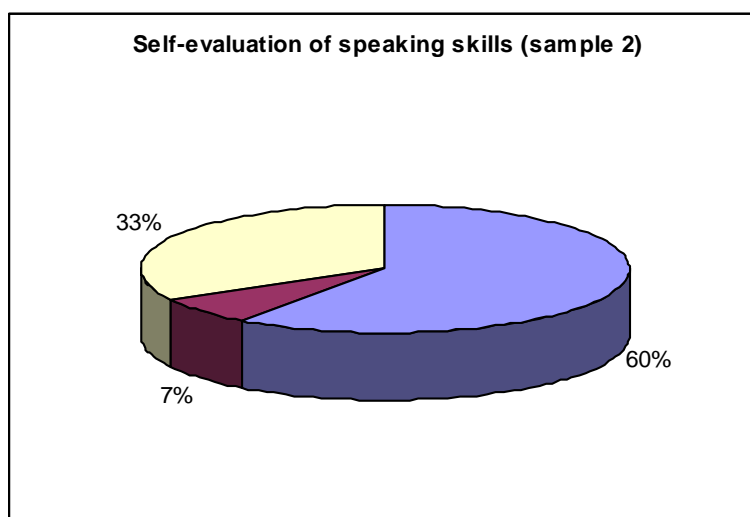


Chart 6 Self-assessment of speaking skills (Sample 2). Positive 60 %, negative 7 %, neutral 33 %

The pie Chart 7 and the pie Chart 8 show self-assessment of writing skills. There does not seem to be essential differences between two samples. It is well known that to a considerable degree writing presents a number of difficulties to language learners, mainly due to the inability to get to the point and use authentic English.

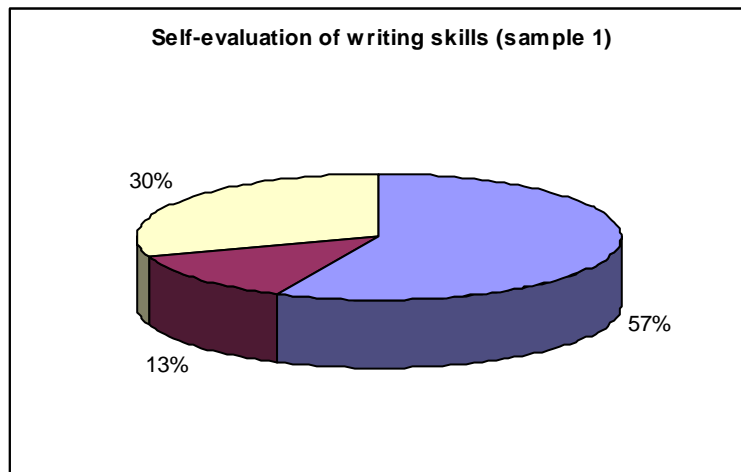


Chart 7 **Self-assessment of writing skills (Sample 1). Positive 57 %, negative 13 %, neutral 30 %**

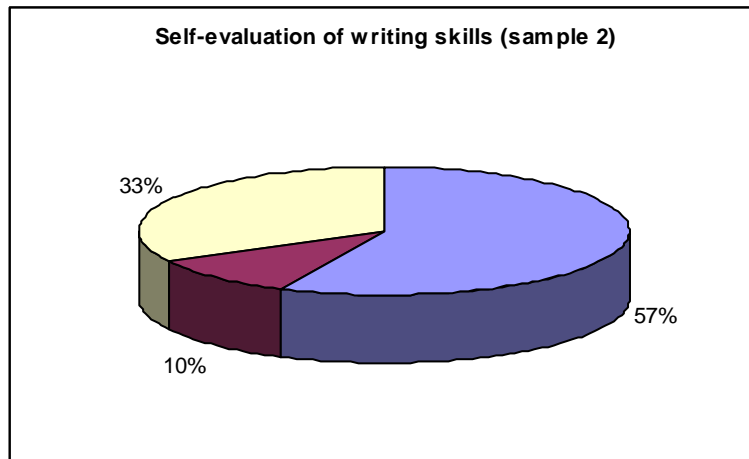


Chart 8 **Self-assessment of writing skills (Sample 2). Positive 57 %, negative 10 %, neutral 33 %**

Column Chart 9 and Chart 10 display students' self-assessment of translation skills. Chart 9 refers to translation from the mother tongue L1 to English L2, and Chart 10 refers to translation from L2 to L1. 1st columns in both charts show responses by the students from sample 1, and 2nd columns – from sample 2. It is quite obvious that translation from L1 into L2 is problem-oriented, and students are apparently aware of it.

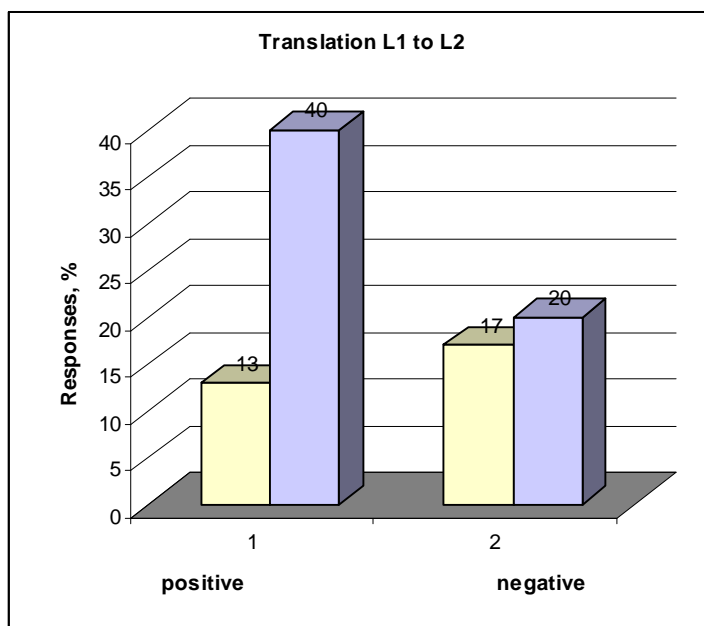


Chart 9 Self-assessment of translation from L1 into L2. 1st bars (13 % and 17 %, respectively) show responses by the respondents of sample 1, 2nd bars (40 % and 20 %, respectively) show the responses by the respondents of sample 2

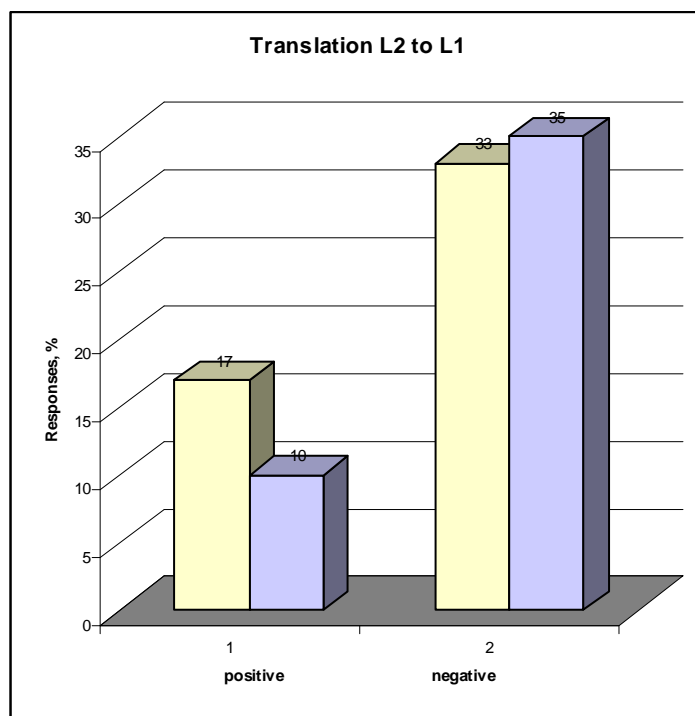


Chart 10 Self-assessment of translation from L2 into L1. 1st bars (17 % and 33 %, respectively) show responses by the respondents of sample 1, 2nd bars (10 % and 35 %, respectively) show the responses by the respondents of sample 2

Column Chart 11 displays the self-assessment of ESP vocabulary. 1st columns show responses by students from sample 1, and 2nd columns – from sample 2. It is evident that for the respondents of sample 2 the knowledge of vocabulary is much to be desired: only 20 % of students are positive, and 40 % assess it as negative one. To get a clear image of opinion differences between two samples of respondents, statistic processing is supposed to be beneficial.

