

Current issues of general music pedagogy

Monograph edited by Prof. Volodymyr Cherkasov

Актуальні питання загальної музичної педагогіки

Монографія за редакцією проф.Черкасова В.Ф.

LAPLAMBERT Academic Publishing, 2023

Current issues of general music pedagogy. Monograph edited by Prof. Volodymyr Cherkasov. Compiled by Prof. Mykhailychenko O. Deutschland. LAP LAMBERT Academic Publishing, 2023. 205 c.

Актуальні питання загальної музичної педагогіки. Монографія за редакцією проф. Черкасова В.Ф. Упорядник проф. Михайличенко О.В. Бо Басен, Німеччина / Deutschland. LAPLAMBERT Academic Publishing, 2023. 205 с.

The collective monograph of leading Ukrainian scientists and pedagogues highlights issues of modern research on the history, theory and practice of modern music pedagogy.

У колективній монографії провідних українських вчених та педагогів висвітлюються питання сучасних досліджень із історії, теорії та практики сучасної музичної педагогіки.

Текст монографії затверджено на засіданні Вченої Ради Комунального закладу вищої освіти «Академія культури і мистецтв» Закарпатської обласної ради. Протокол № 14 від 29 червня 2023 р.

ISBN 978-620-6-76750-3

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peoples of Bukovina, through visits to neighboring countries – Romania, Poland, Moldova, with the participation of awardees in programs of international exchanges and art festivals, helps to reproduce and appreciate their historical, cultural and artistic heritage, to realize the role of nationbuilding and patriotic education. This helps to balance both general and special directions in the implementation of music and regional studies, which serve as a basis for the formation of a specialist in music education and theory and methodology.

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BLENDED LEARNING AND FOREIGN EXPERIENCE OF ITS USE IN PEDAGOGICAL PRACTICE ЗМІШАНЕ НАВЧАННЯ ТА ЙОГО ЗАКОРДОННИЙ ДОСВІД ВИКОРИСТАННЯ В ПЕДАГОГІЧНІЙ ПРАКТИЦІ

Purposeful integration of elements of electronic and traditional learning, the emergence of new forms of organization of the educational process is an important prerequisite and driving force of education reform. In the World Declaration on Higher Education for the 21st Century: Approaches and Practical Actions (UNESCO, 1998), the urgent need to diversify models of higher education through the use of information and communication educational technologies is actualized.

The modern educational paradigm determines the search and introduction of innovative approaches to the organization of the educational process, taking into account new forms of education. One of these forms is blended learning. The American Society for Education and Development recognized blended learning as one of the most popular educational trends, as a promising strategy for spreading knowledge in the digital age.¹⁶³

At the same time, there is no established understanding of this phenomenon in modern scientific literature, which makes it difficult to

¹⁶³ Rooney J.E., "Blending learning opportunities to enhance educational programming and meetings". Association Management, vol. 55(5), 2003. P. 26–32.

determine the characteristic features and levels of practical implementation of blended learning in the conditions of reforming the domestic education system. In order to clarify this issue, it is necessary to get acquainted with the foreign experience of using this form of education in pedagogical practice.

The purpose of the article is to determine the characteristic features and levels of practical implementation of blended learning in the practice of educational institutions abroad.

The Working Group on Music Education to study and implement the Seoul Program, which was established by the European Music Council (EMC), described this program in the Bonn Declaration in 2010 (Adri de Vugt, n.d., c. 19; Emergency safeguarding of the Syrian cultural heritage, n.d.). According to this program, the main emphasis of music education should be accessibility and quality (Declaration on music education). It is the accessibility and quality of education that is embedded in the idea of blended learning – it is a mixture of the best characteristics of two environments: educational and informational and communication. It has been proven that online classes have the potential to avoid the isolation of learning and spread the socio-cultural environment, which was previously lacking in the educational process. There can be no coherent learning without their integration.¹⁶⁴

