

INDIVIDUALIZED LEARNING IN THE CONTEXT OF BLENDED MODE OF THE EDUCATIONAL PROCESS IN SECONDARY SCHOOL: CHALLENGES AND EXPECTATIONS

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Abstract. *Modern learning is the ultimate collaboration between teacher and student. Much like a doctor, the teacher must assess each individual's needs, then prescribe the right solution for that person by crafting an appropriate curriculum and delivering it in a way that is meaningful. The principal aim of the research is to get an insight into contemporary issues of the individualized learning against the backdrop of blended learning in secondary school, to say nothing of the future directions for its progress and exercising. The group of researchers prepared a web-based experimental questionnaire (intended for schoolteachers and parents) targeted at illustrating the didactic potential and educational opportunities of the individualized learning as an effective remedy of preventing malign influence and retaining the quality while rendering the learning services faced with unanticipated shift to distance learning due to the COVID-19 pandemic. The inquiry-based pattern which was chosen with the aid of a voluntary response sampling technique comprised some 500 schoolteachers and parents from a various metropolitan secondary schools. Qualitative data analysis of the data obtained offer the opportunities for forming didactic rationale of the individualized learning, which could facilitate the learning process in secondary school as close as accomplishable to practical application of the learner-centered principle within a competency-based approach and digitalization of education. Alternatively, the obtained findings and logical conclusions showed the trends of teaching modes, methods and tools transformation of the individualized learning within the conditions of blended learning in secondary school.*

Keywords: *blended learning, Covid-19 pandemic, individualized learning, learning process, secondary education.*

Introduction

Currently, the problem of individualization of the educational process has acquired special significance, since its solution is associated with the creation of conditions for the disclosure and development of creative and individual children's abilities, improving the performance of each child, active self-development, deepening knowledge, expanding learning opportunities.

It is undeniable that in the real process of learning, the knowledge is absorbed individually by each schoolchild. However, the process of knowledge absorption can be the same, coincide among children of a given group or class. It is possible to identify the common in the individual development of children in the educational process. In its turn, the common can characterize the level of children's development, the similarity in the motives of activity and behavior. Typically, children of the same age have this common level of development. Therefore, understanding of the common psychological characteristics of children of a given group or a given age, provides the possibility of insight into the educational material by each schoolchild.

Individualization is a set of actions which imply devising and ensuring the fulfillment of learning experiences which are nimble to individual child's needs, strengths and interests. Schoolteachers ruminate upon their monitoring of each child and then devise the most adequate steps to give assistance to each child's learning and development. It is indisputable that when learning experiences are dedicated to children's interests, they are more captivating and determined to children. Due to the fact that children may differ in their evolutionary advancement, it is also essential that the curriculum backups teachers in devising learning experiences that are nimble to individual children's needs and strengths.

The abovementioned works well with the distance teaching during the COVID-19 pandemic, when class exercises had to be shifted from classroom studies and blended online and offline backdrop to fully digital modes. While the COVID-19 pandemic triggered a global learning destabilization of unrivaled scale and severeness, it also uncovered the tremendous room for innovation in education and renewal of education systems.

In this regard, betaking to the variety in learners' cognitive and motivational characteristics is claimed to be a demanding task to secondary school teachers. In the matter of secondary education, the COVID-19 pandemic has disorganized schoolchildren' lives in every imaginable ways, which is a demanding task for them, to say nothing of the schoolteachers and parents. They will not fulfill their school educational program and assessments in the regular way, and they have also been set apart from their social stratum. It could be argued but schools have to fine-tune learning management, shift from conventional classroom studies to remote learning both online and offline.

One of the variants for an appropriate reflex to the unrivaled and unforeseen tasks that the education system in general, and a general secondary education in particular, encounters today with a background of the switching over to distance learning due to the COVID-19 pandemic, can be the essential application of the principle of individualized learning within the educational process in secondary school.

In this context, the main purpose of the study is to get an insight into contemporary issues of the individualized learning against the backdrop of blended learning in secondary school, to say nothing of the future directions for its progress and exercising.

