GENERAL SECONDARY TEACHERS' VIEWS ON EDUCATIONAL PROCESS AMID THE COVID-19 PANDEMIC: TWO-YEAR EXPERIENCE OF BLENDED LEARNING

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Abstract. *The main purpose of the paper is to identify and generalize the tendencies of changes in the system of education influenced by the unexpected shift from face-to-face learning (traditional) to blended learning (as being regarded as a pattern of a certain mix of face-to-face and distance learning). The research is also targeted at investigating general secondary teachers' readiness to respond to the educational challenges during the Covid-19 pandemic. The paper presents the information obtained at the very beginning of the sudden and unpredictable shift to total distance learning and then after the gradual transition to blended learning. The pros and cons of blended learning under conditions of the Covid-19 pandemic are revealed. The ideas that are closely connected with the accepting or not accepting absolutely new ways of teaching and learning from the points of view of general secondary school teachers, schoolchildren and their parents are given in the paper. The main problems of general secondary school teachers, schoolchildren and their parents face and practical ways to address these problems are enumerated and analyzed. The authors offer a variety of possible ways and means for overcoming the problems identified. Some certain innovative approaches and technologies, methods, techniques and means of blended learning aimed at delivering quality education to general secondary schoolchildren are mentioned. The research sample includes 3600 general secondary school teachers from different regions of Ukraine.*
Keywords: *blended learning, educational process amid the Covid-19 pandemic, general secondary school, general secondary school teacher.*

Introduction

Steps to prevent the spread of coronavirus undertaken by governments in almost every country of the world resulted in changes in all spheres of human life (WHO, 2020). The impact of these steps is particularly felt in the sphere of education. In March 2020 after the outbreak of Covid-19 all over the world general secondary school teachers, schoolchildren and parents witnessed temporary suspension of face-to-face instruction and the shift to distance

teaching and learning. Unfortunately, the fight against Covid-19 is still in progress and researchers and practitioners have to find all the possible ways and means for overcoming the negative consequences of the school and university closures and the most effective approaches and technologies, methods, techniques and means of blended learning aimed at delivering quality education to learners of different ages.

Literature review shows that researchers from different countries who are concerned about the situation with education have already investigated various aspects of the problem connected with the sudden shift to remote teaching and learning at education institutions of all levels which took place in March 2020. Thus, for instance, investigating the attitudes of general education teachers towards remote learning in Latvia, Usca, Dzerviniks, Lubkina, Vindece, & Poplavskis (2021) revealed its strengths and weaknesses. And this enabled researchers to develop recommendations for general education teachers which are to be implemented at different levels (namely, at the individual level, at the level of an educational institution, at the municipal level and at the national level). The research by König, Jäger-Biela, & Glutsch (2020) was targeted at investigating the adaptation of early career teachers in Germany to online teaching during school closures caused by the Covid-19 pandemic. In their study the researchers emphasized "the need to foster the development of teacher competence in ICT-related teaching and learning both in initial teacher education and teacher professional development" (König, Jäger-Biela, & Glutsch, 2020, p. 619). Trying to find out the possible ways to mitigate negative impacts of Covid-19 on school education, Burgess and Sievertsen (2020) came to the conclusion that although face-to-face instruction was the most effective way to raise lifelong skills among schoolchildren, teaching was gradually moving online. Some studies were aimed at finding out how general education teachers defined remote instruction and distance education (Lindner, Clemons, Thoron, & Lindner, 2020).

Conducting the study within the framework of the project "Organization of Educational Process in the Content of Unpredicted Changes (the Covid-19): Comparative Analysis (Ukraine – EU countries)" (Registration No 0121U108690) the authors of this paper have already attempted to identify and substantiate the system of psychological and didactic tasks all the players in the educational process of general secondary schools (teachers, schoolchildren, parents) face in the paradigm "teachers – schoolchildren – parents" amid the Covid-19 pandemic (Topuzov, Malykhin, & Aristova, 2021). But considering the fact that we were also interested in tendencies of changes the system of Ukrainian general secondary education faced after the first shift to distance learning caused by the Covid-19 pandemic and then after the introduction of so-called blended-learning (regarded as a pattern of a certain mix of face-to-face

and distance learning), the current research aimed at their identifying and generalizing was carried out among general secondary school teachers.

