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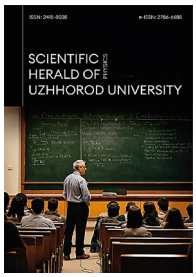

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Blended learning in professional training of teachers

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Abstract

Relevance. The issue of blended learning in professional training of teachers is extremely relevant. This increased interest is due to the spread of the acute infectious disease COVID-19, as all public spheres of activity of citizens have been transferred to a blended format.

Purpose. The aim of the work is to analyze the main features of the blended format of training, as well as to establish the necessary level of knowledge and training of teachers for its effective implementation.

Methodology. The article used a number of scientific and methodological tools that helped to reveal important elements of the studied question. Accordingly, an important place in the work is occupied by functional and system approaches, in addition, such logical methods as the method of analysis and synthesis, comparison, generalization, deduction.

Results. The main results of the study are the theoretical and practical bases of the question under consideration. In the theoretical part the basic concepts, their properties and attributes, undoubtedly related to the sphere of professional competence of the teacher were revealed. On the practical side, it compares the main approaches used so far to train future teachers in the delivery of learning services, namely in a blended format. In addition, the article considered the experience of other countries, which helped to study in depth the features of the studied issue and to establish promising directions that can be applied in Kazakhstan.

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Conclusions. In future scientific works on this topic it is necessary to analyze the main differences between distance and blended learning in order to distinguish the directions of teacher training.

Keywords: teaching and learning process; teacher; advanced training; competence; distance learning.

Introduction

Analyzing the conditions of the nowadays, it is possible to establish that the modern teacher should be able not only to submit educational material, but also to have a sufficient amount of knowledge in the digital sphere. This is primarily due to the fact that every society, including Kazakhstan, is striving for global digitalization, namely the transfer of all spheres of life, including educational, to electronic format. Thus, attention should be paid to the Decree of the Government of the Republic of Kazakhstan No. 827 "On approval of the State Program "Digital Kazakhstan"" [1], which aims to develop citizens directly in the sphere of informatization and use of computer technologies. Moreover, the modern conditions associated with the fight against acute epidemiological disease COVID-19 have obliged all citizens to use digital technologies. That is why the organization and conduct of the training process at present depends only on two factors, namely, internal and external.

Internal, based on the level of competence of the teacher in the field of computer technology and the use of digital resources. External refers to the user's uninterrupted connectivity to the global Internet as well as the availability of a telecommunications facility. It should be established that the teacher is under an obligation to acquire special skills for high-quality professionality of digital technologies and the corresponding conduct of training sessions [2].

At the moment, distance and blended learning are of particular importance in the professional retraining of teachers. The mentioned forms of educational process have a number of features, which as a result requires teachers to master and consider them, for the effective provision of educational services, both in one format and in another. Moreover, one of the basic principles of pedagogical activity is the principle of lifelong learning, which is explained by the active change of social attitudes and the emergence of challenges with regard to educators. Thus, if adhered to, teachers constantly develop their own skills, which as a result has a positive impact on the education sector as a whole [3].

With regard to the teacher training process, it was more effective in a blended format than in a traditional internal study mode. Because thanks to the use of online courses, teachers have the opportunity to be trained regardless of the geographical location of the institution. At the end of the special sessions, they have to come to special lecture theatre to improve their professional skills. This approach is extremely economical and flexible, because teachers themselves master the educational material provided to them, and have the opportunity to practically apply the knowledge gained [4].

It should be established that blended learning requires changes in the teaching staff of the institution. This process is driven by both internal and external factors. Because it depends on the modern conditions of society as well as the competence of teachers. Systematic training courses to improve their professional qualifications are a prerequisite condition for the development of the educational system. This question also concerns the quality of educational services and the results of pupils. In addition, the organization of such training events will allow teachers not only to develop their skills in information and digital areas, but also help them sharing experience and consider relevant forms for the organization of the educational process [5;6].

The main purpose of this article is to consider the features of the organization of training events aimed at the professional training of pedagogical workers, in the context of a blended form of the educational process. In order to achieve a certain goal, the article fulfilled a number of tasks, namely: the concepts of blended training were characterized, its main features were defined; the modern methods and approaches for the organization of professional training of teachers in a blended format were analyzed; the international experience on this issue was considered and on the basis of it a number of promising recommendations were highlighted.

Materials and Methods

Consideration of the question of the features of blended learning, as well as the training of teachers, is sufficiently important for the pedagogical scientific doctrine nowadays. That is why the article was analyzed each of its elements, as well as established their properties and features. First of all, it is necessary to pay attention to the functional methodological approach, since its role is certainly one of the most important. On the basis of this, a work plan was developed and goals and objectives were defined. Due to its use, the article was divided into several stages, which finally allowed a full description of the topic under study. The systematic methodological approach deserves special attention as it is fundamental to the work. This is due to the fact that all methods and other methodological tools have been used interconnected, resulting in the article being holistic and extremely ample.