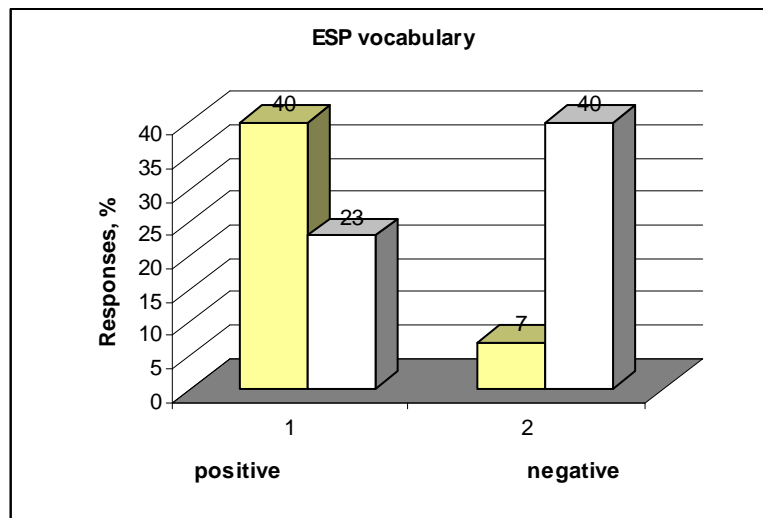


Chart 11 Self-assessment of ESP vocabulary. 1st bars (40 % and 7 %, respectively) show responses by the respondents of sample 1, 2nd bars (23 % and 40 %, respectively) show the responses by the respondents of sample 2

Statistical processing

Statistic processing of the responses includes computation of the Means, the Standard Deviations and the Correlation coefficients. The Mean is the average score of the distribution. In a normal (Gaussian) distribution about 68 % of all scores are within one Standard Deviation of the Mean (34 % below and 34 % above). The Standard Deviation is the indicator of dispersion. It is probably the most commonly used indicator of variability (Bachman, 2005). Standard Deviation may help interpret scores when there is a perfectly normal distribution, which is seldom the case. Table 1 displays the Means and the Standard Deviations for classroom activities that have been shown in Charts 1 to 11 and described above. In Table 1, 1st column contains self-assessment statements; the 2nd column displays the Means and the Standard Deviations for sample 1, and the 3rd column – for sample 2.

Table 1 Likert's scale Means and Standard Deviations for both samples

self-assessment statements	Means & Standard Deviations, sample 1	Means & Standard Deviations, sample 2
1. Reading	4,1667 ,59209	4,3000 ,79438
2. Listening	3,7000 ,70221	4,1333 ,77608
3. Speaking	3,5667 1,00630	3,6000 ,81368
4. Writing	3,4667 ,77608	3,5333 ,86037
5. Translation L1 to L2	3,0333 ,61495	3,3000 ,87691
6. Translation L2 to L1	3,0000 ,52523	3,0000 1,01710
7. ESP vocabulary	3,3000 ,79438	2,8333 ,98553

It should be noted that the values of the Means in both samples are different except for the responses 'translation from L2 to L1'. The values of the Standard Deviations, which show the scattering of the data, also differ, in some cases quite noticeably. The pie Charts 1 to 8 seem similar visually. However this might be a misleading notion. It is essential to evaluate them statistically. Traditionally, Pearson's Correlation coefficients *rho* and the Significance Levels *Sig. p* (2-tailed) are computed to determine if there are any correlations between the samples. Data of computations are presented in Table 2 below. It is seen that no correlations have been detected between samples for the self-assessment of reading, listening, speaking, writing, translation skills or ESP vocabulary. The large values of *Sig p* (over 0.05) mean that all the probabilities of relationships are below the critical value of 95 %. For instance, for speaking skill the *Sig p* is 0.076, i.e. probability is 92 %, while for other skills it is even much lower: 15 % for reading skills, 31 % for listening skills, 10 % for writing skills, etc. Moreover, the computed values of the Pearson's correlation coefficients *rho* are also too small. For significant correlations, the values of the Pearson's correlation coefficients must be well over 0.5. The coefficient *rho* with a 'minus' sign implies a reverse, not a direct relationship.

Table 2 Correlations data: Pearson's correlation coefficients *rho* and Significance levels *Sig. p*

Self-assessment statements	Pearson's correlation coefficients <i>rho</i>	Significance levels <i>Sig. p</i> (2-tailed)
1. Reading	-0.037	0.847
2. Listening	0.076	0.690
3. Speaking	0.328	0.076
4. Writing	-0.024	0.899
5. Translation L1 to L2	-0.275	0.141
6. Translation L2 to L1	0.129	0.497
7. ESP vocabulary	-0.198	0.294

The second part of the questionnaire (Appendix) refers to respondents' self-evaluation of grades and teacher's evaluation (formal testing) of their performance. It is well known that formal testing allows getting insights into the quality of students' learning. The obtained findings are summarized in Table 3 and Table 4.

Table 3 Students' Self-evaluation vs. Teacher's Evaluation: Pearson's correlation coefficients ρ and Significance levels $Sig. p$

Self-assessment statements	Pearson's correlation coefficients ρ Significance levels $Sig. p$ (2-tailed) Sample 1	Pearson's correlation coefficients ρ Significance levels $Sig. p$ (2-tailed) Sample 2
1. Reading	0.458* 0.011 *. Correlation is significant at the 0.05 level (2-tailed).	0,667** 0.000 **. Correlation is significant at the 0.01 level (2-tailed).
2. Listening	0.873** 0.000 **. Correlation is significant at the 0.01 level (2-tailed).	0.072** 0.000 **. Correlation is significant at the 0.01 level (2-tailed).
3. Speaking	0.234 0.213 No significant Correlation is detected	0.637** 0.000 **. Correlation is significant at the 0.01 level (2-tailed).
4. Writing	0.404* 0.027 *. Correlation is significant at the 0.05 level (2-tailed).	0.301 0.106 No significant Correlation is detected
5. Translation L1 to L2	0.267 0.154 No significant Correlation is detected	0.521** 0.003 **. Correlation is significant at the 0.01 level (2-tailed).
6. Translation L2 to L1	0.113 0.553 No significant Correlation is detected	0.508** 0.004 **. Correlation is significant at the 0.01 level (2-tailed).
7. ESP vocabulary	0.346 0.061 No significant Correlation is detected	0.713** 0.000 **. Correlation is significant at the 0.01 level (2-tailed).

Students' self-evaluations of class activities versus teacher's evaluations are computed and presented in Table 3. The 1st column shows the list of class activities, the 2nd and the 3rd columns the computations for sample 1 and sample 2, respectively. The first numbers in these columns display the values of the Pearson's Correlation Coefficients ρ , and the second numbers show the Significance levels $Sig. p$. It may be seen that for sample 1 good correlations are obtained for reading activities (probability 95 %), for listening activities (probability 99 %) and writing activities (probability 99 %). For sample 2, good correlations (99 %) are obtained for all activities except writing. The findings might be interpreted as follows: respondents of sample 2 have better English language skills and are more realistic about their performance.

Table 4 Grading performance: ratio of students' self-evaluation to teacher's (formal) evaluation

Self-evaluation grades of class activities	Sample 1 Ratio of self-evaluation to teacher's evaluation (%)	Sample 2 Ratio of self-evaluation to teacher's evaluation data (%)
1. Reading	50%	57%
2. Listening	17%	53%
3. Speaking	17%	63%
4. Writing	37%	30%
5. Translation L1 to L2	27%	47%
6. Translation L2 to L1	27%	30%
7. ESP vocabulary	43%	50%

Table 4 allows getting insights into the comparative analysis of students' self-evaluation of grades in each activity and teacher's evaluation (formal testing) of their performance. Similarly as in Table 3, the 1st column presents the list of activities. The 2nd column and the 3rd column display the ratios of students' self-evaluation to teacher's evaluation in percentage for the 1st sample and the 2nd sample, respectively. It proves the data of computations shown in Table 3: performance of students in the 2nd sample is much better than in the 1st sample in all activities. The ratio of 50 % means that self-evaluation of grades by the half of the respondents coincides with the teacher's evaluation. Lower values of percentage, i.e. 17 %, imply that respondents' self-assigned grades are either lower or higher than assigned by their teacher. The interpretation of the differences between the samples might be due to the common phenomena of students either over-estimating or under-estimating their abilities (Dudley-Evans & Jo St John, 2000). However, overall it may be concluded that some of the learners are realistic about their language abilities and performance in linguistic tasks.

Conclusions

The following conclusions have been drawn. Students' self-assessments of language skills in class activities demonstrate their perceptions of difficulties they usually face in the ESP classes. There is a significant difference between self-assessment responses and self-evaluation results. In the self-assessment responses, students estimate their language skills optimistically, while grading one's performance might be quite problematic. This point is clearly demonstrated by comparing students' self-evaluation data with teacher's evaluation: there is no total congruence between them - teacher's evaluation may differ from students'

self-evaluation. However, the respondents of sample 2 are more realistic in their self-evaluation than the respondents of sample 1, which is shown by the findings in Table 4. The interpretation of the differences might be due to the fact that some students tend to under-estimate or over-estimate their knowledge and linguistic ability. Nevertheless, seeking to improve the learning it is essential to raise students' awareness of their achievements by encouraging them to self-assess their language skills and self-evaluate their performance in class activities.

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Appendix. Self-assessment of language skills.

Circle the right answer.

- Reading is 1) very difficult, 2) difficult, 3) not sure, 4) easy, 5) very easy.
 Listening is 1) very difficult, 2) difficult, 3) not sure, 4) easy, 5) very easy.
 Speaking is 1) very difficult, 2) difficult, 3) not sure, 4) easy, 5) very easy.
 Writing is 1) very difficult, 2) difficult, 3) not sure, 4) easy, 5) very easy.
 Translation from L1 to L2 is 1) very difficult, 2) difficult, 3) not sure, 4) easy, 5) very easy.
 Translation from L2 to L1 is 1) very difficult, 2) difficult, 3) not sure, 4) easy, 5) very easy.
 ESP vocabulary is 1) very difficult, 2) difficult, 3) not sure, 4) easy, 5) very easy.

