USE OF DISTANCE AND BLENDED EDUCATION TECHNOLOGIES IN THE ORGANIZATION OF IMPROVING THE QUALIFICATIONS OF TEACHERS IN POSTGRADUATE EDUCATION OF UKRAINE

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The article substantiates the importance of the use of distance and mixed learning technologies in the organization of professional development of teachers in postgraduate education of Ukraine. Emphasis is placed on the need to use in the learning process modern electronic resources to support the educational process, which has recently received considerable attention in pedagogical science and practice.

Different approaches to defining the concepts of "mixed learning" and "hybrid learning" are considered. An analysis of Ukrainian and foreign sources was carried out, which proved the ambiguity of the interpretation of the essence of these concepts in the context of their application for postgraduate education of specialists, in particular the organization of teacher training. It is also possible to note the importance of the schemes proposed by the author for the use of mixed and distance learning technologies in the organization of teacher training, which is designed to improve the quality of the provision of educational services and is based on the proposals outlined in the international publications "Strategies for blended TVET in response to COVID-19" of the intergovernmental organization Commonwealth of Learning (COL – Commonwealth of Learning).

The following schemes for the use of distance and mixed learning technology in the organization of professional development of Ukrainian teachers were highlighted: 1) reinforcement of learning outcomes with the help of digital technologies and mixed learning models; 2) conducting the educational process in remote mode with the application of blended learning; 3) training is carried out entirely remotely. In addition, examples of the best practices and ideas of constructive experience regarding the organization of teacher professional development are provided.

Keywords: *teacher; postgraduate pedagogical education; professional development of teachers; distance learning; blended learning; electronic educational and methodical support; Ukraine; foreign experience.*

Ref. 17.

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ВИКОРИСТАННЯ ТЕХНОЛОГІЙ ДИСТАНЦІЙНОГО І ЗМІШАНОГО НАВЧАННЯ В ОРГАНІЗАЦІЇ ПІДВИЩЕННЯ КВАЛІФІКАЦІЇ ВЧИТЕЛІВ У ПІСЛЯДИПЛОМНІЙ ОСВІТІ УКРАЇНИ

У статті обґрунтовано важливість використання технологій дистанційного і змішаного навчання в організації підвищення кваліфікації вчителів у післядипломній освіті України. Акцентовано на необхідності застосування у навчальному процесі сучасного електронного ресурсного забезпечення освітнього процесу, якому останнім часом у педагогічній науці та практиці надається значна увага.

Розглянуто різні підходи до визначення понять "змішане навчання" і "гібридне навчання". Проведено аналіз українських та іноземних джерел, який засвідчив неоднозначність тлумачення сутності цих понять у контексті їх застосування для післядипломної освіти фахівців, зокрема організації підвищення кваліфікації вчителів. Також можна відзначити важливість запропонованих автором схем використання технологій змішаного і дистанційного навчання в організації підвищення кваліфікації вчителів, що покликано підвищити якість надання освітніх послуг та базується на пропозиціях, викладених у міжнародних публікаціях "Стратегії для змішаної П(ПТ)О у відповідь на Covid-19" міжурядової організації Співдружність у навчанні (COL – Commonwealth of Learning).

Виокремили такі схеми використання технології дистанційного і змішаного навчання в організації підвищення кваліфікації українських вчителів: 1) підсилення результатів навчання за допомогою цифрових технологій та моделей змішаного навчання; 2) здійснення освітнього процесу в дистанційному режимі із застосуванням змішаного навчання; 3) навчання відбувається повністю дистанційно. Додатково наведено приклади найкращих практик та ідеї конструктивного досвіду щодо організації підвищення кваліфікації вчителів.

Ключові слова: *вчитель; післядипломна педагогічна освіта; підвищення кваліфікації; дистанційне навчання; змішане навчання; електронне навчально-методичне забезпечення; Україна; іноземний досвід.*

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Introduction. The challenges accompanying the reform of secondary education "The New Ukrainian School" set high requirements for the organization of advanced training of Ukrainian teachers in postgraduate education of the country and require innovations that will make the training of specialists the most convenient and the most effective. The rapid development of digitization in various spheres of human activity, including education, contributes to the introduction of modern forms of organization of the educational process, one of which is blended learning, which combines digital distance technologies and contact communication between teachers and students.