The article uses methods of scientific research, one of them is the method of analysis and synthesis. Its essence and value lie in the essential difference, since the first involves the separation of the subject matter and the second, conversely, a combination of parts. This approach is extremely effective because the authors have the opportunity to fully explore each element of the question and then co-operate them again. In the process of combining separate parts, the formation of links between them occurs, which as a result allows to determine their main features and common and distinctive features. Next, the comparison method was used, which also played an important role in the study.

As a result, current approaches and mechanisms used to organize teacher training in a blended format were compared. It should be noted that this method has also been used to examine experiences of other countries and has thus established the main distinctive features and similarities between approaches in different countries. On the basis of this comparison, forward-looking

recommendations were drawn up that would be useful for the training of teachers in a blended form.

Special attention should be paid to the synthesis method, as it analyzed the main results of the work. Accordingly, this method is sufficiently related to the method of comparison, since it allows generalizing and isolating the main distinctive aspects of the studied question. The deduction method plays an important role in the work, as it is one of the main instruments by which the research was carried out. This method is responsible for the logical structure of the work, in particular, its progress is explained from a general concept to a specific one.

At the outset, the framework and general concepts of blended education and teacher training in such settings are discussed, followed by a more in-depth examination by providing concrete examples and mechanisms on which the process is based. As already mentioned, the work is carried out in three stages, namely. In the first stage, a study plan is developed and the main goals and objectives are defined. In addition, the analysis of the main theoretical concepts and their features are carried out. The second stage examines the practical part of the work, as well as the international experience. In the third stage, the results are summarized and concise conclusions are drawn.

Results

Analyzing the concept of blended learning, it should be noted that it gained some popularity in the 1960s. It can be established that it is absolutely not new and accordingly widely popular in the world. At the same time, it should be noted that it is in the post-Soviet countries that such a format of training has not found wide distribution and relevance. As for the current increase in the dynamic use of blended training in such countries, including Kazakhstan, it is associated with the spread of acute epidemiological disease COVID-19. It can be accepted that to a greater extent the replacement of traditional full-time education with distance learning and then blended learning is a forced social process [7].

Looking at the overall social situation, it can be seen that digital and information and communication technologies have played a leading role in the life of every citizen over the past 10 years. It must be accepted that, throughout their development, they have undergone a number of changes, but have remained at the leading position of every public sphere of life. Thus, the consideration and evaluation of the blended format of training, based on the use of the above-mentioned tools, clearly requires a full study and methodical substantiation, with a view to their further effective implementation, in particular, when updating blended learning in different educational institutions of Kazakhstan [8].

Attention should therefore be focused on the fact that the current factors and, consequently, the requirements for the process of training of educators, directly in the context of blended learning, as well as in the context of the information society, increase the relevance of the themes of remote mechanisms and approaches. There are certain features in the structure of blended learning and in the training of future specialists that play an important role in their cooperation. That is why, in order to better understand these two aspects of the question, it is necessary to reveal their theoretical meaning. By blended learning directly in professional pedagogical education it is necessary to understand the most harmonious and holistic cooperation features of the remote format of the organization of the educational process and certainly the practical activities of teachers. As a result of the effective use of remote properties, the transmission of theoretical material occurs. With regard to the refinement of practical skills and the exchange of professional experience, this aspect of training is responsible for the properties of face-to-face training [9].

Having described the theoretical basis of the concept of blended training, it would be advisable to highlight and compile factors that influence the effectiveness of the organization of the blended learning process, through the study of the main and, accordingly, compulsory subjects, directly for applicants for higher education in pedagogical specialties. These include the creative updating of the natural subjectivity of each applicant for education directly during the implementation of the educational process. In addition, attention should be focused on the level of involvement of special digital mechanisms in the information and educational environment, higher education institutions as a full-fledged subject of learning in the context of a blended format. An important role in the training of teachers is played by the involvement and, accordingly, the application of various tools belonging to the arsenal of information and communication technologies, namely, computers, the Internet, mobile phones, virtual technologies, which as a result allows to fully and qualitatively reproduce the educational, scientific and educational activity of the institution of professional retraining of teachers [10].