The use of blended learning was caused by the inadequacy of traditional learning with today's requirements (N. Girya, Ya. Sikora); the growth of students' passivity (Y. Sikora); lack of live communication in distance learning (I. Kravchenko, I. Stolyarenko); the need of students for personal contact with teachers to compensate for the lack of instructions and explanations, for the development of communication skills and the ability to transfer experience to others, the need for social interactions (S. Higgins, A. Prasetyo, S. Putro, M. Soylu, I. Wirawan); lack of formation in students of mandatory elements of cognitive activity (high motivation, developed skills of independent work, self-organization and self-discipline (I. Stolyarenko).¹⁶⁵

¹⁶⁴ Андреєв О.О. Педагогічні аспективідкритого дистанційного навчання: монографія / О.О. Андреєв, К.Л. Бугайчук, Н.О. Каліненко, В.М. Кухаренко та ін.// За ред.. О.О. Андреєва, В.М. Кухаренка ХНАДУ, Харків: "Міськдрук", 2013. 212 с.

¹⁶⁵ Столяренко І.С. Особливості організації змішаного навчання у підготовці майбутніх учителів інформатики / І. С. Столяренко // Інформаційні технології в освіті. 2015. Вип. 25. С. 138–147. Режим доступу: http://nbuv.gov.ua/UJRN/itvo_2015_25_13

The question of the development of music education in different countries was considered by such scientists as: S. Bobrakov, V. Braynin, R. Neumann, Ya. Kushka, A. Mukasheva, N. Ovcharenko, M. Plyasova, O. Rostovsky, A. Surkina, Jing Liu, and others. The EVEDMUS project is dedicated to the coverage of the music teacher training program in Europe and Latin America, which introduces various conditions and reasons that underlie the system of obtaining musical and educational knowledge (A web site analysis of music teacher education in Europe, 2007). This research was conducted at the Malmö Academy of Music, Lund University (Sweden) under the supervision of Dr. Gunnar Heilil. The project works within the Alpha program, which is a cooperation program between higher education institutions of the European Union and Latin America (A web site analysis of music teacher education in Europe, 2007).

In today's conditions, this program has been expanded (taking into account the period of quarantine due to the spread of the coronavirus disease (COVID – 19) in various countries). Blended learning, which addressed these issues, was introduced in the USA, Saudi Arabia, South Africa, where there was an increase in the demand for education and training, which caused the need to attract more students without increasing resource costs (R. Alebaikan, K. Gray, A. Impes, H. Johannes, A. Othman, P. Padayachee, C. Pislaru, J. Tobin, S. Troudi). This was facilitated by the financial and economic situation in these countries.

The need of students to combine family, work and study is a social prerequisite for the introduction of a mixed form of education (C. Dziuban, J. Hartman, P. Moskal, C. Procter).

In New Zealand, Massey University (Massey University) has been offering various study options since 1964, including a mixed system. In 1998, the University of Central Florida (UCF) introduced the concept of "blended courses". Although the press release of the interactive learning centers of business education of Atlanta company EPIC indicated that the concept of "blended learning" appeared in 1999. Since 2001, this concept has been used as a "new phrase" to denote a new educational phenomenon in corporate and academic culture (J. Lamb); as a fusion for the future (J. Reay); fusion of instructional methods or means of grouping and delivery of educational material to the listener on different media (Singh & Reed); the process and result of combining the technologies of electronic and written tasks, instructions in the educational process (J. Reay); as a "distance learning method" that combines innovative (high-tech – television, Internet and lowtech – voice mail or conference call) technologies with traditional ones (J. Smith); the concept of "blending" e-learning and classroom learning (Rossett & Sheldon).