The purpose of the article is to present constructive ideas regarding the use of distance and mixed learning technologies in the organization of teacher training in postgraduate education of countries.

Review of the sources. The conceptual provisions of the organization of postgraduate pedagogical education in Ukraine were revealed in the dissertation studies by G. Yelnykova, N. Klokar, S. Krysiuk, A. Kuzminsky, V. Oliynyk, N. Protasova, V. Sydorenko, T. Sorochan, and others. At the same time, under the influence of the development of modern technologies, new forms and methods of learning appear in education, and the content of educational programs for improving the qualifications of teachers also changes, which encourages the implementation of additional research in this direction. Studying the experience of using distance and mixed forms of education in the organization of professional development of Ukrainian teachers requires special attention in modern conditions. The topicality of the mentioned problem indicates the need to study the best practices of using distance and mixed learning technologies in the postgraduate education of the country, as well as their distribution in the Ukrainian educational space.

Presentation of the material. During the last two decades, individual and flexible forms of education have been spreading in the countries of the European Union. Recommendations in the field of professional education call for the implementation and use of educational and training programs in which teaching would be focused on the learner, offering access to traditional, digital or hybrid learning, as well as flexible and modular pathways based on the recognition of learning outcomes [16]. The best practices regarding the professional development of specialists are especially important for the development of the economy of Ukrainian society and the integration of the country's education system into the European and world educational space. In particular, "the search for new forms of professional development, the constant diversification of methods encourages the study and generalization of the past experience of the content of

teacher professional development, the borrowing of really interesting ideas" [10].

The proposals outlined in the "Strategies for blended TVET in response to Covid-19" publication of the intergovernmental organization of Commonwealth of Learning (COL), which closely works with the UN and UNESCO on the issues of education [14], provide an opportunity to offer three schemes of application of mixed learning, distance and information-communication technologies in the organization of professional development of Ukrainian teachers in institutions of postgraduate pedagogical education, the activities of which are carried out with the appropriate license (institutes of postgraduate pedagogical education, academies of lifelong education, subdivisions of institutions of higher education), namely:

– advanced training of teachers is concentrated on the basis of educational institutions; the outcomes are reinforced through digital technologies and blended learning models;

– teacher training is carried out remotely by applying blended learning, in particular attending practical classes organized on the basis of institutions of general secondary education or postgraduate pedagogical education (demonstration events – lessons, master classes, trainings, etc.);

– advanced training is conducted entirely remotely, and specialists acquire practical skills independently in institutions of general secondary education at their place of work.

The importance of the development of distance education is emphasized in the state documents of Ukraine. In particular, the Regulation on the remote form of obtaining overall general secondary education (approved by the Order of the Ministry of Education and Culture of September 8, 2020 Vol. 1115) expands the possibilities for distance learning – both by the remote form of obtaining education and when using distance learning technologies in other forms of education. The concept of "distance learning" is defined as "an individualized process of acquiring knowledge, abilities, skills and ways of human cognitive activity, which takes place mainly through the mediated interaction of remote participants in the educational process of a specialized environment that functions on the basis of modern psychological and pedagogical and information-communication techno-logies" [13].

The use of remote forms can be considered as an educational process involving interaction with a teacher and a group of teachers (online only or in a mixed mode) or providing an opportunity to deepen their knowledge in the form of self-study [6]. So, distance learning of teachers on professional development issues can be understood as one of the forms of organizing the educational process, during which the classes are held in full or partial mode with the use of information and

communication technologies provided that teachers and education seekers are geographically remote.