Analyzing the above, it is necessary to consider the factor that the effective and proper use of computer technologies in the process of upgrading teachers' qualifications will help to form their high digital competence, and in the future to give it to students and students. Also, through systematic monitoring and analysis of the problems of the blended mode of training, its effectiveness will certainly improve, as the shortcomings will be constantly eliminated, Moreover, this approach will modernize the training of teachers. Of particular importance is the very important aspect that plays a significant role in the teaching and retraining activities of educators, namely the introduction of specialized high-quality platforms for training sessions. The priority of this factor is that it is the platform that is the main element of the connection between the teacher and the applicant of education, so it should be as rational as possible to provide educational services to the full [11].

It would be useful to note such a factor as the level of organization and information and methodological support, which should accordingly be provided in the process of practical or independent work, while mastering individual training disciplines. The use of so-called “cloud” environments and technologies, directly when teaching the disciplines of specific vocational education, is becoming increasingly important. This is due to the fact that blended training involves part of the training sessions online, so the process of providing educational material to applicants should be unhindered. As a rule, the main part of the theoretical material, as well as tasks for practical and independent work, tests and additional information, teachers publish it on special web-resources, which are

usually created by each institution of higher education separately and have private access. As for the various working documents, electronic journals, additional literature and materials, they tend to focus on Google's cloud services, namely Google Drive, Google Tables, Google Documents, Google Presentations.

This approach is extremely effective because, unlike face-to-face training, where the applicant must write the material himself, it provides access to all the necessary information indefinitely and without hindrance. With regard to communication and the appropriate dissemination of information to students, this process is usually also ensured by the special web pages of individual departments of higher education. Especially popular is the creation of university accounts in various social networks, which in turn is quite necessary aspect, because through such web-pages students can provide feedback on the quality of the provision of educational services, which is extremely relevant in the course of blended training. In addition, social online platforms expand the boundaries of the institution, which allows it to develop more effectively, as well as integrate into society. This aspect also has a positive impact on the establishment of communication of the university or school with other educational organizations, which allows to improve the learning materials [12].

On the basis of the above-mentioned factors, which have a great impact on the learning process in a blended format, it can be established that their application will modernize the training courses for teachers. In addition, it would be useful to focus on the fact that meeting the conditions listed would make blended learning to some extent even more effective than traditional, i.e., face-to-face.

All these aspects will make the courses for the professional development of teachers truly productive, which will accordingly affect the quality of their future provision as well as educational services. In view of the above, it can be agreed that the blended format of the educational process is indeed promising, which is why it would be advisable to develop it during the training of future teachers. It should be understood, however, that the effectiveness of this process lies precisely in compliance with the requirements listed in the article. This approach will not only successfully prepare teachers, but also modernize the educational sphere as a whole and accordingly bring it in line with the challenges of modern society [13].

Discussion

Having analyzed the theoretical aspects of the concept under study, namely the professional training of teachers in blended learning, it would be advisable to consider how this process is implemented in practice. First of all, attention should be paid to the fact that modern teacher training courses, based on blended training programs, can be divided into four groups, which differ in their essence, namely: Rotation, Flex, A La Carte, and Enriched Virtual. Thus, the Rotation group consists of four subgroups, including rotary stations, rotary laboratories, inverted classroom and individual rotation [14]. As for the model Flex, it includes courses for which it is the online format is predominant. At the same time, applicants must acquire knowledge and skills in accordance with the methodological plan developed for the program, as well as related to the individual characteristics of the trainees. It was important to note that the training process was continuously provided with advice from the organizer, that is, the speaker. In addition, most of these courses have an important place for discussion and discussion, as they can not only deepen existing knowledge, but also expand from through the sharing experiences [15].

Also worth considering are the courses belonging to the group A La Carte, a characteristic feature of them is that they are held entirely online. This approach is suitable for those who do not have enough time to travel between establishments. However, to a greater extent, the features of this group belong to a remote format, in particular because these courses are completely virtual and do not involve direct contact between the lecturer and the trainee, nor in the process of providing theoretical materials, no practice. And finally, the latest model of the course is Enriched Virtual, which is that applicants for education, the main part of the educational process is carried out face to face, unlike the previous models. At the same time, it is worth noting the fact that students can complete the training, that is to hand over all the work directly online. Thus, this approach reveals the essence of blended learning as best it can.

The above-mentioned models, which have accordingly grouped teacher training courses according to the criteria of classroom and distance learning, describe the main functional components of the process. Thus, they include an element that includes components and properties that are in turn characteristic of traditional, that is, face-to-face learning, which involves the direct interaction of all participants in the learning process. Another equally important element is that it contains the mechanisms and tools needed to embody interactive interaction. In addition, modern information and communication technologies and various electronic resources should also be included. Attention should also be paid to the components of these courses, respectively, aimed at the self-development of the individual. This aspect is inherent in learning because it involves the full development of the individual. In addition, it is worth emphasizing that it includes self-study, which correspondingly allows you to increase the level of knowledge of the applicant of education after hours [16].