Blended learning (its definition) was formulated by K. Bonk and C. Graham in 2005, in the publication "Handbook of Blended Learning", republished in 2006, as a combination of traditional learning (face-to-face instruction) with online learning (computer mediated instruction).¹⁶⁶

Having systematized the definition of the term "blended learning", researchers K. Grehman, S. Allens, D. Jure classified them into three groups. The first included studies in which blended learning was viewed as a fusion of instructional methods or means of grouping and delivering educational material to the student on different media (Bersin & Associates, 2003; Orey, 2002; Singh & Reed, 2001; Thomson, 2002). To the second – scientific works, where blended learning was understood as a set of forms of organization of the educational process (Driscoll, 2002; House, 2002; Rossett, 2002). The third group is works where blended learning was considered as a process and result of using technologies of combining electronic and written tasks-instructions in the educational process (Reay, 2001; Sands, 2002; Young, 2002, Ward & LaBranche, 2003; Rooney, 2003).¹⁶⁷

In these definitions, attention is mostly focused on the technological aspects of the organization of educational activities by means of the latest technologies, and not on the pedagogical potential of integrated educational interaction. With the development of network and digital technologies, the vector of research into the problem of blended learning has also changed.

Since 2004, scientific works have appeared in the scientific literature, in which the emphasis has shifted from technological to personoriented and environmental aspects. It was the awareness of the variability of integrated, hybrid educational environments, their openness, accessibility, flexibility and adaptability, the multiplicity of strategies, levels and models that ensured the further development of the theory of blended learning, the identification of its components and levels of implementation in the educational process.

We consider blended learning as a synergistic concept (a system of ideas, theories, models, levels, methods and means of organizing educational

¹⁶⁶ Bonk C., Graham C. Handbook of blended learning: Global perspectives, local designs // San Francisco, CA: Pfeiffer Publishing, 2005. [Электронный ресурс]. Режим доступа: http://mypage.iu.edu/~cjbonk/toc_section_intros2.pdf

¹⁶⁷ Young J.R. "Hybrid" teaching seeks to end the divide between traditional and online instruction». Chronicle of Higher Education, vol.48 (28), 2002. P. 33–34.

activity), characterized by a new vision of the process and effectiveness of learning. Currently, educational interaction involves a radical change in the roles of the subjects of the educational process: the teacher acquires the status of a curator of the content of education, a facilitator on the way to the student's acquisition of an individual educational experience in a specially organized educational environment that integrates the best aspects of interpersonal and virtual educational interaction.

The term "integrated learning", "hybrid learning", "combined learning", "multimethod learning", "open learning" also appeared to denote the process of mixed learning (until 2005). However, the presence of such diversity does not cause a substantive conflict.

Highlighting the experience of implementing blended learning, it is necessaryconsider the characteristic features of its main components. The teacher is one of the most important components of this process. The specificity of blended learning requires the teacher (teacher-instructor, teacher-consultant, facilitator, coach, tutor, etc.) to develop specific competencies: the ability to use modern technologies and software, to have skills in working with Internet resources, to understand the logic of creating and using electronic tests, to conduct traditional classes, to clearly explain the content of classroom and e-learning activities, to demonstrate ways of using a computer, searching for information, about passing tests, using references (A. Othman, C. Pislaru, A. Impes), etc. In addition, he must have the skills to manage the educational activities of students in the classroom and remotely. M. Bowler and A. Raiker define the functions of a teacher in conditions of mixed learning:

* organizational – providing access to materials and discussions, managing educational activities by establishing rules, time limits for completing tasks, etc.;

* intellectual – the ability to explain theoretical points, activate students to meaningful perception of information by organizing discussions, debates, surveys, supporting project activities, implementing motivated evaluation of educational results.

* technical-evaluative – the ability to organize effective training software, create and use electronic tests, demonstrate ways to use a computer, search for information, pass tests, use links, etc.