It should be noted that in the scientific and pedagogical literature, both Ukrainian and foreign, there are different approaches to defining the concepts of "blended learning" and "hybrid learning". Thus, according to Ukrainian researcher M. Kabysh [4], blended learning is "an educational approach that combines learning with a teacher (face-to-face) and learning with the use of information technologies, as well as combining the advantages of classroom teaching and remote (electronic) learning, which necessarily includes an interactive component, students' control over the place, time and individual trajectory of their training" [4]. Another Ukrainian researcher L. Oliynyk [9] considers the use of blended learning as a basis for developing a model of effective organization of advanced training courses in the postgraduate education system. In particular, "the mixed learning model assumes that the student of the courses attends "live" classes in the classrooms, but at the same time, the so-called computer-mediated activity is also widely used, i.e. the mediator of educational activity is the computer and online mode, mobile devices and special educational Internet resources" [9].

In foreign scientific sources, it is noted that the term "blended learning" means a mixed form that combines traditional (full-time) education and online solutions [6]. According to another source, "hybrid learning methods that combine traditional learning methods with methods that involve the use of a computer or mobile device are called blended learning or b-learning" [16].

The concepts of hybrid and blended learning are often considered synonymous in the scientific literature, but some sources point to significant differences between them. Thus, blended learning involves the use of online tools and materials, but at the same time involves direct contact with the teacher. The use of multimedia resources diversifies learning and at the same time allows students to independently manage part of the learning process, in particular, to adjust its pace according to individual needs. Hybrid learning involves the use of appropriate tools, such as the Learning Management System (LMS), to provide multimedia materials for use outside the classroom [16].

In the context of distance learning, it is also worth mentioning the FOLC model (The Fully Online Learning Community model), which emphasizes the importance of building knowledge, developing competencies for joint problem solving, as well as the importance of being in a community [3]. A key feature of the model is the assumption of an active engagement position, "being" in the virtual world, and active activity. In the context of today's challenges in society and the increased need for distance learning, the concern for the construction of the educational process in such a way as to enhance interaction and social

connections can be extremely important. A number of studies have been written about the FOLC model, the most recent of which mentions, among other things, learning based on building creative interactive educational communities online [1].

It should be noted that the most important task in the formula of online solutions is the creation of high-quality educational and methodological support for the educational process, in particular, the construction of an educational course (material and type of work) in such a way as to preserve the opportunity to use as many advantages as possible in learning through direct contact and as many advantages as possible in the organization of self-education in remote communication.

A solution for distance learning can be individual tools or whole systems consisting of a number of specially designed tools. Implementation of the educational process in this way, using tools for distance learning can be synchronous (for example, audio-video meetings) and asynchronous (for example, newsgroups, e-mail and online courses). Educational and methodological support is divided into online materials that can be downloaded or are available only in the repository, publicly available or those that require authorization/creation of an account in the system of an educational institution.

Thus, the use of a virtual educational environment – a software system designed to help teachers manage a separate educational course, includes tools for distance learning, provides communication and reverse communication thanks to the placement of audio or video recordings, exchange of performances of group members in real time (online streaming), as well as in the form of chats and forums, surveys and tests, in the format of blogs or wiki pages. In e-learning solutions, it is possible to use the adaptive learning mechanism, which allows you to adapt (personalize) the content of the educational program to the individual needs / (and knowledge level) of a specific course participant and develop an individual learning trajectory.

Educational institutions of postgraduate pedagogical education can implement mobile applications (both educational and organizational). Also, online solutions allow the use of game elements, simulations, quick feedback exchange in order to improve the attractiveness of messages in communication between participants of the educational process and increase motivation for independent work, autonomous acquisition of knowledge by students. In this sense, the experience of using virtual laboratories is the most valuable for the organization of professional development of Ukrainian specialists.

Virtual labs and simulations in the form of applications can function as stand-alone programs that can be downloaded to a computer or online interactive simulators. In particular, in our opinion, it is expedient for science teachers to offer the use of English-

language resources: *Physics Simulations, Lab, and Physical Sciences* with the involvement of Google Translate technology, which allows automatic translation into Ukrainian when browsing web pages. These virtual laboratories offer educational materials for modern teaching of physics and are designed for different levels of user training, from basic to university and further to "advanced", which requires considerable knowledge of theory and understanding of the subject. The systematicity, clarity and accuracy of the materials posted on Internet resources, the convenient interface of the sites provide an opportunity to personally manage one's own learning process.