With regard specifically to the process of developing and improving the professional competencies of teachers, including in the context of the transition to a blended format of education, the question of the analysis and development of completely new approaches and mechanisms for the organization of course training is quite topical and interesting. Thus, on the basis of the models given, which are common in society, it can be established that such courses aimed at improving the qualifications of teachers, directly through the use of blended learning technology, are quite effective, However, when they are brought into line with the challenges of the modern educational system and training programs. In addition, it is necessary to pay attention to the fact that in this context, the blended format of training directly involves the comparison and partial combination of the properties of traditional, that is, full-time learning in accordance with the

features of distance learning, including through the use of various information technology tools [17-20].

It should be emphasized that the use of this approach can not only develop and improve the professional qualities and competence of the teacher, but also link various educational institutions, such as school and university, that, as a result, it will reduce the number and volume of actual and acute problems, respectively, existing. now in the modern educational space. With regard to the practical aspects of teacher training, it can be seen that the process is quite extensive and involves a number of features. Thus, the article has already identified a number of conditions that must be met when developing courses in a blended format, as well as considered the main models of such courses, which are actively used for the training of teachers.

On this basis, it is necessary to establish that the implementation of courses in the context of blended training is undoubtedly aimed at the formation and introduction of current and modernized educational programs for the professional development of teachers, which in turn fully meet the current requirements and conditions of educational policy of Kazakhstan [21; 22]. In addition, it is necessary to pay attention to the fact that the implementation of such courses will help to develop and consolidate innovative processes in the education system. That is why they will help to provide teachers with knowledge and competence in the use of modern pedagogical technologies, which also include information and communication tools and mechanisms, in turn, directly related to the practical activities of teachers [18; 23; 24].

Of particular note is the fact that refresher courses provide educators with knowledge on how to effectively deliver services directly through blended training. Moreover, such training activities undoubtedly influence the formation and development of appropriate, favorable conditions directly for the training of students and as a result of increasing their resource efficiency and the educational process in general [19; 25].

Based on the factors considered to be directly affected by such training courses, it can be observed that for the implementation of blended training at an appropriate high level it is necessary to develop and consolidate conditions, which will have a positive impact on the overall functioning of the educational environment, which also includes digital, computer, information and educational resources. In addition, the content of such training activities should include both information and telecommunication technologies and mechanisms, respectively, belonging to technological means [26]. This approach will certainly allow the applicant to master the educational program of advanced training courses at a high level, in order to subsequently reflect their skills in the educational process.

Thus, the implementation of teacher training in the relevant teacher-training courses in the blended mode is being developed and implemented in stages. According to the stages of this educational process belongs to the full component, a remote component, as well as an independent component. Each of the stages has its own features, revealed in the way of interaction of the teacher and the applicant of education [20; 27].

Bearing this in mind, before implementing such training, that is, during the organization of the educational process, it is necessary to define and consolidate the general framework, where, accordingly, the traditional educational process will take place with appropriate application of the properties and principles of distance learning. Of course, such training will be provided by the fact that a certain part of the training material and methodical tasks are mastered directly, that is, in the traditional form of training, and the next component of the training material – individual or online [21]. It should be noted that distance learning is directly characterized by high interactivity, which is revealed in the fact that the educational content is formed and implemented through regular interaction of the seedbed applicant with the lecturer. As for classroom, i.e., contact work, which is typical for face-to-face training, it should be noted that in such a case the educational process can be carried out in the form of lectures, as well as seminars or seminars, group and individual consultations on the course, module, a specific topic [28-30].

Considering the international experience of the implementation of blended training and, accordingly, the training of teachers, it is advisable to analyze a number of European countries, which are respectively famous for the successful implementation of this form of educational process. First of all, mention should be made of Finland, which has a number of universities that are accordingly aimed at providing adult education services. Thus, these institutions have even developed special models and programs of blended learning, aimed at the preparation of master's degrees in various fields, as well as retraining and advanced training of workers. It is worth noting that such courses operate at the expense of information technology, which in turn is based on the application of a flexible model of blended learning, that is, the one in which all individual qualities and wishes of students are taken into account. In addition, one of the promising aspects of the educational environment of this country is that universities usually develop and accordingly apply special online platforms, on which the teacher has the opportunity to cooperate with students, in particular, both with small groups and individually with an individual student [31-33].