Methodology
Instruments

To collect data the researchers developed a web-based questionnaire which included two parts. The first part which was aimed at finding out social and demographic information about respondents contained questions about gender, work experience and qualification.

Taking into account that we were interested in identifying and generalizing the tendencies of changes in the system of education influenced by the unexpected shift from face-to-face learning (traditional) to blended learning (as being regarded as a pattern of a certain mix of face-to-face and distance learning), the second part of the web-based questionnaire contained the following questions:

(1)   *Did you have any experience to deliver teaching remotely before the first lockdown was imposed in Ukraine?*

(2)   *Did you use any digital technologies for face-to-face learning before the first lockdown was imposed in Ukraine?*

(3)   *Were you ready to deliver teaching remotely during the first lockdown?*

(4)   *What challenges did you face immediately after the introduction of social distancing measures including school closures in March 2020 and do you still experience the same problems?*

(5)   *What online platforms, video-communication and/or messaging services do you use amid blended learning caused by the Covid-19 pandemic?*

(6)   *Has there been a change in your style of teaching since the outbreak of the Covid-19 pandemic? In case of a positive answer, please, provide some examples.*

Procedure

The researchers started to collect data in November 2021 shortly after Ukraine was hit by a new coronavirus wave and the data collection lasted for two months (November-December 2021). To recruit respondents for our web-based survey the researchers used a combination of convenience and purposive sampling methods. After the web-based questionnaire was developed using Google Forms, its link was sent to the principals and teachers of general secondary schools the researchers cooperated with (67 general secondary schools). We kindly asked the principals and teachers we cooperated with to share the link with their colleagues from different general secondary schools. Also the link to the questionnaire was disseminated via various online networking groups for general secondary teachers. Everyone was informed that

participation in a web-based survey was completely voluntary and anonymous. Although we obtained 3849 web-based questionnaires back, it should be noted that 196 of the returned questionnaires were found to be incomplete in some parts and 53 were almost totally blank (there were replies to one or two questions only. Altogether, 3600 general secondary school teachers provided answers to all questions of the web-based questionnaire.

Participants

As it was mentioned above the research sample included 3600 general secondary school teachers from different regions of Ukraine (Kyiv Oblast, Kharkiv Oblast, Khmelnytskyi Oblast, Ternopil Oblast, Zhytomyr Oblast, Zhaporizhzhia Oblast and Dnipropetrovsk Oblast). The overall proportion of female general secondary school teachers that responded to the web-based survey was 93% and the overall proportion of male general secondary schoolteachers was 7%. It should be also noted that the respondents with different work experiences took part in the web-based survey: up to three years (9%), from three to ten years (22%), from ten to twenty years (22%), more than twenty years (47%). Web-based survey participants were primary school teachers (45%), middle school teachers (31%) and high school teachers (24%).

Data Analysis

To process data the researchers used methods of qualitative analysis.

Research Results

First, we wanted to know if web-based survey participants had had any previous experience to deliver teaching remotely before the first lockdown was imposed in Ukraine. The obtained results showed that 69% of respondents had had some previous experience to deliver teaching remotely. Thus, replying to this question one of the respondents wrote:

T 138: *I am a primary school teacher and I have been teaching for more than 27 years. To tell the truth, the sudden shift to remote teaching was rather painful for me. The main reason for such a reaction was that when I was a student, I wasn't trained to deliver teaching remotely. Since my profession requires keeping pace with the time, I mean the development of teaching skills and expertise, I often take part in different webinars and attend various training-sessions. But before the introduction of social distancing measures (including the lockdown), I had never thought about teaching online. What I take from this experience is new knowledge, skills and qualifications …*