The main requirements for electronic educational materials are that they should be structured on the basis of learning theories and their format should contribute to the achievement of specific learning outcomes. The content is divided into modules that can be flexibly arranged and easily adapted to other courses and usage contexts as needed. Modules can be independent or forming a connected series. Also, the content of the materials should be diverse – contain various types of information presented using various multimedia, and support different learning styles, depending on the preferences of the listeners (visual, auditory, practical) [5].

For example, on the educational platform of the European Center named after Vergeland, mixed training is organized for teachers within the framework of the "Democratic School" Program with the participation of teachers of the MI LRC "Lviv Regional Institute of Postgraduate Pedagogical Education" [17]. On this resource, mixed distance learning is chosen as the organizational form of communication, which involves independent mastering of educational material, its approbation in practice, and joint discussion of the results of tasks during online classes with the support of a team of expert facilitators. A prerequisite for participation is the selection of participants, which is carried out on the basis of an open competition.

A mixed facilitated course "Development of civic competences in various subjects" was created for subject teachers. The course length is 60 hours (2 ECTS credits) / 45 hours (1.5 ECTS credits). The purpose of the training is to prepare teachers to implement the provisions of the New Ukrainian School (NUS) concept at the level of basic secondary education, in particular, to the cross-cutting development of key civic and social competencies. The course consists of educational modules for independent study and online meetings for joint work and reflections. The combination of individual, group and coaching interaction enables specialists to develop effective work models for the subject. The course involves individual study of the material, group performance of tasks and meetings with trainers online. A blended facilitated course "School life online: how to teach and learn with pleasure?" (the course length is 30 hours (1 ECTS credit) is created for subject teachers who work in the 5th grades according to the NUS program. The purpose of the course is to increase the level of digital competence of educators and facilitate the development of online tools for synchronous and asynchronous online learning, as well as for online formative assessment [17].

Educational programs of online learning, which provide distance learning and the flexibility of advanced training of teachers in postgraduate education, primarily provide an opportunity to adapt the educational process to the current needs and expectations of teachers. Below are examples of distance and blended learning from selected open Internet sources.

EdEra Online Education for Professional Development is an online education studio (free certified online courses, interactive textbooks, educational special projects, models of integration of modern educational solutions into the traditional educational process) [2]. Among the offers of this resource are such courses as "Teachers 2.0: Online course on professional development and mentoring" (3 modules, lectures and additional materials, international experience, 30 hours (1 ECTS credit), "Teachers in the course: basic course for the development of digital skills of educators" (13 modules that form a complete vision of digital skills of teachers, lectures by experts and additional materials; practical advice and digital tools, 30 hours (1 ECTS credit), "Daring to teach: about teaching in times of crisis" (3 modules, templates and instructions for responding to various crises, interviews with educational opinion leaders, 6 hours), "Compensatory teaching of practical mathematics for children with intellectual disabilities" (3 modules, video lectures, tests, a paid certificate) etc.

One of the forms of online education conducted in the form of courses is massive open online courses (MOOC, Massive Open Online Courses). Studying at such courses does not require an official application, has no restrictions on the number of participants, and is free of charge. The participant receives access to a range of learning materials (videos, notes) on an online platform, and is also provided with an assessment of growth / performance (e.g. in the form of a test), all of which may lead to a certificate. Among the popular English-language educational platforms in professional education are Coursera, edX, Udacity, Udemy, Futurelearn. In particular, the Udemy platform developed a professional development course for English language teachers "ZNO. Teacher [12]. The course is designed for Ukrainian teachers who prepare students to pass the external independent assessment test. The content of the course includes 5 modules, 10 lectures with a total duration of 3 hours and 7 minutes. The course includes 3 hours of video on demand, 16 downloadable resources, mobile and TV access, full unlimited time access, a certificate of completion. Among the requi-

rements for training participants are knowledge of the English language B2+, the desire to learn how to prepare students for the external independent assessment correctly and effectively, interest in the topic of teaching and the desire to develop [12].

