

Improving the Methodology of Using the Geogebra Program in E-Learning Environment

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Annotation: In this paper, the electronicization, informatization and computerization of education, its mediation and virtualization are system-building factors for understanding and developing the conceptual framework of e-learning.

Key words: Electronic, informatization, computerization, environment, pedagogy.

In our article, we discussed how to improve the skills of "collecting, storing, processing and using information, the ability to make informed decisions in their professional activities." Therefore, exploring the importance of the e-learning environment and the place of its use is one of the important conditions of the article problem. In particular, in the theory and practice of pedagogy, the study of the phenomenon of e-learning environment is carried out in various aspects. "Environment", electro it is impossible to achieve this goal without considering the essence of such concepts as "environment". Given the fact that the study has an educational orientation, we consider it necessary to determine its structural and functional characteristics in accordance with the current level of information and technological development of society.

In the explanatory dictionary of the Uzbek language to the word "environment": 1. a set of natural or social conditions in which life, activity. 2. Interpretation of material conditions in which an event, process, etc. takes place made. An analysis of the existing definitions of the category "environment" in various fields of science has shown that the leading role in defining its definition stems from the context of the time. In particular, there are many approaches to the content of the concept of "environment": social (D.J. Markovich, P.A. Sorokin and others); philosopher (Jacob Johann von Ikskyul); psychological (M.Heydemets, G.M.Andreeva and others); ecological (J. Gibson) aspects have been studied and generalized. Our analysis is a unique perception of the environment indicates that it does not exist. To determine the meaning of the category "environment", let's look at the historical and pedagogical literature. The ideas of the influence of the environment on the individual are observed in the works of D. Diderot, J. Locke, J. J. Russo. The essence of the generalized position in these works is that "the environment is a condition for optimal self-development of the individual." Drawing on the research of previous theorists, K.N. Ventsel notes the need to create an educational environment. In particular, it is specific to foster children supports the idea that the formation of a set of conditions is appropriate. The next stage in the study of the effects of the environment on the individual began in the first half of the last century. The peculiarity of this period is the study of the environment and its direct impact on the individual. The problem of environment in pedagogy has also been analyzed by foreign scholars. In particular, he considered it expedient to create a "creative educational environment for the development of a harmoniously developed person." J. Dewey learning environmental analyzed the problem of free upbringing of man. In his research, he emphasizes that during the pedagogical activity, each student should focus on

creating "optimal conditions for the full expression of individuality." By the sixties of the last century, ideas about the influence of nature and the social environment on the individual became widespread. In the next stage (from the seventies to the nineties of the twentieth century) the generalization of experience and knowledge accumulated in pedagogy, as well as the development of an environmental approach.

Natural, cultural, architectural, educational, intellectual environment and other types of works of this period appeared as the subject of study. By the end of the twentieth century - beginning of the twenty-first century, there has been an increase in research on the internal structure of the educational environment and its impact on the individual. This trend was caused by the events of humanization and humanization in the field of education. Also local and foreign can be explained by the focus of scientists on the environmental approach, the connection of education with ecology, the strengthening of the characterization of personality, the development of information, eco and info psychology. It should be noted that in modern pedagogy, the essence of the concept of educational environment is revealed through belonging to the socio-cultural space, educational systems, their elements and the interaction of the subjects of the educational process. First, it is about clearly defining the nature and content of the learning environment there is no single approach. In this regard, it should be noted that it is more interesting for us to discuss the content, scope and ratio of the concepts of "educational space" and "educational environment" and to study it from a scientific point of view. The reason we say this is that some authors consider the category "space" to be synonymous with the word "environment."

Proponents of this view describe the educational space as a system of specially organized pedagogical environment, pedagogical factors and conditions of personal development with a specific structure. Others, on the contrary, describe the learning environment as an integral part of the space. For example: Yu. G. Belyaev, A. V. Khutorskoy et al describe the educational space as a collection of educational institutions, processes, and learning environments. We, in turn, say that the concept of "educational space" is much broader in terms of scope we count. From the approaches presented in scientific and pedagogical research, it is possible to systematize the definition of this concept and to distinguish between structural-spiritual, functional and integrative approaches. The structural-spiritual approach allows revealing the essence of the concept of "educational space". It relies on the components of its composition, the description and analysis of their interaction and cooperation to achieve the main goal - the development and literacy of the individual.

Function The l approach, on the other hand, involves distinguishing the characteristics of the educational space, the quality and specificity of its territorial affiliation. For example, the research of I.D. Frumin and A.A. Zucker emphasizes the functional function of the learning space. "Place" for the implementation of human educational activities; as a certain place in society, where many relationships and connections take place, where different systems (state, society) carry out special activities for the development of the individual and his socialization shown.

Thoughts about the integrative approach and its essence are revealed on the basis of the idea of synthesizing the positions described above. In particular, the educational space is

assessed as an integral integrative unit of society and the world educational space, which is defined as normative and spontaneous and has its own coordinate system. They provide opportunities for a person to mature at different stages of development. Thus, we have the concept of "learning space" as multifaceted and unambiguous we concluded that I have no definition. In this case, the work of OA Leonova is of special importance for our research. He argues that the term educational space is synonymous with the concept of "learning environment"; as a territorial category related to the scale of events in education and social practice; as a result of constructive activity in the field of education; can be taken as the level of social space. In our view, the learning environment is manifested as a component of the learning space and below is a core concept for all types of environments under consideration.