It should also be noted that 31% of respondents had had some practice at delivering teaching remotely (mostly there were foreign languages teachers):

T 473: *I am an English teacher and a member of a special professional learning network for English teachers. Quite often we organize online meetings to share some ideas, new methods and techniques we can use during our lesson. However, although the experience of teaching remotely was not new for me, I did not use it in my everyday practice with my pupils.*

The second question was aimed at finding out if respondents had had any previous experience of using digital technologies for face-to-face learning before the introduction of the first lockdown in Ukraine. We found out that only 38% of respondents had the opportunity to use digital technologies for face-to-face learning before the introduction of the first lockdown in Ukraine (27% of respondents mentioned that their classrooms were equipped with whiteboards and 11% of respondents used different free game-based learning platforms to review their pupils knowledge and to create a motivational learning environment). 62% of respondents replied that they had used only textbooks and educational aids recommended and approved by the Ministry of Education and Science of Ukraine (2020).

The main aim of the third question was to find out if general secondary school teachers were ready to deliver teaching remotely during the first lockdown. The obtained results indicated that 62% of respondents were not ready to teach remotely and they found it difficult to accept absolutely new ways of teaching using digital technologies. Other general secondary teachers (38%) were not so resolute. They noted that although they had some problems connected with the sudden shift to distance teaching but in many cases these problems were connected with pupils' reluctance to learn remotely (lack of necessary digital and self-study skills, lack of equipment etc.) and did not relate directly to their inability to use methods of distance teaching and learning. It took them some time to contact schoolchildren and their parents, to discuss and agree upon some possible ways of delivering remote education effectively (considering availability of computer equipment and access to the Internet etc.), to find out what teaching methods and techniques were effective for delivering education.

The fourth question concerned both challenges that general secondary school teachers faced immediately after the introduction of social distancing measures including school closures in March 2020 and with the passing of time (namely, shortly after Ukraine was hit by a new coronavirus wave which happened in November 2021). A summary of the obtained results is presented in Table 1.

Table 1 **Challenges Faced by General Secondary School Teachers Immediately After the Introduction of Social Distancing Measures in March 2020 and in November 2021**

Period	Challenges								
	Lack of Digital Skills to Deliver Instruction remotely	*Speed and Quality of Internet Connection*	*Lack of Proper Equipment*	*Heavy Workload*	*Lack of Clear Guidance from National Authorities*	*Health-related Stress*	*Lack of Parental Involvement*	*Lack of Direct Contact with Schoolchildren*	*Lack of Skills to Keep Schoolchildren Motivated*
March 2020	2484	3276	2988	3397	3194	3420	2592	3418	2808
November 2021	972	2664	1260	1044	573	648	1332	1116	1656

Source: designed by authors
n=3600

As Table 1 shows the most serious problems general secondary school teachers faced were connected with heavy workload (94%), lack of clear guidance from national authorities (89%) and lack of direct contact with schoolchildren (95%). These problems became less obvious after the school closures in November 2021: heavy workload (29%), lack of clear guidance from national authorities (16%) and lack of direct contact with schoolchildren (31%). Thus, heavy workload was mentioned by 29% of respondents and lack of direct contact with schoolchildren by 31% of respondents. 69% of respondents stated that immediately after the introduction of social distancing measures including school closures in March 2020, one of the main problems they faced was the lack of digital skills to deliver instruction remotely. After the school closures in November 2021 this problem was mentioned by only 27% of respondents.

The problem connected with the speed and the quality of Internet connection was pointed out by 91% of respondents in March 2020 and 74% of respondents in November 2021. Unfortunately, realities of the situation we witness today show that it is practically impossible to move from simply recognizing this problem to adopting serious steps to resolve it at the level of education institutions. Just the teachers' desire to have high quality Internet in order to deliver synchronous instruction remotely without any technical problems during school closures is not enough. We do believe that such steps should be taken at the national level. It should be also noted that according to respondents almost all schoolchildren faced identical problems connected with the speed and quality of Internet. These problems are not peculiar to Ukraine only. A simple proof can be found in scientific papers by researchers in many

countries all over the world. Thus, for instance, the research concerning distance learning at higher education institutions in Ukraine and Latvia conducted in 2020 together with our colleague from Rezekne Academy of Technologies (Malykhin, Usca, & Aristova, 2021; Topuzov at al., 2021) demonstrated that university lecturers and students in both countries faced the problems with speed and quality of Internet not by hearsay, they had personal first-hand knowledge.