To improve the qualifications of Ukrainian teachers, online training is offered in the form of short-term courses, which is carried out on the National Edutainment Educational Platform of current knowledge and skills [15]. Using the platform, everyone can gain important knowledge free of charge for their own successful development. The Diya Platform works under the leadership of the Ministry of Digital Information, NADS (National Agency of Ukraine for Civil Service). According to the results of the training, an electronic certificate is issued, confirming its successful completion. Among the courses offered, there are such basic courses as "Digital Skills for Teachers", "Quarantine: Online Services for Teachers", "Interactive Learning: Tools and Technologies", "School without Bullying", "Digitalgram for Teachers". The courses have a volume of 0.2 ECTS credits (The European Credit Transfer and Accumulation System (ECTS) [15].

It should be noted that the results of advanced training in the online form conducted not at entities of advanced training that have a license for advanced training or carry out educational activities under an accredited educational program require separate confirmation and recognition by the decision of the pedagogical council of the institution of general secondary education. The procedure for recognition of the results of pedagogical qualification improvement is established by the pedagogical councils of the relevant educational institutions [11].

So, it is quite obvious that the effective development of the professionalism of modern teachers occurs due to the use of various organizational forms of the educational process and the combination of systematic and purposeful use of the potential of various types of education (formal, informal and non-formal), namely, advanced training courses (formal education), and professional trainings, webinars offered by the methodical service (informal education), and self-educational activities of a person (non-formal education).

Conclusions and prospects for further research. Today, the organization of advanced training of teachers in postgraduate education is in the field of special attention in order to ensure the highest quality of educational services. In educational institutions of different countries, there are general approaches in the organization of providing educational services for teachers. The leading place in modern conditions is occupied by distance and mixed forms of education. A characteristic feature of the use of such organizational forms of teacher training is the possibility of designing one's own educational trajectory and learning in a convenient way and time. Such an approach to planning the educational process in postgraduate pedagogical education will definitely contribute to greater students' activity and the effectiveness of the relevant practice.

In the conditions of new challenges facing the system of professional development of teachers in postgraduate education of Ukraine, further scientific research regarding the prospects of implementing the practices of using distance and mixed learning technologies in postgraduate pedagogical education of our country considered in the article seems relevant.

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ФОРМУВАННЯ ЛІДЕРСЬКИХ ЯКОСТЕЙ У СТАРШОКЛАСНИКІВ ЧЕРЕЗ ПІДПРИЄМНИЦЬКУ ДІЯЛЬНІСТЬ

Актуальність формування лідерських якостей у старшокласників через підприємницьку діяльність зумовлена сучасними вимогами до випускників шкіл. Сучасний світ потребує лідерів, здатних приймати рішення, брати ініціативу та керувати командами. Підприємницька діяльність розвиває критичне мислення, навички подолання проблем, планування, організації та управління. Вона підвищує соціальну відповідальність і активність учнів, дозволяє застосовувати знання на практиці, готує до дорослого життя, підвищує конкурентоспроможність на ринку праці. Це сприяє всебічному розвитку особистості та успішній професійній діяльності.

Ключові слова: *лідерські якості; старшокласники; підприємницька діяльність; критичне мислення; соціальна відповідальність; навички управління; практичне застосування знань.*

Літ. 8.

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FORMATION OF LEADERSHIP QUALITIES IN HIGH SCHOOL STUDENTS THROUGH ENTREPRENEURIAL ACTIVITY

The relevance of the topic of developing leadership qualities in high school students through entrepreneurial activity is due to the modern requirements for school graduates. In today's world, characterized by rapid change, globalization, and technological development, society needs not only highly qualified professionals, but also leaders who are able to make responsible decisions, take initiative, and effectively manage teams.

Entrepreneurial activity plays a key role in developing such leadership qualities in high school students. It promotes critical thinking and problem-solving skills. In the process of entrepreneurship, students learn to analyze situations, find effective solutions and take responsibility for their implementation, which develops their ability to make responsible and informed decisions.

Entrepreneurial activities also require students to plan, organize work and manage resources, which directly develops their management and organizational skills. They learn how to create and implement projects, which includes