Our second conclusion from the analysis of psychological and pedagogical research is that the mechanism of interaction between the environment and man has not been fully studied, and it is an ongoing process, and it is advisable to study it at all times. In science, there are different concepts of environment and human interaction. They can be conditionally divided into "factorial" and "molecular" concepts. The first is the need and obligation of human interaction with the environment while the latter focuses on the study of the free description of relationships that give the subject the right to choose. According to the factorial model, the environment is a set of conditions and components that are considered to be stimuli and stimuli of human exposure, allowing describing the changes that occur in the environment -functional systems. The molecular model, on the other hand, is based on the notion of space and time, is related to the category of "place" and expresses the composition of the environment. Note the concepts mentioned complement each other. Based on this, we describe the structural structure of the educational environment and highlight its features. In the theory of modern pedagogy, researchers have developed different approaches that correspond to the definition of the components of the learning environment. A similar position has been put forward by researchers, in which the two components of the educational environment structure are the subjects of the educational process and its objects. The first component when it comes to, learners and teachers are understood, the second component is manifested through the field of management, teaching aids, methodologies, material base.

At the same time, the category in question is defined as a system of constantly changing conditions that allow all subjects to work with these resources using methodological, spiritual, operational and technical resources, as well as information and communication technologies [86]. Information analysis the concept of environment is also of interest to us in terms of professional training. This category is interpreted as an environment that includes teaching aids, which rely on information of new information and communication technologies, scientific and educational descriptions, which contribute to the formation of the foundations of the professional component of the future specialist. Analyzing the above, the concepts of "learning environment" and "learning environment" are interrelated as a whole and as part of it will be. At present, the learning environment is a very complex system. The essence of the system depends on the characteristics of educational goals, content, didactic processes, teaching methods, tools, forms and its principles. A didactic system with specific resources creates a learning environment based on interactions with subjects.

In the current context, the learning environment created through the influence of informatization and technologicalization of the education system also deserves special attention. In our research, we present and evaluate a new type of educational environment formed in accordance with the current stage of development of the information technology society. Analysis of the literature in different areas the information technology society is derived from the five basic constitutive (from the French word "constitutive" - the basis of something, the basis defining meanings) allowed the separation of principles: electronicization, computerization, informatization, mediation, and virtualization. Electrification is an engineering and technical process consisting of the production, construction and widespread application of electronic technologies in various fields of human activity. Computerization, which is seen as a phenomenon of computer creation and widespread use, complements electronicization. The informatization of society is information in itself represents the process of progressive-active application of technologies. The purpose is to prepare process, store and disseminate information and knowledge. Mediation is reflected in the creation and dissemination of the latest systems of collective and personal communication. This communication ensures that any individual can easily access sources of information, personal, interpersonal and group communication. The phenomenon of virtualization is the "fragmentation" of reality. Characterized by As a result, human interaction is ensured not with concrete objects but with simulations. What provided the theoretical basis for the emergence and development of these phenomena is the in-depth observation of the following cases: D. Bell's concept of the information society, Y. Masoud's theory of the information society, Z. Brzezinski's theory of cybernetization of social systems, the concept of technotron society, Marshall McLuhan's "electronic society" Concept, M. Castell's theory of narrow-band society (see Table 1).

Theoretical foundations of the development of an informed society

Theoretical foundations	Important ideas
D. Bell's concept of an informed society	The crucial importance of codified theoretical knowledge for the implementation of technological operations; the transformation of the new "intellectual technology into an important tool in the theory of system analysis and decision-making"; orientation of the technical and economic environment to control over technology;
Y. Masood's theory of an informed society	The rise of computer technology, which has helped increase human mental labor;
The theory of cybernetization of social systems	Information theory, algorithm theory, automation theory;
3. Brzezinski's concept of technotronic society	The idea of a technotronic society is a society that is formed in cultural, psychological, social and economic relations, especially under the influence of the development of computers and communications;

Marshall McLuhan's concept of "electronic society"	Communication technologies as a factor in shaping the socio-economic system; The leading concept of "electronic society"; priority of electronic means of communication, including communication processes; development of information technologies and information networks of the society;
Network Society Theory. M. Castels' concept of informatization	"Information age" - informationism - the impact of knowledge as the main source of production - the consequence: the emergence of "sectoral society" and "new economy".

“Analyzing and understanding the content of the table allows us to emphasize the leading role of information and technological progress in all spheres of society. In accordance with the logic of our research, the issue of implementation of the principles (electronicization, computerization, informatization, mediation, and virtualization) in the field of education is very interesting for us. Review the regulatory framework to provide a comprehensive description of the issues under study and the following conclusions were drawn from the analysis of sources: First, the search for more effective teaching methods and tools is one of the leading areas, such as improving the education sector as a whole and, in part, training specialists. Second, the use of information and communication technologies, distance learning technologies and e-learning technologies allows intensifying the educational process, its individualization and differentiation’s promotes. The introduction of information and communication technologies significantly accelerates the transfer of knowledge accumulated on the basis of technological and social experience of mankind, not only from generation to generation, but also from one person to another.

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