Replying to this question, 83% of respondents wrote that during the first lockdown they lacked proper equipment (laptops, printers, scanners etc.), after the school closures in November 2021 this problem was mentioned by 35% of respondents. 95% of respondents stated that they had various problems with their health because they experienced extreme stress. They explained that stress was caused by their inability to influence the situation, fear for their lives and lives of schoolchildren etc. After the shift to remote learning in November 2021 this problem was mentioned by 18% of respondents. Also in their replies the majority of general secondary school teachers (72%) stated that before the outbreak of the Covid-19 pandemic many parents had not shown any particular interest in education of their children. As we can see, parental involvement increased greatly. Unlike March 2020, approximately two years later this problem was mentioned only by 37% of general secondary school teachers. One more problem which concerned respondents (78%) greatly was their inability to keep schoolchildren motivation while they were delivering instruction remotely. And although the situation improved slightly, 46% of respondents still considered this problem rather serious.

The main aim of the fifth question was to find out what online platforms, video-communication and/or messaging services secondary general school teachers used amid blended learning caused by the Covid-19 pandemic. This question was of particular interest to us, since after the introduction of a mandatory lockdown in March 2020, the government of Ukraine took a decision to divide the country into four areas of epidemiological safety (namely, red, orange, yellow and green). And since then, all general secondary schools in Ukraine have been implementing so-called blended learning (regarded in our research as a pattern of a certain mix of face-to-face and distance learning) depending on the epidemiological situation (Ministry of Health of Ukraine, 2020). Thus, in case of emerging threats of coronavirus outbreak in the area either the whole school or some classes have to suspend face-to-face instruction.

Approximately all respondents mentioned that immediately after the suspension of face-to-face instruction they had to communicate with schoolchildren and their parents, to present theoretical material and to give regular assignments via email and messaging apps (for instance, Viber, WhatsApp, Telegram). They also noted that under these circumstances instruction was mostly asynchronous. And only after some time they managed to cope with this situation and started to deliver instruction in synchronous mode

using various video-conferencing platforms (for instance, Google Meet, Webex, Zoom, Google Classroom, Jitsi Meet).

The last question was targeted at finding out what way teaching style of general secondary school teachers changed. Thus, 81% of respondents stated that with the course of time they started to understand what forms, methods and techniques were the most effective to deliver instruction online and what way to integrate the most effective forms, methods and techniques of face-to-face instruction with the most effective forms, methods and techniques of online instruction. Moreover, they started to apply more digital technologies during face-to-face instruction when it was resumed. 56% of respondents mentioned that they started integrating educational material which is given in digital format and provided by Ukrainian educational projects and platforms ("Na Urok" (2021), EdEra (n.d.) etc.) into face-to-face instruction, let alone its usage during blended learning.

Thus, the results obtained enabled us to identify and generalize the tendencies of changes in the system of education influenced by the unexpected shift from face-to-face learning (traditional) to blended learning (as being regarded as a pattern of a certain mix of face-to-face and distance learning): 1) the focus on individualization and differentiation of instruction considering age, needs, strengths and abilities of schoolchildren; 2) the activation of interaction between the key players of educational process in the paradigm "teachers – schoolchildren – parents"; 3) the increased use of digital technologies and mobile devices in educational process; 4) the urgent need to develop (improve or master) digital competence of all participants of educational process.