Let's take a closer look at each function. Thus, the organizational function consists in the fact that the need to match the scope and quality of the content of classes to the requests of a given group of students (course, specialization) requires the teacher to have a clear organizational and methodological toolkit for presenting material, a strict selection of aids. Preparation of scientific discussions, round tables with establishment of rules for their conduct, etc. Adaptation of students to the specifics of one or another form of education allows them to prepare in advance for the corresponding activity, to quickly develop readiness for work in certain conditions.

Intellectual function means the maximum possible observance of such educational guidelines as: consideration of artistic works by the teacher against the background of aesthetic and philosophical generalizations, social phenomena, historical and biographical information; the vector of artistic classes is aimed at comprehensively covering the spiritual essence of artistic images, as well as encouraging students to acquire artistic knowledge, to expand their own artistic horizons, awareness in the field of art.

Technical evaluation function. After learners have completed assignments, the teacher can see the number of completed assignments that need to be graded, as well as the number of learners who have not yet submitted work (assignments are still due). There is an option to copy the grades for the current or all assignments to CSV format or to a file in Google Sheets. The teacher can switch to the mode of reviewing the works of students and their individual assessment. You can view each submitted work, comment if necessary directly in the text of the work, rate it and write a private comment on this work. You can also create an archive of comments available for copying across courses and assignments.

One of the most important components of blended learning is the learner, namely: a very wide audience both in terms of age, field of study, and social status. Satisfaction with the process of blended learning, as noted by K. Vignare, is more clearly manifested in students 25 years of age and older (Hartman, Moskal & Dziuban, 2005).¹⁶⁸

The beginning of a "new standard" in education in general, according to such scientists as: O. Pasichnyk, Yu. Yelfimova, H. Chushak, O. Shinarovska, A. Donets, can be the situation in which educational institutions of various levels (and in all parts of the world) got into. They distinguish four stages of this process: rapid forced transition to distance learning, prolonged transit, laying the foundations of the "new norm", implementation of the "new norm".

The first stage of the ZVO has already passed. It was a transition to distance learning: uncoordinated, chaotic, with the use of very different

¹⁶⁸ Dziuban, C., Hartman, J., Moskal, P., Sorg, S., & Truman, B. Three ALN modalities: An institutional perspective. In J. Bourne & J.C. Moore (Eds.), Elements of Quality Online Education: Into the Mainstream 2004. (pp. 127–148). Needham, MA: Sloan Center for Online Education.

means and technologies – Zoom, Viber, telephone communication, television, etc. Now we are at the second stage – a prolonged transit, which in different states has the following common features:

• creation of own learning management systems or distribution of existing ones, simplification of access to them by educational institutions (for example, Ukrainian educational institutions can get GSuite for Education or Office 365 Education for free);

• nationwide TV and radio programs (for example, in China, a separate TV channel was created specifically for educational needs);

• agreements with Internet or digital service providers to cancel or reduce payment for their services;

• online courses / distance learning for employees of higher education institutions;

• creation of online communities of practitioners for exchange of materials, resources and mutual support;

• creation of state digital platforms for simplified access to highquality educational materials, resources, access to practices in the educational field (for example, in Ukraine, the All-Ukrainian online school and Learning passport have been created. An educational platform for children, youth, educators and parents);

• financial support for students to provide them with the necessary devices for distance learning;

• support for innovative ways of achieving educational results and their assessment, including changes to state exams, defense of diploma theses, etc. (in many countries, they switched to the e-portfolio format, which was hardly used before).

For example, in Sweden, at this stage, the government increased funding for education so that people could acquire a new profession and prepare for exiting the quarantine in advance. The third stage is gradually coming – laying the foundations of the "new norm". Here, many expectations are directed to the governments of the states. Thoughtful strategic decisions at this stage are very important, because at the next stage, the fourth stage, we are waiting for the implementation of the "new norm", which is being formed before our eyes.

Blended learning was actively implemented in institutions of higher education, so now the vast majority of research and other publications about it relate to higher education. Blended learning in the field of music pedagogy has an additional specificity. In many countries, professional musicpedagogical education was perceived as something that cannot be provided remotely. But in recent years, there are more and more examples and evidence that mixed education in music-pedagogical higher education institutions has many advantages over "traditional" education.

