Prospects for the development of distance education in Ukraine: Methodological aspect

Perspectivas para el desarrollo de la educación a distancia en Ucrania: Aspecto metodológico

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Abstract

The article develops the theoretical and methodological foundations of distance learning in the systemof continuous education and its characteristic features (flexibility, modularity, parallelism, long-range action, asynchrony, mass character, economic efficiency, the changed role of the teacher, the new role and activity of the student, specialized control of the learning process, the use of modern teachingaids, sociality, internationality); the differences between distance learning and the traditional full-time form are established (in the distance learning system, the student is the customer of knowledge; the information and educational environment of distance learning is much wider, but less than traditional full-time education, regulates the behavior of participants in the pedagogical process and disciplines students to a greater extent); the specifics of the personal interaction of participants in the distance learning process and the management of distance learning processes (human studies, psychophysical, socio-psychological aspects predominate in it) are revealed; carrying out educationalwork in the conditions of remote betrothal puts forward

the axiological approach in the first place; resolved a set of issues related to the introduction of a distance learning system into real pedagogical practice (its social, worldview, value, methodological, legal, financial, economic, organizational, didactic, technological, psychological, applied and educational aspects); organizational forms of distance learning are defined (traditional (correspondence); with fragmentary use of information and communication technologies; electronic; combined).

Keywords: higher education, education system, distance learning, distance education.

Resumen

El artículo desarrolla los fundamentos teóricos y metodológicos de la educación a distancia en el sistema de educación continua y sus rasgos característicos (flexibilidad, modularidad, paralelismo, acción de largo alcance, asincronía, carácter de masa, eficiencia económica, el cambio de rol del docente, el nuevo papel y actividad del estudiante, control especializado del proceso de aprendizaje, uso de medios didácticos modernos, sociabilidad, internacionalidad); se establecen las diferencias entre la educación a distancia y la forma tradicional de tiempo completo (en el sistema de educación a distancia, el cliente del conocimiento es el estudiante; el entorno informativo y educativo de la educación a distancia es mucho más amplio, pero menor que la educación tradicional a tiempo completo, regula el comportamiento de los participantes en el proceso pedagógico y disciplina en mayor medida a los estudiantes); se revelan las especificidades de la interacción personal de los participantes en el proceso de aprendizaje a distancia y la gestión de los procesos de aprendizaje a distancia (en ella predominan los estudios humanos, los aspectos psicofísicos, sociopsicológicos); realizar una labor educativa en las condiciones de los esponsales a distancia plantea en primer lugar el enfoque axiológico; resolvió un conjunto de cuestiones relacionadas con la introducción de un sistema de educación a distancia en la práctica pedagógica real (sus aspectos sociales, ideológicos, valorativos, metodológicos, legales, financieros, económicos, organizativos, didácticos, tecnológicos, psicológicos, aplicados y educativos); se definen formas de organización de la educación a distancia (tradicional (correspondencia); con uso fragmentario de las tecnologías de la información y la comunicación; electrónica; combinada).

Palabras clave: educación superior, sistema educativo, aprendizaje a distancia, educación a distancia.

1. Introduction

The processes of globalization of all spheres of public life, the formation of the information (post-industrial) stage of development in developed countries make the implementation of the task of continuous education of the population a vital necessity. In its solution, models and technologies of distance education acquire a special role today.

The modern pedagogical process is aimed at establishing mutually enriching relations between its participants, ensuring the adaptation of students to modern socio-economic conditions, self-realization and disclosure of the creative potential of the individual. This, in turn, requires the development of educational technologies that involve the widespread use of modern means of communication for the development of the individual and his professional development. At present, the personality of the student is in the center of attention of all subjects of the pedagogical

process. The disclosure of its creative and intellectual capabilities at all levels of education is the basis of modern educational policy (Shehab & Khalifa, 2021).