Self-evaluation of performance and formal evaluation

Write the self-evaluation grade

Class activities	Self-evaluation grade	Teacher's evaluation grade
Reading		
Listening		
Speaking		
Writing		
Translation from L1 to L2		
Translation from L2 to L1		
ESP vocabulary		

SVEŠVALODU APGUVE BRĪVĀS IZVĒLES STUDIJU KURSOS LSPA

Foreign Language Learning in Optional Study Courses at Lase

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Iveta Boge

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Abstract. Nowadays to be competitive in labor market foreign language knowledge and skills are essential. After graduation from LASE students start to work as coaches, sports managers or recreation specialists, and, speaking about their employability, in their jobs foreign language competence is very significant. The aim of the research is to determine the demand among students for optional foreign language study courses, which foreign languages are chosen and studied by the LASE students. In the research, optional foreign language study course examination protocols were analyzed for the last four years, which provide the best indicator of how many students not only chose but also actually completed optional foreign language study courses. The research shows that at LASE the optional study courses of foreign language learning are in great demand in sport science direction. LASE students are aware of advantages of foreign language knowledge and skills in labor market also in sport sector and show their wish to continue developing their foreign language competence while studying at LASE.

Keywords: foreign language, knowledge and skills, labour market, optional study courses

Ievads

Introduction

Runājot par svešvalodu zināšanu un prasmju nozīmi mūsdienās, šis jautājums jāizskata darba tirgu kontekstā. Nav šaubu, ka mūsdienās bez svešvalodu zināšanām un prasmēm būt konkurētspējīgam ir ļoti grūti. Starptautiskajos uzņēmumos, galvenokārt, tiek prasītas angļu valodas zināšanas, tomēr darba tirgū nemazinās arī krievu valodas nozīme. Privātu uzņēmumos katrs darba devējs var izvirzīt prasības valodu prasmei atbilstoši uzņēmuma specifikai un darba pienākumiem. Tā galvenokārt ir angļu, vācu vai krievu valodas prasme, lai varētu sazināties ar sadarbības partneriem vai klientiem ārzemēs. Personāla atlases speciālists, vakanču Portāla *WorkingDay* mārketinga direktors Māris

Silinieks skaidro, ka visbiežāk darba devēji pieprasa latviešu, angļu un krievu valodas zināšanas. Varētu par teikt, kā šīs trīs valodas ir kļuvušas par ikdienā lietotām (Bērziņa, 2014). Jūlija Lobanovska, personāla atlases kompānijas *CVO Recruitment Latvia* vadošā konsultante stāsta, ka angļu valodas zināšanu līmenis jauniešu vidū ar katru gadu pieaug. Savukārt krievu valodu jaunieši zina arvien sliktāk un arī paši nožēlo, ka nebija iespējas to apgūt skolā. Vienlaikus aug arī darba devēju prasības. Tā, piemēram, pašlaik ir ļoti pieprasīti juristi, kuri var veikt savus pienākumus latviešu, angļu un krievu valodā (Melberga, 2016). Tas viss, bez šaubām, attiecas arī uz sporta nozari, jo sports tiek attīstīts visā pasaulē un pašlaik gan starptautiska līmeņa Latvijas sportistiem, gan treneriem un menedžeriem sporta jomā paveras plašas iespējas strādāt un trenēties jebkurā pasaules valstī. Latvijā mūsdienās trenējas sportisti no dažādām valstīm, un, lai varētu ne tikai sazināties, bet arī profesionāli piedalīties treniņu procesā, jāpārvalda svešvalodas. Jau studiju laikā Latvijas Sporta pedagoģijas akadēmijas (LSPA) studenti sastopas ar dažādu svešvalodu zināšanu nepieciešamību, jo:

- a) aktīvi piedalās dažāda līmeņa starptautiskajos sporta pasākumos, piemēram, kā brīvprātīgie;
- b) startē dažādās starptautiskajās sacensībās, sākot no Baltijas valstu līmeņa sacensībām līdz pat Olimpiskajām spēlēm;
- c) piedalās apmaiņas studiju programmā ERASMUS, izmantojot iespēju studēt vienu semestri ārvalstīs. LSPA ir noslēgti sadarbības līgumi ar 36 Eiropas Savienības (ES) valstu augstskolām, tādām kā Beļģija, Bulgārija, Čehija, Horvātija, Itālija, Vācija, Spānija u.c. ERASMUS apmaiņas studiju programmas dalībniekiem īpaši nepieciešamas svešvalodu zināšanas un prasmes. Svešvalodu mācīšanās veicina savstarpējo sapratni un starpkultūru kontaktu veidošanu (Vankevič, 2010).

Bez svešvalodu literatūras izmantošanas nav arī iespējams veikt mūsdienu pētījumus un uzrakstīt kvalitatīvu, mūsdienu prasībām atbilstošu bakalaura, maģistra vai doktora darbu. Beidzot augstskolu, LSPA studenti kļūst par treneriem, sporta darba vadītājiem vai rekreācijas speciālistiem, un šajās profesijās svešvalodu zināšanām un prasmēm ir ļoti liela nozīme absolventu nodarbinātības nodrošināšanā.

Pētījuma mērķis: noskaidrot, cik liels ir pieprasījums studentu vidū pēc brīvās izvēles svešvalodu studiju kursiem un kādas svešvalodas izvēlas un apgūst LSPA studenti. Šis pētījums palīdzēs noskaidrot svešvalodu nepieciešamību LSPA studentiem, kā arī viņu prioritātes svešvalodu studēšanas izvēlē.

Lai veiktu pētījumu, tika apstrādāti brīvās izvēles svešvalodu studiju kursu pārbaudījumu protokoli (n=48) par pēdējiem četriem studiju gadiem (no 2012.-2013. studiju gada līdz 2015.-2016. studiju gadam), kas ir vislabākais rādītājs par to, cik daudz studentu ir ne tikai izvēlējušies, bet arī reāli apguvuši brīvās izvēles

svešvalodu studiju kursus. Pētījumā tiek atspoguļoti rezultāti, kas uzrādīti dienas/klātienes nodaļas protokolos.

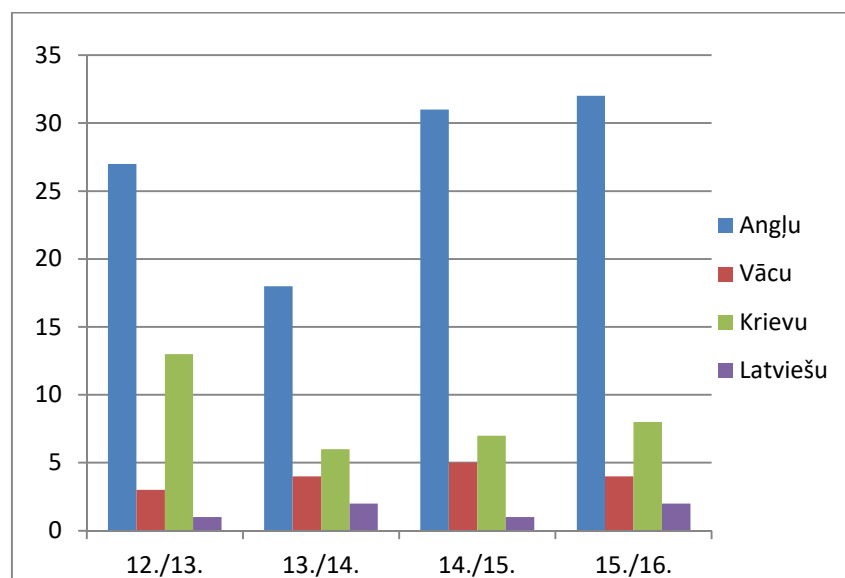
LSPA Profesionālā bakalaura augstākās izglītības studiju programma “Sporta zinātne” piedāvā divus svešvalodu studiju kursus brīvās izvēles studiju kursu programmā „Profesionālas saziņas pamati I, II ” (1. studiju gadā) un „Profesionālā komunikācija I, II, III” (2. un 3. studiju gadā). Visi studiju kursi tiek piedāvāti četrās valodas: angļu, vācu, latviešu un krievu. Viena studiju kursa apjoms ir 20 stundas (1 kredītpunkts).

LSPA brīvās izvēles svešvalodu studiju kursi tika iekļauti bakalaura studiju programmā jau 2009. gadā, pārejot uz jauno bakalaura studiju programmu “Sporta zinātne”, un uzreiz tie kļuva ļoti populāri studentu vidū. Bet mēs savā pētījumā atspoguļojam studentu svešvalodu apguvi brīvās izvēles studiju kursu programmas ietvaros tikai kopš 2012. gada, kad šie kursi tika piedāvāti pilnā apjomā 1., 2. un 3. studiju gadā.

Rezultāti

Results

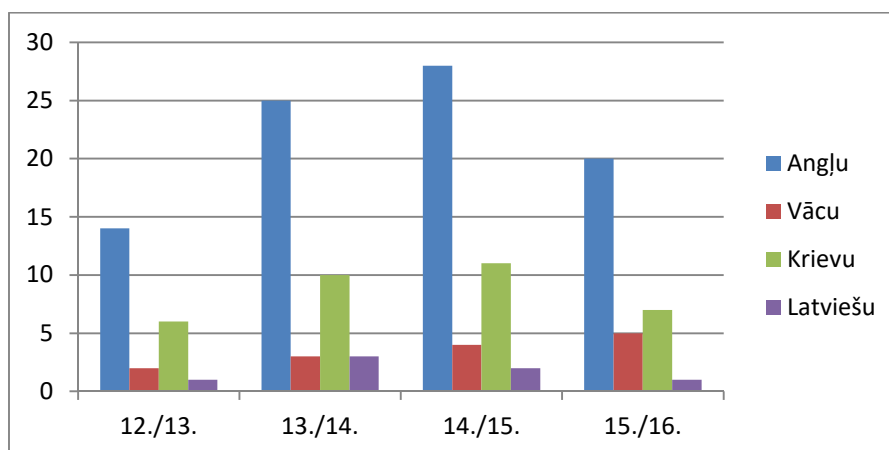
Pētot svešvalodu brīvās izvēles studiju kursu protokolus par pēdējiem četriem studiju gadiem (no 2012.-2013. st. g. līdz 2015.-2016. st. g.), noskaidrots, ka studiju kursā „Profesionālas saziņas pamati svešvalodā”, kas ir 1. studiju gadā, visvairāk studenti izvēlējās un apguva angļu valodu (18-34), tad seko krievu valoda (7-14), un tikai neliels studentu skaits apguva vācu (3-5) un latviešu valodu (1-2).