Literature Review

The importance and necessity of the individualization of learning has been repeatedly proven by the scientific works of several generations of psychologists, educators, methodologists and practicing teachers (Gibbons, 1971; Hiemstra, & Sisco, 1990). For some time past, a range of pedagogical studies have been dedicated to the topic of individualization and differentiation of the educational process in the light of new circumstances of life triggered by the COVID-19 pandemic (Algozzine, & Anderson, 2007; Lapada et al., 2020; Malykhin et al., 2021; Yeh, 2010; Connor, 2017).

Data as of August 20, UNESCO (2020) put on the list nearly 1.6 billion learners engaged in more than 190 countries all over the world. Shutdowns of schools and other learning spaces have influenced 94 per cent of the world's student population. Most governments around the world have temporarily closed educational institutions in an effort to restrict the spread of the COVID-19 pandemic. Schools are hubs of social activity and human intercommunion. When schools close, many children and youth miss out on social contact that is essential to learning and development (UNESCO, 2020). The abovementioned has a prompt and a durable impact, particularly for the more vincible and deprived communities.

To guarantee interaction between schoolteachers and children, as well as among schoolteachers and parents or among schoolchildren in many countries various online communication applications are being used (among them WhatsApp, television, cell phones, computer and network hardware, satellite systems, as well as different services available with them such as video conferencing and distance learning). Interactive online courses are also affording the opportunities for social communication and promoting the succession of education for all via distance learning. As much as these undertakings are deemed to be reasonable to refer to the need of the time, it has also caused a challenging groove to parents who are working from home and simultaneously

taking the charge of their children's learning process, so that it keeps up smoothly during the times of COVID-19.

It should be also mentioned that quite apart from the fact that distance education has its unquestioned benefits compared to other ways of innovative teaching and learning, much needs to be reanalyzed and reconsidered to bring the training in secondary school into accordance with new circumstances of life triggered by the COVID-19 pandemic. In this regard, international co-authored works serve as a valueless support in this process (Mykhailenko et al., 2020; Žogla, Ušča, & Mykhailenko, 2020).

Methodology and Participants

The survey was conducted in January-March 2021 and took place in Kyiv. Subjects of the research were schoolteachers and schoolchildren's parents. The inquiry-based pattern which was chosen with the aid of a voluntary response sampling technique comprised some 500 schoolteachers and parents from a various metropolitan secondary schools. The mentioned principals and teachers of metropolitan general secondary schools were asked to share the links among their colleagues and parents. This resulted in 500 responses from 130 general secondary schoolteachers who teach different subjects and 370 parents.

The present research is targeted at discovering experiences of teachers and parents illustrating the didactic potential and educational opportunities of the individualized learning as an effective remedy of preventing malign influence and retaining the quality while rendering the learning services faced with unanticipated shift to distance learning due to the COVID-19 pandemic. Qualitative data analysis allows the authors to examine the phenomenon from an individual's personal experiences in different situations and circumstances. The descriptive qualitative frame was used to make good of this research so that significant responses could be found to get an idea of teachers' and parents' true-to-fact experiences amidst COVID-19 pandemic.

Instrument and Procedure

Data gathering instrument comprised a web-based questionnaire prepared by the group of scientists using Google Forms. The views outlined in the scientific papers by Topuzov (2021) and Topuzov, Malykhin, & Opaliuk (2018) were embraced as a theoretical groundwork for preparing web-based questionnaire.

Five obligatory questions were intent on investigating schoolteachers' and parents' concerns towards educational changes that have been occurring in the system of secondary education and the attempt to comprehend the concept of individualized learning amid remote and blended learning triggered by the

COVID-19 pandemic, when the schoolchild turns to the subject and no more the object of educational process. For the core task of our research we took into consideration the following questions:

1. *How did the moving of the general secondary school to a blended mode of the educational process affect the academic performance of schoolchildren? In this regard, is there a need to take advantage of additional tools of individualized learning?*
2. *To what extent were the technologies of individualized learning involved in the educational process in the pre-COVID-19 period? If any, please name them.*
3. *Were any diagnostics of the schoolchildren's individual characteristics carried out in the pre-COVID-19 period in order to organize a learning process that is adequate to the level of development of schoolchildren's general educational skills and abilities? Were the individual characteristics of schoolchildren/groups of schoolchildren taken into account during the organization of the work of the class in terms of the use of additional technologies of individualized learning for the successful retention of educational material?*
4. *At the time of the compulsory move of the general secondary school to a blended mode of the educational process, was a need for an individual approach to some schoolchildren within the classroom taken into account? In connection with the different pace of the covering of educational material by different schoolchildren, who (schoolteachers or parents) had extra commitments to strengthen the additional efforts for the qualitative retention of auditory material?*
5. *At the time of the compulsory move of the general secondary school to a blended mode of the educational process, was there any information available regarding the individual psychological and pedagogical peculiarities/distinctions of schoolchildren/groups of schoolchildren, which would create optimal conditions for the bringing out full potential of each schoolchild, as well as taking an active part in lessons?*

