



DESIGN FEATURES OF VIRTUAL LEARNING ENVIRONMENTS

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ABSTRACT: - The article deals with the influence of virtual informational educational environment on didactics of basic education, the functions of virtual informational educational environment as a new pedagogical system, shows the relationship of real and virtual components of the informational educational environment in the integral pedagogical process, presents the conditions for the selection of organizational forms of learning in a virtual educational environment. The validity of the selection of organizational forms of training ensures the achievement of guaranteed high quality of the educational process.

KEYWORDS: Basic education, didactics, information educational environment, virtual educational environment, design of virtual environment, conditions for the selection of organizational forms of learning.

INTRODUCTION

Progress in education is associated with the implementation of ideas of digitalization of education, with the widespread use of organizational forms and e-learning technologies. Growing requirements for the quality of the educational process determine the need to build a pedagogical process in

parallel with the dynamics of scientific and technological progress, restructuring and forming a special educational environment that meets the requirements of the time. In this regard, there is a problem of designing a virtual educational environment, in which there are certain features and methodological problems.

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The methodology of researching this problem is based on a systematic approach to designing a virtual educational environment in a modern school as a new pedagogical system, which allows you to consider the phenomenon under study not as unchanging and undivided, but as a system which represents a structural union of the primary elements into a single whole in terms of internal structure and integrity.

In modern conditions of digitalization and informatization of our society we believe that the teacher has the ability to adjust the navigation systems of virtual educational information environment, giving it a productive semantic coloring. However, to date, the teacher's choice of organizational forms of learning in a virtual information educational environment is problematic, as the issue has neither a fundamental scientific solution nor extensive systematic practical experience. However, according to C. Rogers and J. Freiberg, "... teachers always have to respond to demands from outside" [9]. The complexity of this situation is emphasized by V.V. Verbitsky, drawing attention to the fact that there is no psychological and pedagogical theory of digital learning, which is the integral essence of virtual information educational environment. At the same time, the scientist emphasizes that digital can be training, but not education, and the three main problems in relation to the professional competence of the teacher defines as the lack of the necessary number of electronic resources, the experience of the teacher as a competent practitioner in the digital educational reality, ideas about the scientific basis of psychological and pedagogical support for the student in the new educational environment [2].

Indeed, building a special virtual information educational environment, which will be part

of the general educational environment - the leading strategic task of the teacher, a conscious understanding of the main questions: "What?", "Why?", "Why?", and "How?". In other words, the teacher must initially understand why he or she prefers these or those organizational forms of educational activity in these conditions. We believe that the choice of appropriate forms of teaching cannot be a static phenomenon, because it is based on a multicomponent structure (intellectual and creative levels of development of the teacher, the level of preparedness of students, the possibility of technical support of the educational process, etc.).

Pedagogical activity itself is associated with the organization of educational process based on polyvector motion and unpredictability of its dynamics, especially in the projection of motion in asynchronous space of virtual educational environment.

Nevertheless, S.L. Rubinstein defines the semantic tone of the process. He believes that it is necessary to emphasize the inclusion of reflexive competence into the sum of the most important professional characteristics of a teacher, which in its totality give an opportunity to reveal, develop and realize the teacher's giftedness [10]. Such competence, according to J. Maxwell, is based on "three whales": what a person knows, what a person sees and what a person feels (synergetic effect) [6]. Virtual information educational environment defines the changes in the main components of the educational process, putting emphasis on the plan of highlighting productive possibilities of virtualism in learning and maintaining its continuity with the traditional system of learning:

- from learning limited to the framework of the classroom-lesson system to learning

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- in different environments, including virtual reality, increasing the degree of productivity of personal development;
- from the learning process, closed in the space of one school or classroom to the distributed learning in the virtual environment, extending geographically its coordinates;
 - from the organization of teaching and learning activities to the organization of the processes of designing, forming and mastering the individual's individual educational routes;
 - from teaching as the leading activity of a teacher to a variety of his/her professional functions [3].

Thus, the problem of "restructuring" of teachers' thinking and attitudes in terms of professional competence in the projection of building individual routes of students in virtual educational reality today is an urgent problem waiting for immediate solutions. We believe that the role of the knowledge translator does not disappear from professional skills and abilities, so the living word of the teacher is difficult to replace, but the role of the facilitator as an organizer and guide in the virtual educational reality is inevitably added [5]. So, what is the teacher's interactivity in building such an educational process?

In our opinion, the answer lies in its multicomponent structure:

- The technological component provides the choice of electronic teaching aids and the quality of computer equipment, implying the subject content based on didactics and methodology of the educational process;
- The informational and communicative component focuses on the need to build interpersonal relations in the process of

- mastering the educational material through an algorithm for building a feedback loop among the participants of the virtual educational process;
- Content-methodological component, i.e. defining pedagogical tools for solving training and development tasks within the virtual educational environment;
- resource component - possibility of accumulation of connections with different resource platforms and centers (virtual libraries, web-sites, electronic publications, software in educational areas, etc.);
- organizational component - determined by the differentiation of learning organization by the teacher of the educational process in conditions of virtuality through multivariant choice of organizational forms (web-quests, virtual and discrete lectures, etc.), allowing at spatial distance to provide "entry" into the world of knowledge in order to level knowledge gaps.
- Cultural-creative component - allows to provide the development of creative activity of students, based on the mastery of the teacher, who determines the content, methods and values, which serve as a basis for development in a virtual environment.

The metamorphosis of the content of virtual education consists in the transition from the relative constancy of the forms of learning process organization to its dynamism on the basis of polyvalence and emotional richness of learning activities. The choice of organizational forms of learning in a virtual environment with access to informational educational resources should be carried out only in the interaction between a teacher and a pupil, with subsequent provision of the latter with the opportunity to gain skills and

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abilities for independent stage-by-stage planning of learning.

For virtual education it is important to choose forms of learning as an organization of activities based on the interaction of participants in the educational process while providing a predetermined algorithm: lesson, excursion, projects, Olympiads, competitions, seminars, electives, homework, exams and credits, lectures, consultations, testing, master classes and other forms remain optimal for achieving the goal of personal potential development. At the same time there are different forms of organization in the new educational environment: collective, frontal, group and individual. As we can see, a whole range of possibilities for organizing the educational process is projected in many ways from the traditional counterpart, but acquires new opportunities.

Thus, the development of methodology within the framework of new electronic didactics with the emergence and constant improvement of network global technologies and methods of network integration of heterogeneous resources allow using a variety of organizational forms of learning, taking into account the processes of self-organization at the psychophysiological level with projection into social communication in conditions of integration of environments of virtual and real worlds.

However, we can highlight the following difficulties: poor technical support of the educational process; insufficient knowledge of the basics of electronic didactics, which affects the inability to restructure educational material; arising difficulties at the psychological level due to the "deficit" of live communication; lack of understanding of the need to shift the semantic emphasis from teaching to organization of conditions of

individual independent development in the student's learning process.

It is natural that today's virtual education acutely raises the issues of determining productive conditions of functioning as a dynamic system of links between real and virtual educational environment, determining the formation of a creative personality of a student with a pronounced dominant motivation of cognition. The solution to the problem lies in the teacher's semantic assessment of this situation and his/her choice of organizational forms of education capable of providing personality's new formation in the conditions of virtual information educational environment.

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