1.att. Studentu skaits, kuri ir nokārtojuši studiju kursu „Profesionālas saziņas pamati svešvalodā” (1. st. g.)

Fig.1 Number of students, who have passed the study course “Basics of professional communication in foreign language” (1st st. y.)

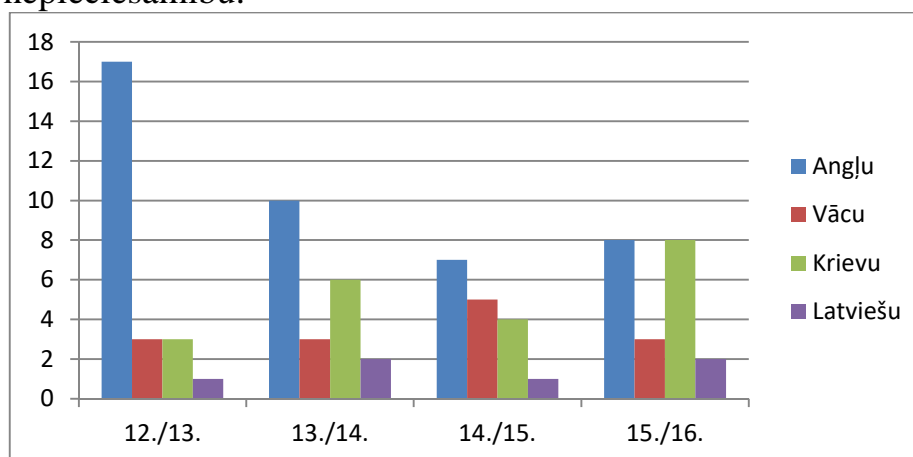
Kas attiecas uz studiju kursu „Profesionālā komunikācija svešvalodā”, kurš seko pēc studiju kursa „Profesionālās saziņas pamati” un tiek realizēts 2. un 3. studiju gadā, šeit ir līdzīga situācija. 2. studiju gadā nedaudz mazāk studentu izvēlas angļu valodu (14-27), un tas ir izskaidrojams ar to, ka šajā studiju gadā sākās obligātais svešvalodu kurss „Speciālā terminoloģija un komunikācija svešvalodā”, kuru lielākā daļa studentu apgūst angļu valodā. Krievu valodu izvēlas apmēram 6-12 studenti, vācu 3-5 un latviešu valodu 1-3 studenti.



2.att. Studentu skaits, kuri ir nokārtojuši studiju kursu „Profesionālā komunikācija svešvalodā” (2. st. g.)

Fig.2 Number of students, who have passed the study course “Professional communication in foreign language” (2nd st. y.)

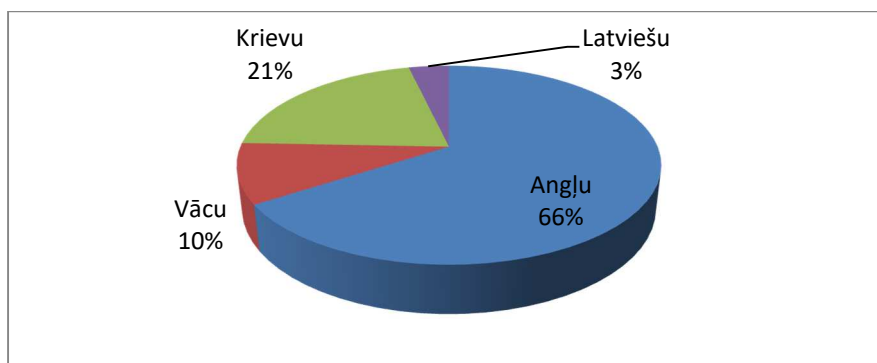
3. studiju gadā arvien mazāk studentu izvēlas svešvalodas brīvās izvēlas studiju kursu programmā. Angļu valodu apgūst 7-17 studenti, krievu 3-8, vācu un latviešu valodu apgūst 2-5 studenti. Parasti tie ir tie paši studenti, kuri jau bija sākuši apgūt svešvalodas 1. un 2. studiju gadā un turpina to, izprotot svešvalodu zināšanu nepieciešamību.



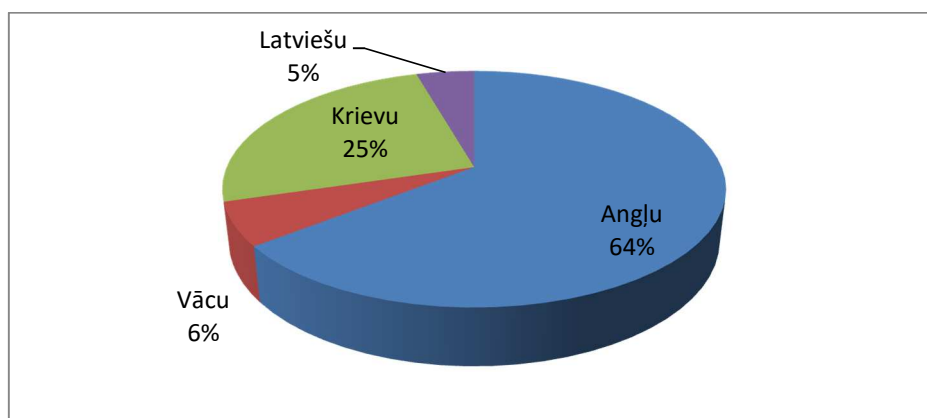
3.att. Studentu skaits, kuri ir nokārtojuši studiju kursu „Profesionālā komunikācija svešvalodā” (3. st. g.)

Fig.3 Number of students, who have passed the study course “Professional communication in foreign language” (3rd st. y.)

Kopumā, vērtējot LSPA studentu prioritātes, izvēloties svešvalodas brīvās izvēles studiju kursu programmas ietvaros, varētu teikt, ka visvairāk apgūst angļu valodu (64 %-66 %), tad seko krievu valoda (21 %-25 %), vismazāk izvēlas vācu (6 %-10 %) un latviešu valodu (3 %-5 %). 1. studiju gadā nedaudz vairāk studentu izvēlas angļu valodu. 2. studiju gadā vairāk sāk apgūt krievu un latviešu valodu.



4.att. **Studentu prioritātes, izvēloties studiju kursu „Profesionālas saziņas pamati”**
Fig.4 Student priorities, when choosing the study course “Basics of professional communication”



5.att. **Studentu prioritātes, izvēloties studiju kursu „Profesionālā komunikācija svešvalodā”**
Fig.5 Student priorities, when choosing the study course “Professional communication”

Diskusija Discussion

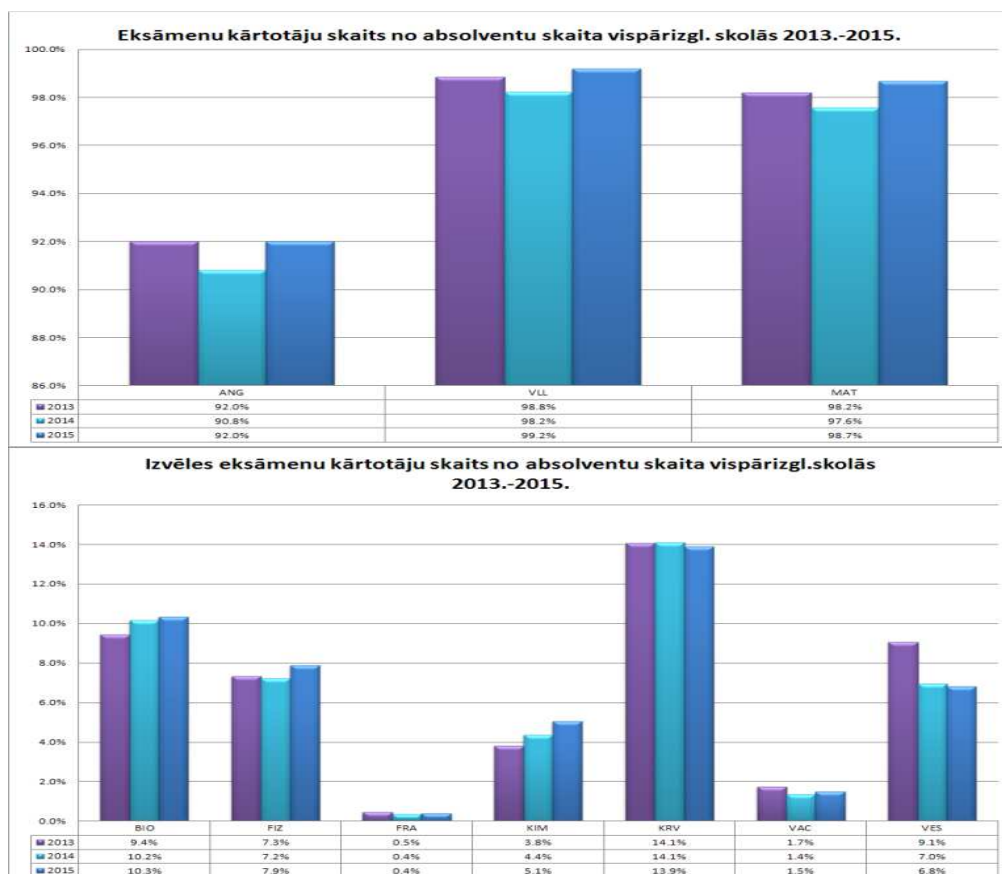
Runājot par to, kāpēc LSPA studenti izvēlās vienas vai citas svešvalodas studēšanu ārpus obligātas programmas, šis jautājums jāsaista gan ar viņu mērķiem darba tirgū, gan ar pabeigto vispārizglītojošo iestādi un apgūtām svešvalodām. Jo tieši no skolas ir atkarīgs, cik un kādas svešvalodas jau ir apgūtas, iestājoties augstskolā. Kopš 2014. gada Latvijas izglītībā tika ieviesta jauna sistēma: pirmo