So, for example, many universities use the "Self-mixing" model. This is such a model of blended learning, or the "a-la carte model", which involves the "picking up" of individual online courses in addition to the faceto-face educational program. Under this model, classes can be temporarily transferred to the distance learning format, and the remaining courses of the educational program will be mastered by students in person.

Self-mixing makes the educational process more flexible, listeners they can take courses of increased complexity or, on the contrary, make up for the previous material according to the agreed schedule. At the same time, this format requires increased self-discipline and motivation from the acquirer or acquirer of education.¹⁶⁹

According to this model, students take one or more coursesonline courses in addition to regular ones. Education seekers can stud y these courses both in educational institutions and outside them.

Example: Quakertown (QCSD) in Pennsylvania offers students the opportunity to take one or more online co urses. They can complete an introductory online course before enrolling. The courses are asynchronous, so learners can work on them whenever they wantduring the day. QCSD has created "cyber lounges" where learners can take online courses directly at the educational institution.

Permanent members of the Online Learning Consortium: University of Pennsylvania; University of Florida; Dartmouth College; University of Massachusetts at Amherst; Central Washington University; University of Central Florida; Miami University in Ohio; University of Illinois; Oregon State University; University of Chicago; Michigan State University; University of Memphis.

Foreign universities are implementing the format of mixed education for a more rational use of financial contributions and material and technical resources, while the main goal of this form of education – improving the quality of education due to the flexibility and availability of courses – is preserved.

The tools used are diverse: at Stanford University, in 2011, 3 online courses were implemented free of charge for students. 160,000 students from 190 countries study at the university; at the Clayton Christen Institute

¹⁶⁹ Рашевська Н.В. Змішане навчання як психолого-педагогічна проблема / Н.В. Рашевська // Вісник Черкаського університету. Випуск 191. Частина IV. Серія «Педагогічні науки», 2010. С. 89–96.

(California, USA), blended learning models are constantly changing, taking into account student requests (rotational model; changing stations; changing laboratories; flipped learning; personalized model; flexible model; self-blended model; virtual-enriched model).

Station Rotation Model. Students work and change educational "stations". The presence of at least one task that is performed online. Students visit all "stations" during one session.

Lab Rotation Model. Having a stable schedule. One of the laboratories provides online training. Enlargement of laboratories for other types of classes.

The model of inverted learning (Flipped Model). Planning extracurricular activities. Acquaintance with the theoretical material takes place at an individual pace. Work in the classroom based on active learning methods. Changing the role of the teacher – performs the role of a trainer or consultant.

Personalized model (Individual Rotation Model). Drawing up an individual study plan for each student. The student passes only those "stations" provided for by his personalized training program. During training, the teacher provides support and can clarify or expand the boundaries of the student's knowledge.¹⁷⁰

Flexible model (Flex Model). The main activity is online. The student has his own device and works in different classrooms. Mobility of students and orientation to their own needs (the student himself decides which classes to attend and at what time). The availability of an individual flexible training schedule that changes depending on the need; two people teach -a teacher and an assistant (there may be more of them).

Self-Blend Model Prometheus. The model is based on the student's independent choice of an online course that he wants to study as an addition to traditional courses. Training takes place completely online in individual mode, at home or on the basis of a computer class.

Virtual-enriched model (Enriched Virtual Model). One or more courses – online, at home or at a university. Work under the guidance of a teacher (depending on the need). Learning is not completely individualized.

¹⁷⁰ Осадча К.П., Осадчий В.В. Аналіз досвіду змішаного навчання в іноземних закладах вищої освіти. Сучасні інформаційні технології та інноваційні методики навчання в підготовці фахівців: методологія, теорія, досвід, проблеми. № 60. 2021. С. 410–420.