Table 1 Sociodemographic Characteristics of General Secondary Schoolteachers Participating in the Web-based Survey (made by Authors)

<i>Variable</i>	<i>Number (n=130)</i>	<i>Percentage (100%)</i>
<i>Gender</i>		
<i>Female</i>	121	93
<i>Male</i>	9	7
<i>Position</i>		
<i>School Principal</i>	3	2

<i>A Teacher</i>	21	16
<i>A Category-1 Teacher</i>	20	15
<i>A Category-2 Teacher</i>	20	15
<i>A Higher Category Teacher</i>	36	28
<i>A School Counselor</i>	31	24
Working Experience		
<i>More Than 20 Years</i>	60	46
<i>From 10 To 20 Years</i>	31	24
<i>From 3 To 10 Years</i>	27	22
<i>Up to 3 Years</i>	10	8
School Level		
<i>Primary School</i>	69	53
<i>Middle School</i>	39	30
<i>High School</i>	22	17

Source: own study

n=13

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What is more, since we hold an interest in achieving impersonal and credible consequences we appended four questions having to do with sociodemographic data of the research participants. The sociodemographic parameters of secondary schoolteachers are given in Table 1.

The sociodemographic characteristics of parents participating in the web-based survey are presented in Table 2.

Table 2 Sociodemographic Characteristics of Parents Participating in the Web-based Survey (made by Authors)

<i>Variable</i>	<i>Number (n=370)</i>	<i>Percentage (100%)</i>
Age		
<i>≤30</i>	7	2
<i>31-35</i>	85	23
<i>36-40</i>	118	32
<i>41-45</i>	104	28
<i>46-50</i>	30	8
<i>51-55</i>	11	3
<i>≥56</i>	15	4
Family Composition		
<i>Full family (a father and a mother)</i>	303	82
<i>A single-parent family (a mother)</i>	56	15
<i>A single-parent family (a father)</i>	11	3
Number of children		
<i>One</i>	141	38
<i>Two</i>	192	52
<i>Three</i>	33	9
<i>Four</i>	4	1

<i>Number of school-age children</i>		
<i>One</i>	256	69
<i>Two</i>	107	29
<i>Three</i>	7	2

Source: own study

n=370

Results and Discussion

Following on from the results of the questionnaire the attained results of the study are primarily about the notion of distance learning and individualized learning from the teacher’s point of view. Just about all of them articulate that distance learning is the complex of learning modalities using an online area, Internet connection, media, but adaptable with unrestricted time and distance. In its turn, with the individualized instruction, learning strategies have to be based on schoolchild readiness, interests and best practices.

Schoolteachers are in possession of miscellaneous ideas and backgrounds concerning individualized instruction, a widely-publicized educational strategy that is suited for schoolchildren’s merits and flaws. Research summary information demonstrates that there is a scarcely equal dividing between teachers who have a positive attitude of the individualized learning trend at large and those who are either neutral or more adverse. Along the same line, schoolteachers are divided on technology’s destination in individualized instruction. As much as about half of schoolteachers (48%) are constructive and upbeat about individualized instruction. They perceive it as either a new and novel approach to upgrade public education or at best an encouraging intention. Whereas in contrast, as much as about a third of research participants suppose the headway toward individualization is a passing craze, something that is not within their eyeshot, or a spoiler to public education. Additional one-quarter believe that individualized instruction is just one of many school modernization policies.