The focus on individualization and differentiation of instruction considering age, needs, strengths and abilities of schoolchildren – Not to lower the quality of education amid distance and blended learning general secondary school teachers have to consider age and individual psychological characteristics of schoolchildren. General secondary school teachers should have a variety of methods and techniques (for instance, individual assignments or assignments for independent work (presentations, reports writing etc.), tasks for pair, small-group and large-group work) at hand and know how to apply them. Application of individualized and/or differentiated instruction based on schoolchildren's learning styles enables general secondary school teachers to expand schoolchildren's cognitive interest, to enhance their motivation to study and, moreover, to develop cooperative and collaboration skills, time management and decision-making skills etc. It definitely takes much time and effort either to develop or to compile tasks and activities suitable for individualized and/or differentiated instruction from various resources. But once a teacher makes some time to do it, schoolchildren will be offered a variety of tasks and activities based on their individual abilities, needs and strengths.

The activation of interaction between the key players of educational process in the paradigm "teachers – schoolchildren – parents" – Two-year experience of so-called blended learning caused by the Covid-19 pandemic clearly points to the need to activate the interaction between the key players of educational process in the paradigm "teachers – schoolchildren – parents". When it comes to quality education amid school closures and considering existing experience, more and more often general secondary school teachers emphasize the importance of parental involvement in providing children with support and in creating favorable conditions for their learning at home. The need to involve parents is especially acute for primary and middle schoolchildren who due to their age and individual peculiarities are often incapable of independent learning.

The increased use of digital technologies and mobile devices in educational process – The sudden shift to distance learning and then the shift to blended leaning enabled many teachers to understand that the system of education in general and the system of general secondary education was not ready to respond quickly to such unpredicted challenges. The urgent need to enhance the use of digital technologies is explained by the fact that during the introduction of social distancing measures (we have already witnessed a series of Covid-19 waves) traditional instruction in the classroom is impossible because participants of educational process are separated by distance. To maintain a sound educational process and to continue to deliver quality education both school teachers and schoolchildren have to be ready and to be able to work with various digital technologies.

The urgent need to develop (improve or master) digital competence of all participants of educational process – The obtained results clearly show that general secondary school teachers who had extensive teaching experience before the outbreak of the Covid-19 pandemic were not completely ready to sudden shifts to both distance and blended learning. Some of them even thought that they were not treated equally because they had to compete with younger colleagues who had necessary digital knowledge and skills and were able to use various devices and technologies freely. We believe that in most cases such an attitude is connected with the fact that before the sudden and unpredictable shift to total distance learning in March 2020, they had a wide choice of best didactic practices which they had been collecting for many years and which did not necessarily imply the use of digital technologies in the traditional classroom (flashcards, tables, tasks of different levels of complexity for personalized learning, printouts etc.). And due to this shift and then due to the introduction of blended learning these general secondary school teachers have been subjected to the completely unusual conditions and to meet the new demands of the times they were forced to develop their digital knowledge and skills.

Conclusions

The research attempts to identify and generalize the tendencies of changes in the system of education influenced by the unexpected shift from face-to-face learning (traditional) to blended learning (as being regarded as a pattern of a certain mix of face-to-face and distance learning). The obtained results clearly demonstrate that these tendencies include the activation of interaction between the key players of educational process in the paradigm "teachers – schoolchildren – parents", the increased use of digital technologies and mobile devices in educational process, the urgent need to develop (improve or master) digital competence of general secondary school teachers and schoolchildren, the focus on individualization and differentiation of instruction considering age, needs, strengths and abilities of schoolchildren. The study process also helps researchers reveal the ideas that are closely connected with the accepting or not accepting absolutely new ways of teaching and learning from the points of view of general secondary school teachers, schoolchildren and their parents, the pros and cons of blended learning under conditions of the Covid-19 pandemic. What is more, authors enumerate and analyze main problems general secondary school teachers, schoolchildren and their parents have been facing since the sudden and unpredictable shift to total distance learning which took place in March 2020. In addition to this, authors offer some practical ways to address these problems by mentioning certain innovative approaches and technologies, methods, techniques and means of blended learning aimed at delivering quality education to general secondary schoolchildren.

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