The intensive development of information and communication technologies initiates the formation of tendencies for the intellectualization of all types of society's activities in all its spheres, and above all in the education system (Atieku-Boateng, 2021), (Shoufan, 2019). Realization of opportunities for educational purposes requires the development of special approaches to the application of knowledge and technologies for creating, processing, storing, transmitting information in modern socio-cultural conditions. Such developments are carried out both in our country and abroad.

Over the past thirty years, research has been carried out on the use of computer support programs in the field of traditional forms and methods of education (Hillier, 2018).

A promising trend in the development of continuous education, its accessibility, personal orientation is the optimal combination of traditional forms and methods of teaching and distance technologies (Palvia et al., 2018).

There are opportunities to expand the scope of educational services in the form of a student-centered distance learning system. The implementation of a distance learning system in real pedagogical practice will make it possible to solve a number of problems, which in general terms can be formulated as follows: a) ensuring the availability of a variety of information; b) receiving general and vocational education; c) advanced training, retraining or change in the field of professional activity during life; d) intensification of the education system; e) development of creative and intellectual abilities of a person (Gao, 2021).

The development of distance education ensures the creation of open, including international, educational structures for various purposes. Currently, there is an active development of modern science-intensive technologies based on cardinal socio-economic changes in society. The paradigm of education is changing - from "education for life" to "education throughout life". Within its framework, there is a search for new forms of organization of the learning process. One of the promising forms, according to scientists, is distance learning. Entering the system of distance education, it becomes its technological component. Today, this type of education is considered as a promising direction in the development of the national education system.

2. Literature review

Despite the obvious advantages of online learning in higher education institutions, the introduction of the educational process in electronic format involves solving a number of issues for both students and for academic staff of educational institutions (Riera Guasp, Ardid, Vidaurre & Dueñas, 2018), (Rajab, 2018).

For academic staff, the real challenge of online learning was the significant increase in the time required to provide a quality learning process. In particular, the time for preparing lecture classes, checking homework, and maintaining electronic and hardcopy records of attendance and success of education applicants has doubled (Ali, Khalil & El-Sharkawy, 2020).The major reasons for the suspension ofthe educational process during warfare are considered to be the lack of a clear plan of action for the use of online learning for all participants in the educational process and the lack of adequate facilities of institutions of higher education that could ensure the proper quality of

online education (O'Doherty, Dromey, Lougheed, Hannigan, Last & McGrath, 2018), (Nikadambaeva, 2020), (Morin, 2020). Considering the challenges of online learning organization, scientists pay attention to the issues of qualified support of the student by the educator or other authorized persons during online learning. Such qualified support should begin at the stage of searching for proposals of distance learning programs and accompany the student during the entire learning process (Langegard, Kiani, Nielsen & Svensson, 2021). However, a review of the literature on the development of online education in times of war has shown that the issue of developing special strategies for working with higher education applicants during military conflicts remains unresolved. This is due to the lack of specialized software and information developments for working with students that take into account the specifics of receiving education specifically during military conflict (during its exacerbation especially) in the territory where the educational institution or students studying at such institutions are located.

3. Aims

The Aim of the article is to substantiate and develop the theoretical methodological foundations of distance learning in the system of continuous education.

The object of the study is distance learning at various levels of continuous education.

The subject of the study is modeling the process of distance learning in the system of continuous education.

The general hypothesis of the study: modeling the process of distance learning in the system of continuous education allows us to solve a major scientific and practical problem of the development of distance learning, as one of the promising areas for improving the national education system.

4. Materials and methods

Research methods. At different stages of the study, a set of complementary methods was used:

a) theoretical (analysis and synthesis of scientific literature on the topic of research; generalization, extrapolation, modeling, design of systems and processes, study of directive, regulatory and program and methodological documents in the field of education);
b) empirical (study, analysis of the current experience of the functioning of the system of continuous education and distance learning, prolonged observations; questionnaires, heuristic conversations, content analysis, rating, Internet search, pedagogical experiment, retrospective analysis of personal pedagogical experience in modeling learning systems and implementing distance learning;
c) statistical (quantitative and qualitative processing of experimental data, graphical representation of the results).