For another thing, the survey results are relevant to the discrepancy and resemblance of distance learning stemming from the teacher’s point of view. Each and every one takes up the position that the analogies between distance and face-to-face learning can be identified in the process itself. No matter distance or face-to-face learning the teachers have to get ready the syllabus, material, and remember the primary target that has to be accomplished. The dissimilarity between these two is only manifested in the manner how to teach the schoolchildren. The schoolteachers converge on a position that distance learning and face-to-face learning have dissimilarities in how the way the teacher conducts the teaching process. In face-to-face learning, the schoolteacher and the children get together in one place and one time, but in distance learning they cannot, even they can employ Zoom as a media, but they

are disunited in distance. In this context, even when appropriate technology is in hand to teachers, some are lacking faith about the scope to which digital tools give a hand to schools in implementing the aims connected with individualized instruction.

Getting back to the media, WhatsApp is the media that is at most utilized by the teacher for carrying out distance learning modalities, then accompanied with Google Classroom, Zoom, and Telegram in this pandemic context. The schoolteachers converge on a position that they utilize those media because they are convenient for employment, techno-friendly, and that media are acceptable to be engaged in this context. The majority of schoolteachers inform that their schools support Wi-Fi that is fast/strong enough to facilitate all their instructional needs coupled with relevant assistance to remove technological defects. No fewer than 70% of participants make no doubt that there are reasonable Internet and IT resources in location where they work. Substantially all schoolteachers (96%) make understand that their schools are incorporating digital technologies to extend assistance to individualize the learning experience stemming from each schoolchild's merits and flaws, and requests. The better part of schoolteachers (55%) explain that their schools are incorporating digital tools as an essential auxiliary reserve.

Further to this, although distance learning looks simple to be comprehended in idea, it also has hindrances for carrying out. The schoolteachers also converge on a position that the hindrances of carrying out distance learning split into three elements. They are in the sustaining instrumentality such as Internet connection, students' appliances technical data, and Internet limit and the learning process like less approachable when the activities because the schoolteacher and children have restricted time to interinfluence each other, cannot offer a comprehensive explanation about the material, and cannot get a feeling and keep control of schoolchildren's emotive factors when learning process. Consequently, they also articulate that teachers' difficulties in the practical application of distance learning are: teacher's skills to cope with technology, teacher's agenda to manage high-performance distance learning activities, sustaining instrumentality, and the creative potential of teachers as the main factor in distance learning activities.

In testimony whereof, in our research more than 55% of teachers have at best some conviction that digital technologies can give a hand to schools to be conscious of six different challenges connected with individualized instruction (enhance schoolchild involvement, adapt instruction for each schoolchild, enhance schoolchild learning, offer all schoolchildren with equal opportunities to put the axe on the helve, help teachers better penetrate their schoolchildren, let teachers concentrate on what is most urgent, enhance schoolchildren's socioemotional skills). But no greater than 13% have a good many of self-reliance concerning any of those key goals. To give one example, 93% of

research participants are at best in some measure steadfast that digital tools can give a hand to adapt instruction for each schoolchild but only 8% have a good many of self-reliance.

The following one is teacher's perceptibility of schoolchildren's accomplishment when conducting distance and face-to-face learning. The better part of schoolteachers consider that face-to-face learning is more resultative to the schoolchildren; so, when the schoolchildren learn in offline operation, the teacher can handle them, and then they can discover that their accomplishments are stemming from their abilities. In distance learning, they are aware of that it is the same as learning has a process to achieve a schoolchild's accomplishment by rapid-fire questions or exercise, but the teacher cannot keep the schoolchildren under the radar. So, they do not keep in line schoolchildren's factual accomplishment, whether it is stemming from their abilities or not. It must be explained, when the schoolchildren do the homework, teacher cannot observe if it is done by themselves or maybe they are assisted by their relatives. This is one of the hindrances come across by the teacher.

Further, pass to the following clarification about the interconnection between the learning process and schoolchild accomplishment. Children who study offline will bother with the materials, because the schoolteacher always keeps a check on them and when in the learning process, the schoolchildren, who do not get an understanding of the material, can address the question to their teacher. This thing has an effect on schoolchildren's comprehension and is concerned with their accomplishments. The schoolteachers also provide insight about obstacles to reach the learning goal, in the distance learning process not all of the children put in their task on time, children do not easily get an understanding without a clarification from the schoolteacher, so the schoolteacher cannot reach the learning goal most accurately, sometimes the children could not keep track of the online session because of data limit or Internet which is not backed up. On the top of that, the goals of the teaching and learning process could not be accomplished. Hence, the teacher's challenge is in issuing grades. When the schoolteacher cannot provide an ultimate clarification to their children, unvoluntary the learning goal or basic expertise cannot be gained. Apart from that, some of the materials require to be regarded by using face-to-face learning, so when distance learning is performed, the learning process is not ultimate.