svešvalodu bērni mācās jau no 1. klases, nevis kā iepriekš - tikai no 3. klases. Šie bērni iestāsies augstskolā tikai pēc 9 gadiem. Bet jau tagadējie studenti, nākot no dažādām vispārīzglītojošām skolām, ir mācījušies pirmo svešvalodu no 1. vai 3. klases, un tā lielākoties ir angļu valoda. Lielākajai daļai studentu skolā bija iespēja apgūt otro un arī trešo svešvalodu, un tās ir bijušas pārsvarā vācu vai krievu valoda. Daži studenti ir apguvuši skolā pirmo svešvalodu (angļu) ļoti labā līmenī, un tāpēc brīvās izvēles studiju kursu programmā izvēlas kādu citu svešvalodu (vācu vai krievu). Citi, savukārt, saprot, kā viņu angļu valodas līmenis ir ļoti zems un izvēlas tieši šo valodu. Krievu valodu izvēlas studenti no Latvijas reģioniem, kuriem sazināšanās šajā valodā sagādā problēmas, vai studenti, kuri jau studiju laikā ir sākuši strādāt par treneriem ar maziem bērniem un ir sastapušies ar šīs valodas zināšanu nepieciešamību. Vācu valodu izvēlas tikai daži studenti, kuriem skolā jau bija iespēja apgūt šo valodu pamatlīmenī. Diemžēl, LSPA joprojām iestājas studenti no mazākumtautību skolām, kuriem ir problēmas ar latviešu valodu. Tieši viņi arī pārsvarā izvēlas šo valodu.

Izpētot eksāmenu kārtotāju skaitu no absolventu skaita vispārīzglītojošajās skolās par 2013.-2015. gadiem, ko mums sniedz Valsts izglītības satura centrs (VISC), var redzēt, ka angļu valodu, kas ir obligātais priekšmets, 2013. gadā ir kārtājuši 92,0 %, tikpat daudz 92,0 % - 2015. gadā; krievu valodu, kas ir izvēles eksāmens, kārtāja no 14,1 % 2013. gadā līdz 13,9 % 2015. gadā; vācu valodu - no 1,7 % 2013. gadā līdz 1,5 % 2015. gadā (VISC, 2015). Kā redzams no grafikiem, angļu valodu kārtāja gandrīz visi absolventi, un tas ir pats par sevi saprotams, jo angļu valoda ir obligātais eksāmens, krievu valodu, kā izvēles eksāmenu kārtāja vidēji 14 % no absolventu skaita, un šī tendence samazinās, vācu valodu kārtāja ļoti maz - vidēji 1,5 % absolventu. Šī statistika parāda, kāpēc mūsu studenti bija izvēlējušies kādu no valodām kā brīvās izvēles studiju kursu LSPA, jo izvēlēties šos kursus varēja tikai tie studenti, kuri ir apguvuši atbilstošas svešvalodas pamatus vidusskolā.

Pēc Centrālās statistikas pārvaldes informācijas lielākā daļa pieaugušo Latvijā vecumā no 25 līdz 64 gadiem kā svešvalodu pārvalda krievu valodu 57 %, angļu valodu prot 49 %, bet vācu valodu – 18 % iedzīvotāju. Bet dati par jauniešiem mainās, un pirmajā vietā ierindojas jau angļu, tad seko krievu un vācu valoda, jo procentuāli apgūstamās svešvalodas Latvijas skolās sadalās šādi: angļu – 97,9 %, krievu – 39,7 %, vācu - 13,4 %, franču – 2,2 % (Bērziņa, 2014).

Divdesmit pirmā gadsimta sabiedrībai ir nepieciešami darbinieki, kuriem ir visas prasmes, ieskaitot svešvalodu prasmi, lai atrastu darbu un veiksmīgi tajā strādātu (Coyne, 2008; Rimšāne, 2009).



6.att. Eksāmenu kārtotāju skaits vispārīzglītojošajās skolās no 2013. līdz 2015. gadam
 Fig.6 Number of students, who took examinations in general education schools from 2013 up to 2015

Arī Latvijas politiķi saprot un izsaka savu viedokli par to, ka bez vairāku valodu zināšanām mūsdienās ir grūti būt konkurētspējīgam. Kā uzskata bijušais Latvijas prezidents Andris Bērziņš, beidzot vidusskolu, Latvijas jauniešiem jāzina vismaz četras valodas, jo valoda ir instruments, lai apgūtu jaunas zinības un ietu dzīvē uz priekšu (Bērziņš, 2012). Līdzīgi domā arī politiķis un uzņēmējs Ainārs Šlesers, kurš uzskata, ka ar trīs valodu prasmēm šodien esot iespējams dabūt darbu veikalā vai kafejnīcā, bet Latvijas cilvēkiem, lai konkurētu pasaules līmenī, būtu jāzina vismaz piecas svešvalodas (Šlesers, 2014). 2010. gadā LR Saeimas apstiprinātā “Latvijas ilgtspējīgas attīstības stratēģija līdz 2030. gadam” izvirza vienu no uzdevumiem attīstīt valodu zināšanas (Latvijas ilgtspējīgas attīstības stratēģija līdz 2030. gadam, 2010).

Tas attiecas arī uz sporta nozari. Izvērtējot jebkuru starptautisko sporta pasākumu, kas tiek rīkots Latvijā, var redzēt, ka bez svešvalodu zināšanām un prasmēm dabūt jebkuru darbu tajā ir ļoti grūti. Tā, piemēram, Eiropas U16 basketbola čempionāta rīkotāji aicināja brīvprātīgos iesaistīties 2016. gada vasaras lielākajā sporta notikumā Latvijā, kas 20.-30. augustā risinājās Liepājā,

Grobiņā, Ogrē un Rīgā. Par pretendentu priekšrocībām tika uzskatītas angļu valodas zināšanas, kā arī poļu, krievu, franču, spāņu, turku, ukraiņu un lietuviešu valodas zināšanas (LBS, 2014).

Kā redzams, darba tirgū ir pieprasījums pēc dažādām valodām, ne tikai angļu, bet arī vācu, spāņu, franču, skandināvu, kā arī mūsu kaimiņvalstu valodām. Tas viss attiecas arī uz sporta nozari, jo uz jebkuru starptautisko sporta pasākumu sanāk dalībnieki no vairākām valstīm. Tomēr nepārspēta pagaidām paliek angļu valoda. Var secināt, ka lielākā daļa LSPA studentu saprot: svešvalodu zināšanas un prasmes ir viņu plašākas iespējas dabūt interesantāku un labāk atalgotu darbu.

Secinājumi **Conclusions**

1. Svešvalodu studiju kursi „Profesionālas saziņas pamati I, II ” un „Profesionālā komunikācija I, II, III” ir pieprasītākie studiju kursi brīvās izvēles studiju kursu programmā sporta zinātnē LSPA.
2. LSPA studenti visvairāk, kā brīvās izvēles kursus, izvēlas angļu valodu (64 %-66 %), tad seko krievu valoda (21 %-25 %), tad vācu (6 %-10 %) un latviešu valoda (3 %-5 %).
3. LSPA studentu svešvalodu studēšanas izvēle ir saistīta ar apgūstamo svešvalodu skaitu Latvijas vispārīgglītojošajās skolās.
4. Svešvalodu zināšanu priekšrocības un nozīme darba tirgū, tai skaitā arī sporta nozarē, ir nenoliedzamas, ko saprot un atzīst LSPA studenti ar savu vēlmi apgūt un pilnveidot svešvalodas zināšanas un prasmes.

Summary

It is obvious that nowadays one cannot be competitive in labour market without foreign language knowledge and skills. International companies mostly require the English language skills, however, in labour market the Russian language skills are still important. In private companies an employer can require language skills, usually English, German or Russian, according to its specifics and job responsibilities. Requirements to know foreign languages also refer to sports sector, as there are various possibilities for top Latvia athletes, coaches and managers to train and work in any world country.

The aim of the research is to determine the demand among students for optional foreign language study courses, which foreign languages are chosen and studied by the LASE students. In the research, optional foreign language study course examination protocols were analyzed for the last four years.

Having evaluated LASE student priorities when choosing optional foreign language study courses, it can be concluded that students study the English language the most (64 %-66 %), then – Russian (21 %-25 %), the least number of students study

German (6 %-10 %) and Latvian (3 %-5 %). In the 1st study year a bit bigger number of students choose English, but in the 2nd study year students start learning Russian and Latvian more.