In the case of Germany, advanced digital technologies are at the leading position of the education system. That is why blended learning is extremely popular among higher education institutions. In addition, the educational process in the universities of the country as a rule is based on the principles of blended learning, which in turn cooperates with written learning materials, as well as multimedia learning tools and classroom classes, this makes teaching as rational as possible and convenient for students and teachers [34]. The experience of Great Britain, directly in the field of blended training, deserves special attention. Thus, the main areas of education and thematic scientific work is undoubtedly the disclosure of the concept of v, through which the subjects of the educational process are given the opportunity to use a number of technologies, in particular to improve the effectiveness of learning [35; 36]. In addition, there is quite a broad interaction between applicants and teachers, which allows them to communicate freely and improve cooperation.

Thus, by analyzing the international experience and other countries, in particular the United States of America, Sweden, Belgium, Switzerland, China, it can be established that the blended format of the educational process is certainly a promising direction in the organization and conduct of initial classes, it also has some impact on improving the quality of education. It is worth noting that experts and scientists of foreign educational institutions establish that it is a blended training that aims to achieve maximum rationality and flexibility, in particular by increasing the number of distance courses and their accessibility [37]. The training implementation usually takes place directly using a range of digital technologies that can be considered, ranging from student blogs to pedagogical video lectures [38-40]. On this basis, it should be noted that the modernization and training of teachers in most educational institutions of other countries is aimed at the implementation and conduct of high-quality blended learning, by attracting new means of information and communication technologies, as well as the development and use of various electronic resources, in particular aimed at the smooth running of the learning process, directly in a blended learning environment.

Conclusions

As a result of the study, it was found that the organization of professional pedagogical training can be carried out in a blended format, and this is quite effective, especially if teachers pass special courses. Thus, the article considered the theoretical and practical component of this question. Accordingly, it has been established that blended learning contains a full-fledged educational concept, which in turn combines features of both traditional and distance learning. The analysis of conditions and factors influencing the process and its effectiveness is an important part of the work. Thus, a number of features have been identified that need to be taken into account when developing a program or course for the professional development of teachers. In addition, the article proved that the current policy of the state, which is aimed at digitalization of all spheres of public life, is reflected to a certain extent and on the educational system. Thus, the teacher in modern conditions fluctuates the obligation not only to thoroughly know and reproduce the educational material, but also to easily organize the educational process through the use of digital technology and the global Internet.

Accordingly, it is necessary to mention that in the article were grouped courses for teacher training and professional development on 4 models, in particular, Rotation, Flex, A La Carte, and Enriched Virtual. In this way, their main features and distinctive features affecting the way and form of conducting training sessions were identified. The article also compared the properties of blended format with distance and face-to-face, which allowed to analyze each of them and compare their effectiveness. Thus, it should be emphasized that it is the hybrid approach that is the most rational and flexible, but in order to be more effective it is necessary to approach the process of developing modern educational courses for teachers qualitatively. With regard to future scientific work on the subject, it is certainly necessary to explore the main differences between distance and blended learning in order to distinguish the areas of teacher training.

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Conflict of Interest

None.

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Змішане навчання у професійній підготовці вчителів

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Анотація

Актуальність. Питання змішаного навчання у професійній підготовці вчителів є надзвичайно актуальним. Такий підвищений інтерес зумовлений поширенням гострої інфекційної хвороби COVID-19, оскільки всі суспільні сфери діяльності громадян переведені у змішаний формат.

Мета. Метою роботи є аналіз основних особливостей змішаного формату навчання, а також встановлення необхідного рівня знань та підготовки викладачів для його ефективного впровадження.

Методологія. У статті використано низку науково-методологічних інструментів, які допомогли розкрити важливі елементи досліджуваного питання. Відповідно, важливе місце в роботі посідають функціональний та системний підходи, крім того, такі логічні методи, як метод аналізу та синтезу, порівняння, узагальнення, дедукції.

Результати. Основними результатами дослідження є теоретичні та практичні основи питання, що розглядається. У теоретичній частині розкрито основні поняття, їх властивості та ознаки, які, безперечно, стосуються сфери професійної компетентності викладача. У практичній частині порівнюються основні підходи, що використовуються до цього часу для підготовки майбутніх викладачів до надання освітніх послуг, а саме у змішаному форматі. Крім того, у статті розглянуто досвід інших країн, що допомогло глибше вивчити особливості досліджуваного питання та встановити перспективні напрямки, які можуть бути застосовані в Казахстані.

Висновки. У подальших наукових працях за цією темою необхідно проаналізувати основні відмінності між дистанційним та змішаним навчанням з метою розмежування напрямів підготовки вчителів.

Ключові слова: навчально-виховний процес; викладач; підвищення кваліфікації; компетентність; дистанційне навчання.