5. Results

Distance learning is a modern form of organizing the educational process, which is based on the principle of self-study and is expressed in a purposeful process of interactive interaction between teachers and students (teachers and students, teachers and students) using information and

telecommunication technologies that provide students with the necessary amount of material to be studied. In the course of distance learning, trainees (pupils, students, specialists) receive education and confirmation of a certain educational qualification.

Analysis and generalization of literary sources, practical experience made it possible to single out the stages of development of distance learning: ascertaining (the initial stage of development, at which the goals, objectives, functions and principles of the distance learning system are developed), phenomenological (the essence of continuous, in this case, distance education is studied, highlighting its practical significance), the methodological stage at which the development of the scientific and theoretical foundations of lifelong distance education and the identification of organizational aspects of the implementation of various models of distance education in the practical activities of lifelong education institutions.

Based on the analysis of philosophical, psychological, pedagogical and special literature on the research problem, the following general features of continuous distance learning are identified in three interrelated aspects: personal, functional and organizational. It has been established that continuous distance learning is implemented in practice through the following principles: systematic and scientific teaching; consistency and continuity of types, forms and technologies of education; predicting learning outcomes; specialization of education, taking into account the demands of the market and the possibilities of the individual; individualization of learning through the study of the real educational opportunities of students (Ratheeswari, 2018).

The process of interaction between the economy and education lies in the fact that the improvement of production technologies requires an increase in the level of professionalism, and as a result of this process, there is an increase in the requirements for the preparation of students of a general education school and students of higher educational institutions.

Self-education is a purposeful cognitive activity that is controlled by the individual himself without external influence and incentives in order to acquire systematic knowledge in any field. It is based on a person's direct interest in the learning process, combined with the independence of studying educational material, and acts as one of the means of self-education. Self-education is an integral and one of the most important components of continuous distance learning, acting both as a way to gain knowledge and as a link between basic education and periodic training of specialists (Alqahtani & Rajkhan, 2020).

The main forms of self-education in the context of distance learning are the study of specially selected information blocks on certain topics.

We have singled out the following components in the adult lifelong education system: general education, realizing the possibility of obtaining and expanding secondary education; professional, allowing you to get a profession; additional, which offers educational programs for more productive occupations of citizens by interests (training for universities, learning foreign languages, etc.).

The development of a system of continuous distance learning is significant due to the fact that it stimulates the reorganization of the pedagogical process using active teaching methods; contributes to the creation of such conditions under which a person independently strives to improve the level of his education and general culture throughout his life; leads to the knowledge of the individual himself, his interests and abilities; leads to the development of independent work

skills and individualization of the learning process; activates the creation of "through" professional programs, opening up the possibility of moving in them both vertically and horizontally; forms an attitude to knowledge as a value, develops a sense of responsibility for the education received and the need for further development.

Distance learning is now firmly established in the world pedagogical practice. It originated from "television education" in the West, correspondence education and correspondence education and became widespread in the 70s. In Ukraine, distance learning has been enriched with modern achievements in the field of pedagogy, psychology, ergonomics, computer science and information technology and telecommunications. Distance learning acts as one of the social mechanisms that contribute to the adaptation of members of society to new conditions of life.

The purpose of distance learning is determined by the modern economic socio-cultural conditions of society and is aimed at preparing a comprehensively developed personality, a professional with high mobility. The distance learning system is the most important mechanism for the reproduction of highly developed productive forces capable of ensuring the country's dynamic development.