At the University of British Columbia (Canada), which has experience in implementing e-learning in Europe, the USA, and Canada, there are 6 models of blended learning:

1. "Face-to-faceDriver" model. Electronic learning is used as an addition to the main program and provides access to electronic materials in the computer classroom and laboratory.

2. "Rotation" model. Study time is divided between individual elearning and classroom learning with a teacher.

3. "Flex" model. Most of the learning takes place in an electronic learning environment, but students are provided with the necessary face-to-face support from a teacher.

4. "Online Lab" model. Training takes place in an online laboratory. Students are supported by technical staff and teachers online.

5. "Self-blend" model. Students independently choose additional courses to the main study. The model is traditional for American higher education institutions.

6. "OnlineDriver" model. Students study in an electronic environment online. Meetings with the teacher are periodic in nature. The procedures of face-to-face consultations, interviews and examinations are considered mandatory.¹⁷¹

The considered models are rarely used in their pure form, as a rule, it depends on the situation and conditions of learning, on the target group, the level of knowledge and goals. Therefore, each model involves the development of an application scenario for the distribution of roles, didactic goals and resources.

Researchers note the advantages of blended learning. This is the presence of an interactive component that complements face-to-face learning; opportunities for joint learning, as students and teachers can work together on projects at any time and from any place; opportunities for intercultural exchange, since such training allows students, teachers, researchers from different countries to interact within the framework of one project and learn about the cultural features of their countries; moreover, education becomes affordable, as there is no need to go outside the city to get a high-quality education; compliance of such training with the needs of a modern student who has been familiar with information technologies since childhood; flexibility, accessibility, independence of students.¹⁷²

¹⁷¹ Там само.

¹⁷² Мукан Н.В. Неперервна педагогічна освіта вчителів загальноосвітніх шкіл: професійне становлення та розвиток (на матеріалах Великої Британії, Канади,

The foreign methodology of blended learning is distinguished financially justified approaches (M. Chester) regarding the use of Smartboards technology (the possibility of providing access to digital and traditional content through the use of smartphones during classroom classes); Rocketship strategies (a significant number of individual tasks are performed in online classrooms), individual models (One-to-one models) (use of portable electronic devices (laptop or tablet) by each student in classroom and out-of-classroom work).

Wiki technology (T. Jungmann, D. May) is defined as a powerful tool of mixed learning in foreign universities, which provides the organization of a special kind of support for active, joint, reflective work and independent learning through the use of Web 2.0 applications. A significant feature is the emphasis on the significant potential of cloud technologies.

Microsoft offers solutions for the organization of distance and blended learning with the help of its cloud services and software products. Detailed information about the company's offers can be read in Ukrainian in the section of the Microsoft 365 Education website.¹⁷³

The basic package is free for educational institutions. Yes, teachers and students can use the popular programs Outlook, Word, Excel, Power Point, One Note and a number of services, including One Drive, MS Teams, Forms. The combination of such services creates a space for the organization of mixed learning. The software allows you to use mail and calendars (Outlook), work with texts (Word) and spreadsheets (Excel), create presentations (Power Point), take and organize notes (One Note). Cloud services provide an opportunity to collaborate in a virtual environment. One Drive provides storage and organization of files, Forms – creation of electronic forms for surveys, tests. Special attention should be paid to the MS Teams service, which has a wide range of functions for virtual classes with video communication, chat, class schedule, evaluation log, creation of tasks, individual and group calls, collaboration with documents stored on OneDrive, work in groups and much more. We do not list all the possibilities, as they are explained in detail on the company's website.

The problem of determining the advantages and disadvantages of blended learning is quite controversial. The idealized process of mixed learning allows you to preserve all the advantages of traditional classroom

США): [монографія] / Н.В. Мукан. Львів: вид-во Нац. ун-ту Львівська політехніка, 2010. 284 с.