Irrespective of the difficulties mentioned, the received answers bring forward future expectations on the degree to which schoolteachers use adaptive software, demonstrate content in distinguishing arrangements, and allow children to take up the options. A good few individualized learning practices corroborate to be more widespread than others. Almost three-quarters of schoolteachers always or often bring together children's own personal motivations into classroom tasks and practical trainings. Rather more than half

(51%) of schoolteachers always or often lead individual children through material stemming from what they have learned thoroughly as contrasted to leading everyone through the academic programme at a similar tempo. Over 60% of schoolteachers always or often use versatile frameworks, such as audio or video, to demonstrate the same material to children stemming from their individual wishes. As few as 33% of schoolteachers always or often ask students to lay down their own learning aims and 20% of schoolteachers never make use of this methodology. It is also important to note that 20% of schoolteachers always or often want children to choose the key deliverables that identify whether they are making headway in the direction of their learning goals. Somewhere one-third not even once employ this strategy. Somewhat greater than one-quarter (27%) of schoolteachers always or often use computer software to build up learner personal details. Roughly 40% of teachers never do so.

On the other hand, schoolchildren's parents have had to get over the difficulties of being under a stay-at-home order as well. Dealing with the problems of learning encounter by parents, the survey results are prevailed by three elements, particularly growing family expenditures; parental drain due to the progressive burden of managing limitations and work, much as the mutual relation and interaction of parents with children, and likewise between parents and teachers.

The above survey's results demonstrate that nearly all parents are concerned about the unfavourable effect of the COVID-19 pandemic on their children's learning. The results bring to light the fact that the major annoyance of the parents are connected to children coming across the issues due to abrupt school shut-down and a total restriction on social meetings.

Heedless of the fact that most parents have been aidless in how to keep their children interested, many have made an effort to make friends with technology and come to grips with online learning. Those who are already well-acquainted with technology and online tools are far more efficient in making a consuetude of learning at home with their children, comprising activities and home tasks assigned by the schools, and employing more online resources for reading and home-based tasks.

Insufficient engagement of parents and families to extend assistance to children's distance learning activities at home is foremost due to parents' restricted time and capability to come with children in learning. An unexpected discovery in the research is that over half of parents acknowledge that their children's learning impetus has diminished. The grounds for this are versatile (specifically, a lot of assignments that have to be accomplished in a little time, less enjoyable learning methods, restricted communication with friends, absence of the possibility to study productively in an online mode, disorganized home entourage or lack of access to proper study areas etc.).

Conclusions

Based on the survey results and deliberation, it can be determined that in the face of unanticipated shift to distance learning due to the COVID-19 pandemic the individualized instruction can be an effective remedy of preventing malign influence and retaining the quality while rendering the learning services. This current survey specifies the task complex in general stemming from the teachers' and parents' points of view. In one respect, the performed research has uncovered many problems and tasks with regard to distance teaching and learning triggered by the COVID-19 pandemic, but at the same time it demonstrated the tendencies of teaching modes, methods and tools transformation of the individualized learning within the conditions of blended learning in secondary school. The classrooms are completed with different children, and many schoolteachers look toward to contemplate learning experiences that are receptive to the children's wishes and motivations. Nevertheless, many of schoolteachers make efforts to carve out time to use individualized instruction in the classroom. Catering to the diverse needs of children is exacting, but undertaking a commitment to harmonize instruction comes from the idea that children learn better through the use of various formats and methods of learning.

We can suggest that the best practice to turn to good advantage of the didactic potency and educational potentialities of the individualized learning is to come to know children, set individual, gaugeable and attainable goals for children, decide on an instructional approach for each learning style and use supportive technology to help meet the demands of all children. Moreover, the conducted survey has proved correct that the teachers who incorporated the individualized learning formats into their day-to-day classroom practices in the pre-COVID-19 period, successfully continued and took advantage of employing those practices in the context of distance or blended mode of the educational process in secondary school caused by the COVID-19 pandemic.

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