Speaking about why LASE students choose to learn a definite foreign language as an optional study course – it depends on their aims in labour market, the secondary school they finished and the acquired foreign languages there. Some students have acquired their first foreign language (English) on a very high level, therefore they choose to study another foreign language (German or Russian) at LASE. Others understand that their level of the English language skills is low, so they choose to continue developing English. Students of Latvia regions usually choose to study Russian, as communication in this language causes difficulty for them. Students who during their studies have started to work as coaches and have small children as their trainees sometimes face the necessity of the Russian language. Only a few students who have learned German at school on basic level choose to study this language. Some students who have finished minority schools enter LASE, and they have problems with the Latvian language, so in more cases they choose this language as an optional language course.

It can be concluded that most part of LASE students understand that foreign language knowledge and skills allow them to get more interesting and better-paid job. Therefore foreign language study courses are in demand among optional study courses. The most popular is the English language (64 %-66 % of LASE students choose it), it is followed by Russian (21 %-25 %), then German (6 %-10 %) and Latvian (3 %-5 %).

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FOREIGN LANGUAGE LEARNING: DIFFICULTIES AND IMPROVEMENT OF THE STUDY PROCESS

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Abstract. *The idea about knowing well any foreign language is very inspirational. People who know two or more foreign languages are admired and give people a hope to learn a new language easily. Consequently, this nice idea ends with the difficulties that students face while learning a new language. Only the infinitive desire could help student to learn something new. Attempts are really important thing in learning language, but difficulties can stop and isolate from the learning process. Scientists constantly have been estimating various kinds of learning difficulties and people who are undergoing difficulties of their studies. Frequently students face with academic failures, but according to the scholars, there is a way to avoid them – making learning more modernized by incorporating various innovative technologies as a motivational tool.*

Teacher's role, without any concerns, has a great influence on a person's life. Intellectual development starting with the primary classes to the university auditoriums and even future career largely depends on a teacher, who is responsible for providing valuable information and deciding on the methods as well as motivational tools to be applied.

The research and data acquired revealed the students' attitude towards learning of foreign language. It was noted that it is a very complicated and laborious procedure requiring long time and sustained efforts. During the process of foreign language acquisition, as the research results demonstrate, students confront with variety of difficulties. The respondents noted that the most topical difficulties are as follows: poor knowledge from secondary school, lack of practice, inefficient time management, etc. Therefore, in order to achieve prodigious results, the process of efficient language acquisition has to incorporate new educational trends, innovative study methods and practices, and appropriate motivational tools. Students participating in the survey specified that they would be satisfied by participating in modern innovative teaching and learning activities and having more contact hours for their lectures, and although the role of motivation cannot be denied.

Keywords: *foreign language learning/teaching, teaching/learning methods, learning difficulties, improvement of study process.*

Introduction

The knowledge of foreign language(s) has become one of common features of a person in a modern society. When we talk about the foreign language proficiency we often have in mind proficiency in English due to its World

Language status. But there are regions on the Earth, like Latin America or part of Asia, where its title of being global is not quite palpable. Actually, three world languages are distinguished – English, Spanish and French, and some other with several stipulations. The knowledge of at least two of them is mostly dictated by the labour market, international communication and by tendencies, both political and cultural, which make the national borders blurred (Parišauskienė & Jankauskienė, 2012).

For this reason a young person who seeks higher education certainly has a pressing task to acquire any foreign language(s). Statistics in Lithuania shows positive tendency of foreign language usage. English is the most popular foreign language to be learned today. It is spoken by 30 % of total population and 80 % of the youth (Languages in Lithuania (2011)). Today English is the language Lithuanians expect foreigners to know, so it is widely used in modern museums, hotels, tourist signs and city/resort restaurant menus. As the "top language" of the "prestigious West", it also became fashionable for some key local trademarks and popular songs. Spoken by some 70 % of the population, Russian is still the most popular second language in Lithuania (Languages in Lithuania (2011)), although this is declining due to the needs of students and educational system, the fact is that pupils at secondary schools and even at higher education institutions are entitled to select the languages to be studied. Beside Russian, other languages are considered to be more useful and popular in the modern digital world. German (spoken by 8 % of the population) held popularity as the 2nd foreign language (after Russian, instead of English) (Languages in Lithuania (2011)), but the situation could be improved by expanding projects with German speaking countries or developing global business.

Relevance and topicality of the problem. European Council pays huge attention to the language and plurilingualism policy, it focuses on the promotion of multilingualism and languages learning in European context. The experts of Council emphasise that process of languages learning and their usage has to involve entire population and that should lead to the preservation of cultural, social, intellectual and political elite, and on the contrary, it has to be available for every ordinary person (Guide for the development and implementation of curricula for plurilingual and intercultural education (2010)).

Foreign language competence is closely related to education possibilities and professional career opportunities. Foreign language importance is highlighted by majority of EU acts and documents. For instance, a Memorandum on Lifelong Learning (2000) determines new basic skills, which are significantly important for active participation in knowledge society and economical fields. After realizing of own potential and “big picture” it is not enough to have generic skills developed; furthermore, new capabilities have to be acquired, such as a new foreign language and computer literacy, etc. Due to constant digital development

and new technologies used in daily and professional spheres, educational systems deeply concerned about new skills development, and it is obvious that competent specialists have to meet the requirements of labour market and appropriate education, knowledge and skills give them competitive advantage. Council Resolution on a European strategy of multilingualism (2010) stresses the importance of foreign language skills development closely related to intercultural competence and their cohesion with abilities to be universal in various national and international contexts “significant efforts should still be made to promote language learning and to value the cultural aspects of linguistic diversity at all levels of education and training, while also improving information on the variety of European languages and their dissemination across the world”. (Guide for the development and implementation of curricula for plurilingual and intercultural education (2010)). According to the EU Council the role of multilingualism and foreign language learning is relevant for a modern professional citizen, who demonstrates willingness to be active participant of global business. Lifelong learning accentuates that age and motivation is not a limit. Everyone can find appropriate reason and place for education, and besides that, a responsibility of a modern teacher is to inspire and lead people, the youth to right direction and stimulate their inner motivation. On November 2005 the European Commission issued an announcement, which strongly propagates multilingualism in the European Union (UE). (The European Union strategy for multilingualism and acquaintance with foreign languages in Lithuania.(2005)). The member states were suggested to teach at least two foreign languages at a very young age. Language acquisition is related to European politics; respectively, development of foreign language literacy needs to be improved.

In 2014 education, youth, culture and sport council provided conclusions on multilingualism and the development of language competences (Conclusions on multilingualism and the development of language competences (2014)). Where it was stated that linguistic diversity is a fundamental component of European culture and intercultural dialogue and the ability to communicate in a language other than one's mother tongue is acknowledged to be one of the key competences which citizens should seek to acquire. Adopt and improve measures aimed at promoting multilingualism and enhancing the quality and efficiency of language learning and teaching, including by teaching at least two languages in addition to the main language(s) of instruction from an early age and by exploring the potential of innovative approaches to the development of language competences.

Following the analysis of the EU documents regarding multilingualism and foreign language acquisition the necessity and process of foreign language literacy development is a key priority of European Council and relationships with the rest world have to be expanded starting from acquiring and strengthening of

foreign language skills required by informational age and rapidly changing situation.

Study problem may be formulated as follows: despite new requirements of modern society and rapidly growing innovative technologies students in higher education institutions still confront with foreign language learning difficulties and handling of problematic learning and teaching process relies on appropriate students' motivation and elimination of the obstacles. That is considered to be partially teachers' responsibility, but on contrary, students have to find particular strategies to deal with lack of motivation and inner problems independently.

Object of research – detection of foreign language learning difficulties.

Aim of research – to investigate the foreign language learning difficulties, and the strategies of the study process improvement.

Goals of research:

- To analyze the basic foreign language learning difficulties;
- To investigate the benefit of traditional methods and innovative strategies, which can help to eliminate foreign language difficulties and improve the study process;

Methods: analysis of the legal documents and scientific literature sources, generalization, content analysis and survey.

Foreign language learning difficulties

Due to fast pace of our modern life, students can experience learning difficulties studying foreign language. Various studies were presented by foreign and Lithuanian scholars. Skehan (1991) analyzed differences of the learners participating in the process of the second foreign language acquisition. Barkauskienė (2015) and Galvydytė (2017) provided valuable information and recommendations how to detect foreign language problems and what strategies might be used in order to improve study process. Žindžiuvienė (2000), Bagdonas and Jankauskienė (2010), Tuomaitė (2014) presented the data acquired implemented surveys in Lithuanian higher education institutions that reveals students attitude towards foreign language difficulties and necessity to improve the study process. Žegunienė et.al (2014) studied and researched the foreign language acquisition process and difficulties that students confront during the study process. Learning difficulties and peculiarities of foreign language methodology were analyzed by Griffiths and Oxford (2014). Reviewing the results of surveys and the theoretical material provided by various scholars and pedagogues on the learning difficulties, it is obvious that difficulties arising from the foreign language learning can have significant impact on education and acquisition of foreign language. Learning difficulties, affect the way information is learned and processed. In general, a student may be diagnosed with learning

difficulties where there is a lack of achievement at age and ability level, or a large discrepancy between achievement and intellectual ability. Some teachers may conclude that students who confront with learning difficulties while learning foreign language are 'lazy', or 'just not trying hard enough'. Such students struggle to meet deadlines of their assignments and to demonstrate high achievements, but nevertheless the efforts used in reality teachers can see just poor skills and low assessment.