Practice shows that distance learning provides opportunities for: training at the place of residence, in the process of production activities; ensuring wide access to world resources; obtaining an education that contributes to the solution of various life tasks at any level of basic education; organization of the self-learning process in the most effective way to use all the necessary means; interruption and continuation of education, depending on individual capabilities, needs and emerging personal circumstances; significant expansion of access to all types of educational resources without age restrictions for trainees; reducing the cost of education in comparison with its traditional forms; formation of educational programs and courses for a wide range of consumers; improving the quality of education and its practical orientation; meeting the needs of society in well-trained specialists in the fields of activity that are in demand today; increasing the mobility of the population, its entrepreneurial and social activity, the level of development; preservation and development of a single information and educational space in Ukraine.

The implementation of distance learning is carried out on the basis of specific didactic support. By it we mean an educational and methodological complex created for a specific academic discipline or a cycle of disciplines based on the systemic principles of distance learning. This complex includes a set of interconnected in terms of goals and objectives of education and upbringing of various types of "pedagogically useful" meaningful educational information on various media. Didactic software is used to organize, control and correct the educational process in distance learning and serves as one of the means of formation and self-development of the student's personality.

According to the researchers, the success of distance learning in the system of lifelong education largely depends on the didactic quality of the content educational information used; professional skills of teachers; effective management of the pedagogical process; quality of software and hardware support; willingness of students to work with modern technologies. When organizing distance learning, the specifics of communicative, motivated and purposeful emotional and intellectual interaction between the teacher and students, as well as regional features of the functioning of educational institutions, are taken into account.

The study shows that at present the problem of building a unified DL system is being solved at

four levels: a) global (international subsystems and their support); b) national (federal) subsystem of distance learning; c) regional and sectoral subsystems and their provision; d) local (university) subsystems and their support.

The study of domestic and foreign practice in the implementation of distance learning made it possible to identify such characteristic features as flexibility, modularity, parallelism, long-range action, asynchrony, mass character, economic efficiency, the new role of the teacher, the new role and activity of the student, specialized control of the learning process, the use of modern teaching aids, sociality, internationality. These characteristic features of DL determine its advantage over other forms of education. At the same time, distance learning places higher demands on its participants, didactic support of the pedagogical process and its management.

The introduction of a distance education system into real pedagogical practice requires solving a set of problems related to social, ideological, value, methodological, legal, financial, economic, organizational, didactic, technological, psychological, applied and educational aspects.

Distance learning is a component of distance education. When it is included in the system of continuous education, the following principles are taken into account: modular design of the learning process; self-learning orientation; balanced use of the reserves of traditional education; optimality of the distance learning system. This makes it possible to obtain a high result in the main components of the education system, which is achieved by the gradual inclusion of elements of distance learning into the system of continuous education.

The specificity of distance learning lies in the indirect interaction of its participants, which is carried out on the initiative of the student, proceeds in the form of purposeful independent work on individual educational programs, the possibility of designing which is embedded in the learning model and is aimed at obtaining the desired result. In distance learning, the "customer" of knowledge is mainly the student.

To effectively manage the development of distance learning in the system of continuous education, the following main patterns have been identified:

−   the components of distance learning in the structure of continuous education have different meanings in different periods of a person's life, are subordinate to each other and, as a whole, constitute a system;
−   distance learning in the system of lifelong education is multifaceted and linked to other social institutions (culture, family, healthcare, etc.);
−   the development of distance learning in the system of continuous education is determined by the level of social development of society;
−   distance learning in the system of continuous education strives for integrity through the introduction of state educational standards;
−   the stages of distance learning in the system of continuous education are structured as interconnected and complementary;
−   educational programs of each educational institution should be correlated with programs of other levels and stages of distance learning;
−   distance learning in the system of continuous education ensures the unity of the management process in the space-time continuum;
−   the dependence of the effectiveness of the functioning of distance learning in the system of

continuous education on the level of structural and functional relationships between the subject and object of the pedagogical process.

