

Providing The Integration of Modern Pedagogical and Information - Communication Technologies in Higher Education

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Annotation. The development of scientific and technical progress led to the emergence of electronic tools and their active introduction into various spheres of society. Their use has become an integral part of social, economic, political and educational spheres. Higher education institutions are actively using these funds to train highly qualified specialists. Information and communication technologies are a tool that helps to form the professional competence of students. The article examines the issue of integrating modern pedagogical and information and communication technologies, including electronic tools, at the university.

Keywords: information and communication technologies, integration, higher education, distance education, individualization, problem-module technology, modern educational technologies, integrated education, electronic education.

Introduction

General description of the problem and its connection with important scientific and practical problems.

Pedagogic and information and communication technologies is the most important factor for moving the educational system to a new level, improving the quality of teaching of academic subjects, increasing the interests of students, and stimulating the improvement of students' knowledge and skills. Today, the primary goal of education is to prepare qualified graduates who can professionally solve problems in a constantly changing environment. Changing education should be done through fundamental changes, taking into account the current level of development of educational technologies. The integration of modern pedagogical and information and communication technologies creates the necessary effective cooperation - between the subjects of the educational process. Integration focuses on the flexibility and dynamism of the educational process. Information technology, together with other modern pedagogical technologies, is a tool that significantly accelerates the transfer of knowledge and ensures faster adaptation of students to social changes. Enrichment of modern pedagogical technologies with information systems not only changes and improves existing teaching methods and technologies, but also involves computers, tablets, software and technical tools, video and telecommunications, special equipment, as well as various information processing. forms new ones. The integration of information and communication and modern pedagogical technologies into the educational process is a necessary condition for the modernization of the educational system [1].

Methodology

Forming the goals of the article. The purpose of the article is to analyze the possibilities of integrating modern pedagogical and information and communication technologies in the formation of professional competence of students.

Defining the task. To achieve this goal, the following tasks must be solved:

- determining the role of integration of information-communication and pedagogical technologies into the educational process;
- modern information and communication and pedagogical technologies and their application to the educational process.

Results

Presenting the main material of the research, fully justifying the obtained scientific results.

Consideration of the integration of information and communication and modern pedagogical technologies is currently the most urgent issue in the field of education. The integration of technologies solves a number of problems, the main of which can be considered as follows: low information culture of graduates and the labor market's need for qualified specialists; the need to implement the social order aimed at improving the quality of education [2].

Information and communication and modern pedagogical technologies are one of the social elements of the educational system, as they are aimed at fulfilling the most important educational tasks.

VM Monakhov defines pedagogical technology as a well-thought-out and based model of collective educational activities for the organization, design and implementation of the educational process, providing favorable conditions for all subjects of the educational process.

Information technology means an integrated process based on a set of methods and tools for collecting new quality information, processing it, storing educational information and transferring it to the student. Information technology also implies the interactive interaction of all subjects of the educational process with each other or with software tools, testing the knowledge of students through testing [3].

Integration of modern pedagogical and information and communication technologies can be done in several ways. Computer classrooms, digital microscopes, interactive whiteboards, interactive test systems, tablets, various software systems, and others can be involved in this process. Based on this integration, various forms of educational organization are created. So, it can be media conferences, virtual laboratory, web quests. Web-quest is a lesson format aimed at developing students' cognitive, research activities, in which most of the information is obtained through Internet resources [4].

Information - communication and other educational technologies occurs due to the inclusion of these tools in the educational process. Information and communication technologies can participate in the implementation of problematic, controversial, game technologies, group learning technologies. A characteristic feature of game technologies is the mandatory inclusion of all participants in the interaction process. Despite the collective interaction, the introduction of information and communication technologies helps to individualize education, that is, it takes into account the needs and abilities of each student. Here, integration focuses on adapting the learning process, including pace, learning time, volume of learning material, etc. Due to the maximum closeness to the possibilities and abilities of students, attention to individual aspirations of students is strengthened, educational and cognitive activity of students is activated. This integration ensures the flexibility of the educational process.

Modern information-communication and pedagogical technologies integration to teach optimization for necessary conditions to create it more efficient and fertile to do help gives. The integration of these two technologies gives the student the opportunity to demand and use all the theoretical and hardware tools of each technology in the process of acquiring the necessary competence that creates a solid base for his future professional activities. Practice shows that modern educational technologies based on the use of information technologies provide solutions to new educational issues, as their main advantage is the ability to integrate all other educational technologies into a single system [5].

Integration can be represented by project-activity technology, the basis of which is the formation of students' creative component, critical thinking, orientation skills in the information space, development of independence. This integration allows you to use creative non-standard tasks. Project-activity technology is aimed at combining the knowledge and skills of students in different fields and implementing different teaching methods. For example, web quest technology is a problem situation or a task with role-playing elements, the solution of which requires the use of information and communication technology resources, the Internet. Students must study and analyze information, then modify, present and discuss.

A distinctive feature of modular technology is the formation of a targeted individualized program in terms of content, pace, level of training, methods, methods of self-control, etc. Problem-module technology is aimed at independent activity of students. It can be research, team work, search or creative work. Technology allows each student to study the material according to their theoretical knowledge and ability

level. Educators include educational material in the electronic course of the educational module, formed in accordance with the curriculum, interconnected blocks of information. The implementation of this technology is facilitated by the Moodle system. The electronic platform includes several blocks, modules on different subjects of the course, each of which includes a structured system. Students can study or repeat the material in different options: abbreviated, in-depth and complete. Blocks of each subject are presented as follows: an introductory control block, historical, problematic, theoretical, as well as generalization and deepening blocks depending on the subject, etc. The course material is presented in the form of blocks, in which there are test tasks for checking knowledge and self-control on the electronic platform.

The result of integration can be distance education technology, the raw material for their creation is interactive resources and systems, remote access technologies, problem module technologies, a wide range of new information and telecommunication technologies and technical tools. This is the highest level of integration achieved as a result of the combination of information and communication technologies and the formation of new ones.

The method of integration is the introduction of content-methodical information to information and communication technologies. Distance education technology greatly facilitates the learning process, making it more flexible and student-oriented. Significantly expands educational opportunities for all students. This technology can be used in remote competitions, creative competitions, projects, educational conversations, as well as training courses and conferences [6,7].

Information and communication technologies into the educational process during assignments, tests, projects, and practical work, students are given the opportunity not only to master the theoretical material given in the educational modules, but also to develop practical work skills and competencies. Implementation of modern pedagogical technologies is carried out together with information and communication technologies. Thus, in distance education, the lack of personal contact between students and the teacher is compensated by an electronic service, where online consultations are held, as well as messages to the teacher on all interesting issues, correspondence by e-mail can be sent. All assignments are checked based on a rating system. Scores for test tasks are automatically set, and after the first pass, you can analyze your mistakes and retake some tests. This "Moodle" system manages a large amount of educational data, creates material within the framework of educational courses.

Conclusion

Conclusions of the study and prospects for further research in this area.

In the process of work, we achieved the set goal: we analyzed the possibilities of integrating modern pedagogical and information and communication technologies in the formation of professional competence of students. The integration of modern pedagogical and information and communication technologies into the educational process can solve a number of problems, including the change of knowledge due to the shift towards systematic thinking in the educational process; effective organization of students' cognitive activities during the teaching process; the need to create an open and convenient educational system; orientation of the educational process to the individual; individualization of the educational process; improvement of distance education technology. Thanks to this integration, more opportunities are created for students to form professional competence.

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