As Spengler (1995) notes the foreign language learning problems may be interrelated with personal features of a student, pedagogical competences of a teacher, application of various methods and managerial aspects implemented in an educational institution. Donath (1998) propose that language learning may be improved combined that with motivational factors. Furthermore, the other scholars Raasch (1982), Rampillon (1995) and Spengler (1995) state that learning difficulties are evaded if both the students and teachers demonstrate approach where foreign language is referred to as a integral system comprising linguistic elements, social requirements for appropriate communication in foreign language and norms applied to different methods of communication. If this system is not complete a student and/or a teacher confronts with learning difficulties that result in low achievement and insufficient learning/teaching.

With reference to the sources mentioned above, the learning difficulties, as they can be experienced by students who learn foreign language, may be divided into separate groups:

- Memory difficulties;
- Organisational difficulties;
- Writing difficulties;
- Visual processing difficulties;
- Reading difficulties;
- Auditory processing difficulties;
- Time management difficulties;
- Sensory distraction: an inability to screen out extraneous visual or auditory stimuli,
- Sensory overload: a heightened sensitivity to visual stimuli and sound; an inability to cope with busy environments.

Multiple challenges arise on the way towards fluency, and the obstacles for smooth learning might be distinguished into two categories: 1) internal (or psychological) and 2) external (or situational). Internal difficulties might be experienced when a student forms negative view to the learning process. That could be an initial disbelief in the final success, lack of motivation or creating labels about own capabilities based on wrong assumptions. External challenges

are situational and depend on a student's time schedule, financial situation, university course, area of living, access to the information, etc.

As Aufenanger (2006) emphasises, firstly students have to learn how to learn efficiently and avoid difficulties. Partly they are responsible for organization of learning process, but on contrary this process is almost impossible without assistance of a teacher who is entitled to manage learning/teaching process implementing or even developing new educational trends, learning/teaching methods and innovative strategies.

Improvement of the study process: traditional vs. innovative

The methodology of foreign language learning/teaching has been analyzed for centuries. Scholars analyze and demonstrate serious concern about integration of new and traditional methods in the process of foreign language learning. Griffiths and Oxford (2014) demonstrate concern about the foreign language learning/teaching methodology. Richards and Renandya (2002), Freeman and Richards (1996) analyzed how teacher has to be prepared for the foreign language teaching, and they reviewed the basic factors ensuring efficiency of the second foreign language acquisition process. Šiaučiukėnienė (2006) analyzed the organization and changes of learning/teaching process where integration of traditional and innovative methods has been reviewed, as foreign language learning has to comprise development of different language acquisition fields: writing, reading, speaking and listening. The unity of these skills might be expanded through integration of innovative strategies and combination with traditional activities performed during lessons. That could be challenging for teachers, because they have to be familiar with innovations used in education field and especially focus on foreign language acquisition. Continuous modernization and innovation processes change understanding of a teacher's role. Perception of a concept "a teacher" could be interpreted differently, as Šernas (2006) notes it is not a teacher's role to provide students with teaching material, nowadays teachers have to organize teaching process allowing students to use information and communication technologies themselves, because basic components of learning and teaching process is autonomy, independency and ability to work within comfortable environment. Informational and scientific sources are available for everyone, and it is not necessary to analyze paper versions of books or articles; beside that students have to be able to find suitable and efficient way of learning because a modern teacher is referred to as a guide or adviser who leads and directs students. Firstly, a teacher has to be proficient in computer literacy, innovations and acknowledge interrelation with foreign language learning/teaching. Žegunienė (2009) and Bijeikienė (2012) note that traditional teaching methods are passive and they do not play vital role achieving high learning outcomes. If high

expectations are desired traditional has to be combined with innovative. That is associated with both the methods and innovative approaches towards foreign language learning/teaching process. Innovative methods comprise new trends of activities, which are interactive and students have no longer to be just observers but to take active participation in simulations, presentations, on-line activities and virtual games, to use the Internet educational websites (forums, chatting rooms, blogs, etc.) and social or educational media platforms. Students may use the programmes Skype, Frype and other interactive applications, which help to search and communicate with the native foreign language speakers. Mobile applications are very beneficial for daily foreign language deepening due to constant repeating of material, new words and phrases. Sudžiuvienė and Tautavičienė (2011) accentuate deliberate transition from traditional methods and teaching strategies to more advanced technologies and innovative approaches. Application of innovative technologies was analyzed by Parišauskienė, Žegunienė (2013), Žegunienė et.al. (2014), the authors reviewed the principles of innovative technologies usage in foreign language learning and teaching process and their impact on students' achievements. A computer is the most common example of innovative devices used in learning/teaching process, and it is the most popular among teachers and students, specially deepening foreign language skills. Variety of devices can be used in foreign language acquisition. Modern educational tools such as an interactive board, an interactive table, tablets, interactive notebooks, iPads could be successfully integrated into learning/teaching process. These devices contribute to improvement of foreign language speaking, reading and writing skills and inspire/motivate students to active participants of the modern study process.

Combination of traditional methods and innovative strategies cannot be denied. Biletskaya (2003) emphasizes application of teacher-oriented, grammar translation method, aural-oral and oral-audio methods, reading methods and their combination with communicative, situational/natural context-oriented methods, where language can be learned and taught in real life situations. The author accentuated new methods of learning such as a "silent way" and community language learning, where students are treated not as students/learners but rather clients and they are entitled to learn getting teachers' advice or consultations and independently using various devices or interactive tools. Parišauskienė and Žegunienė (2013) highlighted the importance of combination of innovative and traditional methods. Due to rapid global and educational changes usage of new approaches make the study process more accessible, innovative and attractive for demanding students, who want to be ready for future professional challenges.

Methodology of Research

The research has been organized and performed in Klaipėda State University of Applied Sciences to investigate the difficulties that students confront with during the course of foreign language learning. The research was completed in March – April 2016. The target group was the 1st and the 2nd year students who study English as a foreign language (256 respondents), the instrument of research – a questionnaire form comprised 7 open and closed questions. The questions were formulated diagnostically aiming to investigate foreign language learning difficulties and strategies to eliminate them.

Analysis of foreign language learning difficulties

The respondents were asked to select from the provided list which foreign language learning difficulties they confront during the study process. Predominant difficulties are elucidated below in the Figure 1.