It was revealed that the successful implementation of effective distance learning at various levels of education is possible under the condition of a comprehensive consideration of methodological, organizational, psychological, content and regional aspects. In the course of the study, it was found that it is advisable to build a distance learning management model based on the following provisions:

1. At the center of the learning process is purposeful and active independent educational and cognitive activity, managed through the DL program and the conscious choice of the student.
2. A flexible system of distance learning will allow the student to independently acquire knowledge throughout his life in the future.
3. Distance learning should be active and purposeful, providing for the acquisition of knowledge by a person to solve the practical problems of his work and the implementation of career pants.
4. Distance learning should not exclude the possibility of direct personal communication of its participants (teacher and student, teacher-student) and cooperation in the process of cognitive and creative activity.
5. The system for monitoring the assimilation of knowledge should be of an operational nature, based on the processing of data for monitoring progress, information about participation in research work, etc.
6. Purposeful use of time and health-saving learning technologies in the process of distance learning.
7. Conducting educational work in the process of distance learning in forms consistent with its characteristics and conditions.

The didactic system of continuing professional education has a structure, content, methods, forms, means and methods of control that provide students with the achievement of a certain level of professional preparedness.

For the optimal design of a system of continuous distance education, it seems appropriate to first evaluate possible options for the future (forecasting). It should be aimed at finding effective ways to increase the level of design, to regulate the development process of one or another didactic subsystem for optimizing this process.

Pedagogical forecasting is one of the most important elements of preparation, or rather the first step in designing a distance learning system, as well as the scientific substantiation of these plans, programs and decisions, an assessment of the progress and sequence of their implementation.

Pedagogical forecasting plays a supporting role in relation to design and programming. It is designed to provide the necessary scientific information to the authorities throughout the entire design process, that is, this is not a one-stage event, but a continuous process.

Pedagogical forecasting and design are the two initial phases of the management process, along with the phases of monitoring the implementation of the project, its operational adjustment and detailing, that is, operational management.

The conceptual problems include, in particular, such problems as the analysis and selection of the goals of distance learning, the analysis of the possible consequences of its system, the identification of a set of indicators characterizing the initial projects and the objects participating in them, the analysis of these indicators, the selection of the most significant and assigning them to the category of optimality criteria.

According to the author, the design process may include the following stages: preliminary formulation of the pedagogical problem; determination of research objectives and selection of appropriate optimality criteria; identification and formulation of design conditions; compilation of the most complete list of alternatives and their preliminary analysis in order to discard those that are clearly ineffective; collection of the necessary information and forecasting changes in system parameters in the future; precise formulation of the problem statement; forecasting the likely consequences of the implementation of the distance learning system; development of a remote control model that allows evaluating the effectiveness of each alternative; analysis and selection of a design method and development of an algorithm for creating a system; evaluation of alternatives and determination of the most effective ones; acceptance of the project by management; project implementation and evaluation of results; forecasting the development of distance learning based on the ongoing project.

The process of creating an organizational system of distance learning includes: preparatory, main and final stages, at which various activities are carried out to ensure the effective functioning of the distance learning system. They include organizational, technical, personnel, program-didactic, methodological, prognostic, regulatory, technological, corrective and financial aspects. In the course of the study, we considered the provisions that determine these stages:

1. At the preparatory (organizational) - regulatory, financial, personnel, technical, program-didactic, methodological.
2. On the main - programmatic and didactic, methodical (representing the development, clarification and addition of those carried out in the framework of the first stage) implementation of the model, technological, corrective.
3. At the final stage - prognostic (assessment and forecasting of the further development of the distance learning system).

A specific feature of distance learning is the self-management of the learning process. The basic principles of self-guided learning are:

- the process of distance learning as a system is built on the basis of a unified theory of teaching-learning;
- the main figure of the learning process is the student's personality, which acts as a subject capable of self-government;
- the systemic content of the learning process depends on the accepted concept of distance education and its structure.