¹⁷³ Бахмат Н.В. Використання хмарних сервісіву навчально-виховному процесі вищої школи. Молодь і ринок. № 5, 2014. С. 45–49.

classes, supplementing them with the advantages of the online learning mode (consistency, availability, flexibility, immediacy, interactivity, adaptability, unlimited space etc.). However, the real conditions of implementation of blended learning do not always allow to fully realize its advantages. In connection with this, problems arise that are not really problems of blended learning, as they are problems of the educational institution's incompatibility with today's requirements.

Therefore, when considering the advantages and disadvantages of such training, it is appropriate to focus special attention not on subjective factors, but on the criteria of training effectiveness, namely: student satisfaction with the process and the result of training, compliance of the processes and results of training with the needs of the educational institution, the availability of training and the effectiveness (payback) of costs.¹⁷⁴

In accordance with the above, we note that the analysis of publications on the implementation of mixed learning in higher education institutions reveals the undeniable fact that the involvement of significant financial resources (for the creation of wireless infrastructure, the purchase of software, the updating of equipment, the retraining of administrators and teaching staff) at the implementation stage is mainly necessary for educational institutions with a neglected state of material, technical and personnel support. Although, even under these conditions, the costs of using blended learning in the future are sharply reduced.¹⁷⁵

In connection with the spread of distance learning at the end of the 90s of the last century, the movement for open educational resources (educational resources in open online access), which is under the auspices of UNESCO, began. Currently, there are many different, ready-made highquality resources (in English) in public access.

In the European space, the European Digital Competence Framework for educators operates, which describes 22 competencies grouped into six areas of digital competence of educators: professional engagement (use of digital technologies for communication, collaboration and

¹⁷⁴ Биков В.Ю. Теоретико-методологічні засади моделювання навчального середовища сучасних педагогічних систем. Інформаційні технології і засоби навчання, 2005. С. 5–15. URL: https://lib.iitta.gov.ua/3583/1/1.pdf

¹⁷⁵ Рекомендації щодо впровадження змішаного навчання у закладах фахової передвищої та вищої освіти. Міністерство освіти і науки України. 58 с. URL: https://mon.gov.ua/ storage/app/media/

vishcha-osvita/2020/zmyshene%20navchanny/zmishanenavchannia-bookletspreads-2.pdf

professional development); digital resources (search, creation and exchange of digital resources); teaching and learning (managing work and educational processes and organizing them with the help of digital technologies); assessment (use of digital technologies to engage students in learning); promoting students' digital competence (creating opportunities for future professionals to use digital technologies for communication, content creation, development and problem solving).

The analysis of the above allowed us to distinguish the conceptual principles of blended learning: first, it can be implemented only within the framework of institutional education (formal educational program); secondly, it is carried out under the supervision of the teacher in conditions where one part of the educational interaction takes place in the classroom in the process of direct communication (face-to-face), and the other is in a mediated virtual environment (it can be individual or group work in the classroom, or independent processing of materials remotely, for example, at home), which, in turn, creates for students the opportunity to determine the time, place, path and/or pace of learning to a certain extent; thirdly, in the process of such educational interaction, a new individual cognitive experience of the student should be formed, in which the components of traditional and interactive online learning complement each other.

The interpretation of the concept of "blended learning" in the scientific literature allows us to draw conclusions about the dynamic changes in its content that have taken place over the last decades. The development of this concept began with the technological aspects of the combination of face-to-face, distance and electronic learning, combining their components and means. Today, the essence of blended learning has deepened significantly and is mostly understood as an innovative pedagogical synergistic concept that combines a powerful arsenal of strategies and levels of educational cooperation organization in a student-centered educational environment based on the integration of direct and computer-mediated pedagogical interaction.

Prospects for further research can be seen in the study of the positive experience of the organization of mixed learning using adaptive technologies and individualization of learning, the introduction of a model of the educational process that can flexibly respond to the challenges of time.