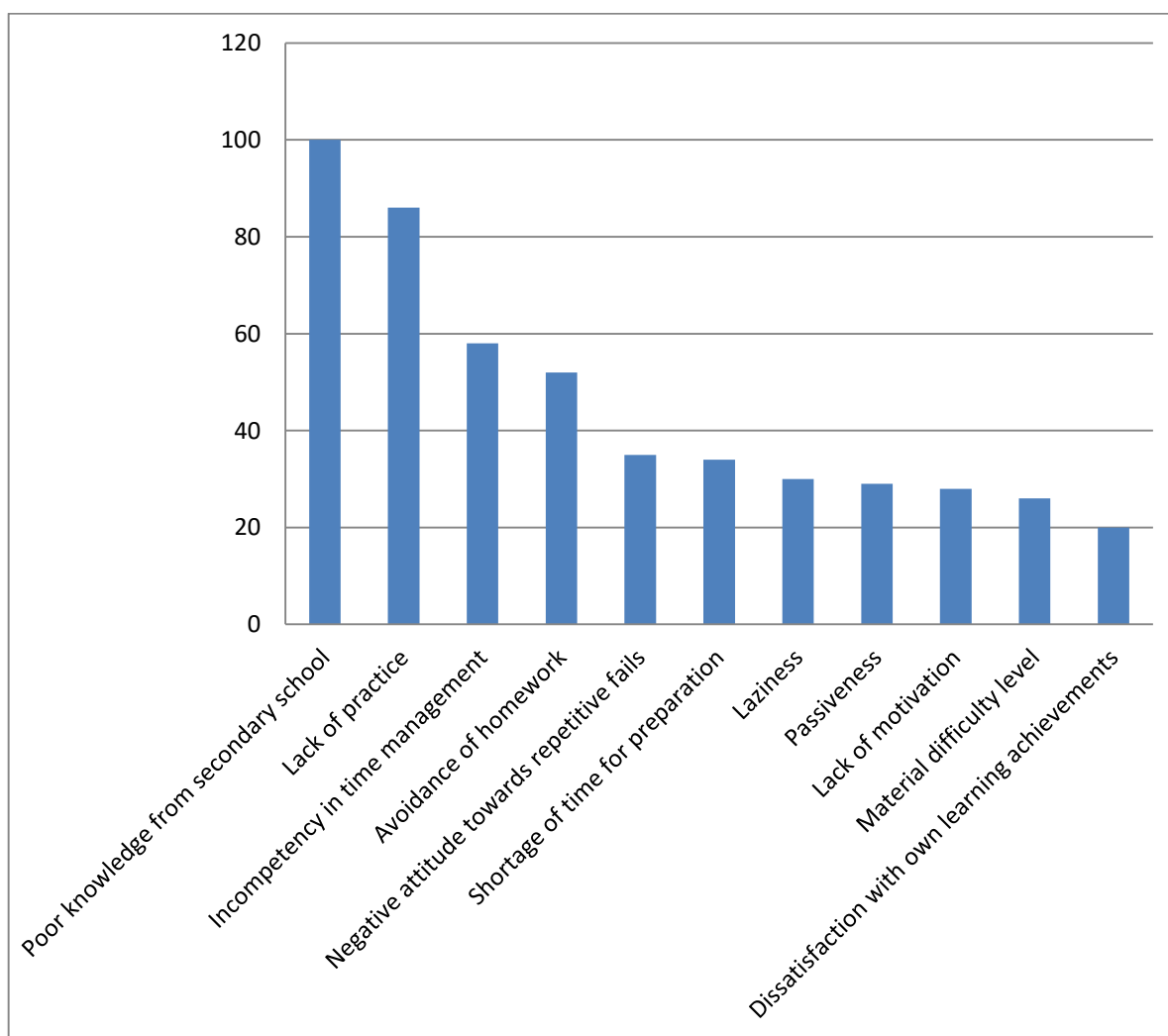


Figure 1 Foreign language learning difficulties

The respondents were presented with a list of possible learning difficulties, and they could select the most relevant. The selection was not limited. Having analyzed students answers the following might be concluded. Foreign language learning process is rather complicated for students because they indicated various difficulties. Herein the most common were presented. Majority of the respondents (100 %) indicated that they have poor knowledge from secondary school and continuing foreign language studies they don't feel competent and self-sufficient. Closely related difficulty is presented further – lack of practice. It was indicated by large majority of students (86 %). More than half of respondents are incompetent in time management (58 %) and avoid doing homework (52 %). The following difficulties were named by almost the third part of the interviewed respondents: negative attitude towards repetitive fails (35 %), shortage of time for preparation (34 %). Finally, the difficulties occurred due to negative personal features, such as laziness (30 %), passiveness (29 %) and lack of motivation (28 %). Lastly, the smaller group of the respondents was dissatisfied with own learning achievements (20 %) and that is referred to as a learning difficulty which prevents students from further successful learning.

As the research data reveal, the students confront with plenty of difficulties occurred during the course of foreign language learning. Some of them are originated from the secondary school (poor knowledge, lack of practice, avoidance of homework, high level of material) and inappropriate organization of learning/teaching process (inefficient time management, lack of time for preparation). Majority of indicated difficulties may be correlated with psychological condition or internal characteristics of the students (negative attitude, laziness, passiveness, no motivation and dissatisfaction).

Improvement of the study process

Further the respondents had a possibility to select from the list of suggested measures which could help them to confront with experienced difficulties and improve the foreign language study process. Results are presented below in the Figure 2.

Majority of the students (58 %) showed interest in presented variety of measures, which can be used during foreign language learning/teaching process. According to their expressed opinion that is the best way to enhance students' motivation and strengthen willingness to demonstrate their newly developed skills of foreign language. More contact hours were mentioned by slightly more than a half of the respondents (52 %). 46 % of the interviewed students need to have their motivation enhanced. More than third part of the students (38 %) indicated that they wish to have more tasks and assignments and almost the same number of students (34 %) require taking into consideration the needs of the learning

students. Respectively the smaller groups of the respondents appointed that it is important to make changes in timetable (22 %), non-formal education could help to cope with difficulties (16 %) and integrated lessons with other subjects studied at higher education institution (for instance, English lessons integrated into specialized courses of accounting fundamentals, business management, tourism administration, etc.) would improve current situation and would be beneficial for learning outcomes (13 %).

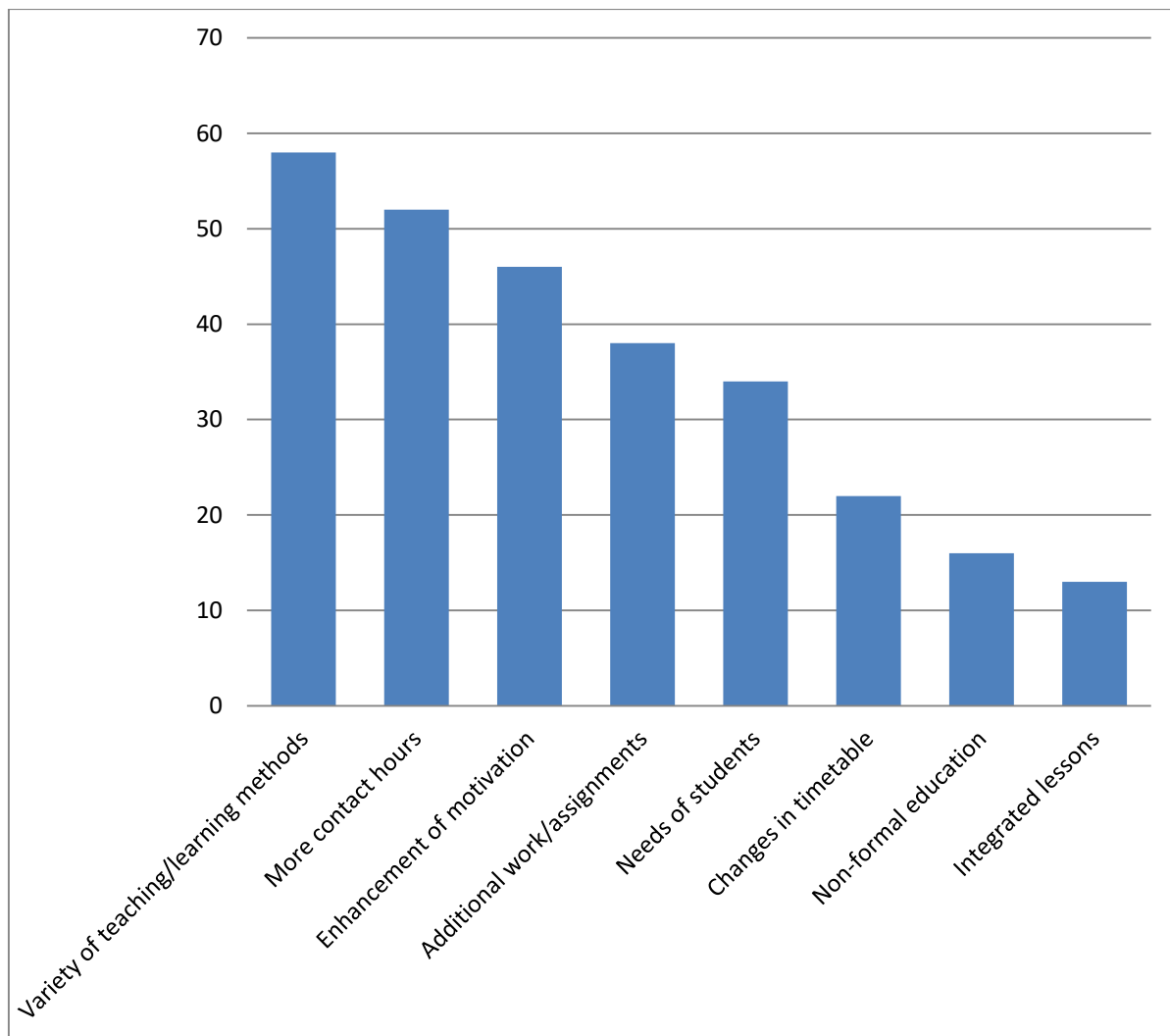


Figure 2 **Measures for Improvement of the study process**

As the research and data revealed students confront with the difficulties but they have own options how the foreign language learning and teaching processes could be improved and complemented with traditional methods (more contact hours, taking into consideration the needs of students, additional tasks, teacher-oriented method, grammar translation method, aural-oral and oral-audio methods, etc.) and innovative strategies (English lessons integrated into other courses,

usage of smart devices, interactive activities, newly adapted methods as “silent way”, community language learning, etc.). Mentioned factors may help students to master foreign language skills, to feel more self-confident and motivated. Such methods and strategies modernize learning/teaching process and make it available for every student.

Conclusions

Foreign language learning and teaching is a complex process and it has to be referred to as an integral system comprising elements and norms of communication. Due to this approach students and teachers bear responsibility for proper organization of learning/teaching process and efficient confrontation with experienced learning difficulties. Learning success and progress shouldn't be just teacher's responsibility; it has to be influenced by students – active participants of study process (consultations, independent work, active participation in activities, expressing own wishes and needs, etc.). Almost half of the mentioned learning difficulties arise from internal students' capabilities (time management, attitude, character features, etc.) but a fact that surrounding environment has no impact on learning/teaching process could not be denied. Modern academic community is engaged into exploration and usage of new study devices, methods and application of new approaches.

The research demonstrated positive situation where students suggested measures to be used for improvement of foreign language study process. Modern education system is open for innovations and interactive learning. Knowledge and skills could be acquired using computers, organizing integrated lessons and considering learning possibilities provided by different educational environment (natural and interactive). However, traditional learning/teaching methods (teacher-oriented method, grammar translation method, aural-oral and oral-audio methods) have to be related with innovative technologies (usage of smart devices and tools, interactive activities, etc.). They play important role enhancing students' motivation, creating comfortable learning environment.

Summary

Demand of knowing foreign language is precisely determined in EU legal documentation and acts. This issue is relevant for the citizens of whole Europe considering spheres of business, economics, professional and personal life. Currently the situation in world arena changes rapidly and it is influenced by changes in education system and labour market. Majority of the youth and senior people are engaged in international activities, projects and business, so that leads to new skills where foreign language is a key priority. Studying of foreign languages is very complicated and laborious procedure requiring long time and

sustained efforts. Therefore, in order to achieve prodigious results, the process of efficient language acquisition has obtained completely new approaches, study methods and practices. The modern studying approach demands planning and implementing of innovative teaching and learning activities. It cannot be opposed that the 21st century often called the information age, is bringing changes into traditional studying. Indeed the capability of applying of computer technology in teaching of foreign languages is almost infinitive. Consequently these innovations help students and teachers to deal with foreign language learning difficulties, and following the research data, it is presented that students are confident about arising difficulties and provide ideas on their efficient elimination.

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