On the basis of these principles, we have constructed a model of distance learning in the system of continuous education, the main function of which is to provide effective reflective management of students' distance learning. The components of the system within the framework of achieving this goal perform specific functions inherent in them. Possessing a certain organizational integrity and operational independence, they are subsystems of the entire distance learning management system and develop in accordance with the laws of development of social systems.

The theoretical foundations of distance learning as a component of the system under consideration are represented by the initial provisions of the theories and methods outlined in the first and second paragraphs of the first chapter. At the same time, we note that there is no unified theory of distance learning and a coherent system for managing it in the system of educational institutions, practical activities for managing distance learning are unsystematic, which, on the one hand, reduces its effectiveness, and on the other hand, creates the prerequisites for real improvement. student self-government. In DL, all components of the program of the learning process are filled with new content that reflects its specifics. This allows you to quickly update the content and technology. To achieve the manufacturability of program development, a pedagogical scenario is created, which is one of the ways to fix experience. With the help of the scenario, typical procedures (sequence of actions) in the problem area are set in a generalized and structured form. The pedagogical scenario contains indications of the necessary and sufficient conditions for the beginning and completion of the necessary procedures. For example, for teacher training, a working pedagogical scenario is created that represents a teaching model in accordance with the selected teaching technology and the use of computer and other technology in distance learning. The pedagogical scenario is developed for programmers who create the appropriate computer support included in the structure of didactic support.

Practice shows that the effectiveness of the implementation of the DL system depends on the fulfillment of a set of organizational and pedagogical conditions. By them, we mean a set of interrelated circumstances, measures aimed at creating a favorable environment that provides targeted management of the distance learning process and the rules established in the distance education system in order to ensure the high quality of distance learning. The system of organizational conditions is aimed at ensuring planning, organization, communication, regulation, control and correction of the distance learning process.

The conducted experimental work showed that the most important pedagogical conditions for the implementation of a distance learning system in real educational practice include: theoretical foundations; organizational forms of distance learning; readiness of students for distance learning; pedagogical control of independent work in the distance learning mode; training teachers to work in the distance learning system.

The study revealed that the most important organizational conditions for the implementation of a distance learning system in real educational practice include:

− scientific development of theoretical foundations and technology of distance learning;
− designing a model for organizing distance learning;
− organizing the approbation of this model and testing it in mass pedagogical practice;
− purposeful use of information and telecommunication technologies in the process of distance learning;
− creation and use of a telecommunications complex in the distance learning system;
− organizing the design and development of didactic support for the distance learning process.

The implementation of a distance learning system is closely related to the problem of developing special didactic tools and choosing forms for this type of education. The pedagogical process in the distance learning mode can be carried out in full-time, part-time (evening), part-time forms of education, in the form of an external study or a combination of these forms.

Didactic means of distance learning, by their properties, actively influence all components of the learning system (goals, content of education, organizational forms, etc.) and allow setting and solving more complex and urgent tasks.

The introduction of these tools into practice will allow students to form the skills of competent work with various types of information using information and communication technologies; involve each student in an active cognitive process; to provide free access to the necessary information not only in the information centers of the educational institution, but also in the centers of other countries; communicate with peers from other educational institutions of the country and even other countries of the world; work in collaboration in solving a variety of problems, while demonstrating certain communication skills; to form the ethics of work in telecommunication networks, etc.

6. Discussion

Scientific novelty of the research:

− clarified the conceptual apparatus (distance education, distance learning, distance learning technology, distance education tools);
− it has been proved that distance learning, due to a number of objective conditions, is becoming the most promising type of education, its distinctive features make it possible to better solve the problems of continuous education;
− the specificity of the design and implementation of didactic support for distance learning was revealed;
− a system of principles has been developed that allows introducing distance learning into lifelong education on a scientific and theoretical basis;
− applied a variety of methods, tools and techniques for designing a functional model of distance learning, taking into account one or another level of the lifelong education system;
− a set of organizational, legal, pedagogical, socio-psychological, technical, technological and other conditions have been established and taken into account, allowing to successfully implement the possibilities of distance learning in the system of continuous education;
− a model of pedagogical interaction of distance learning participants (teacher, learning model, student, means of communication) has been created.

Theoretical significance of the study:

− substantiated the theory of self-guided learning as the basis of distance learning;
− the theoretical and methodological foundations of distance learning in the system of continuous education and its characteristic features (flexibility, modularity, parallelism, long-range action, asynchrony, mass character, economic efficiency, the changed role of the teacher, the new role and activity of the student, specialized control of the learning process, the use of modern means) learning, sociality, internationality);
− the differences between distance learning and the traditional full-time form have been established (in the distance learning system, the student is the customer of knowledge; the information and educational environment of distance learning is much wider, but less than traditional full-time education, regulates the behavior of participants in the pedagogical process and disciplines students to a greater extent);
− the specifics of the personal interaction of participants in the distance learning process and

the management of distance learning processes were revealed (human studies, psychophysical, socio-psychological aspects predominate in it); carrying out educational work in the conditions of remote betrothal puts forward the axiological approach in the first place;

- a set of issues related to the introduction of a distance learning system into real pedagogical practice (its social, worldview, value, methodological, legal, financial, economic, organizational, didactic, technological, psychological, applied and educational aspects) has been resolved;
- organizational forms of distance learning are defined (traditional (correspondence); with fragmentary use of information and communication technologies; electronic; combined).

The practical significance of the study lies in the development of scientific and methodological recommendations for modeling the DL process and the use of a functional model of self-directed learning in institutions of the continuous education system. In addition, the materials and conclusions published on the results of the study can be used by employees of educational institutions in the preparation of curricula, high school students and students in the development of their social and professional orientation, in the system of advanced training and retraining of specialists using any level of computer literacy.

7. Conclusions

1. The development of the theory of a self-organizing system of distance learning is the development of one of the areas of personality-oriented pedagogical systems. It allows you to effectively implement distance learning technologies, education and self-development, taking into account the peculiarities of the functioning of the regional system of continuous education. When implementing a distance learning system at various educational levels, interrelated and interdependent pedagogical, psychological, organizational, technological, personnel and regulatory methods are considered and a self-organizing model of distance learning is proposed.
2. Theories, technologies, telecommunication networks and software and information support for various purposes are widely used in the distance learning system. Based on the use of these tools in a distance learning environment, self-guided learning is provided. Information and telecommunication technologies make changes not only in the ways of disseminating the acquired knowledge, they suggest a new way of organizing the structural and functional components of the lifelong education system.
3. The optimal implementation of distance learning in the system of continuous education can be ensured by the integrated use of traditional and innovative means.
4. To ensure the effectiveness of the development and use of modern informatization tools in distance learning, it is necessary to organize qualified training and retraining of teachers. This training should have meaningful motivations and be carried out in an integrated manner with extensive practice in all types of information and telecommunication technologies used. At the same time, training should be focused on a different level of information culture of teachers.
5. Studies have shown that at the stage of application by users of software and information support of distance learning systems with computer support in various conditions, they need to be modernized and developed, which predetermines the importance of the theoretical development of the logic and patterns of their development; the need to study the previous stages of the life cycle of these systems. This requires taking into account organizational and pedagogical conditions both in the design, creation, and implementation of such systems. When developing and applying didactic support in the system of continuous distance learning,

the components of the information infrastructure of the learning environment and the components of the real infrastructure of software for various purposes should be considered in conjunction.

6. Practical experience has shown that further improvement of distance learning for its use in the system of continuous education should be considered in the following interrelated areas: a) theoretical and methodological; b) regulatory and legal; c) methodical, involving research, development and implementation of forms, methods and means of distance learning; d) technological, based on the scientific application of technologies in distance learning; e) organizational and practical.

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