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CREATION OF INFORMATION AND EDUCATIONAL ENVIRONMENT IN EDUCATIONAL INSTITUTIONS AS A CONDITION FOR ACHIEVING A NEW QUALITY OF EDUCATION

Abstract. The article discusses the main levels of development of the educational environment; describes the features of new technologies in education; describes the methods of training specialists of natural and mathematical profile; the main directions of the use of new technologies in higher education. The article deals with the problems of the necessity of introducing different types of educational innovations; describes the nature and direction of innovations in higher education; the role of subjective factors and value orientations of subjects of education; the main characteristics of innovations and their management in the system of higher education of Kazakhstan are structured. The features of the educational environment in educational institutions to achieve a new quality of education are structured.

Key words: innovative technology training in high school, items updated education, education, educational environment.

1. INTRODUCTION

The state of modern education and trends in the development of society require new system-organizing approaches to the development of the educational environment. Modernization of Kazakhstan's education one of its priorities highlights the Informatization of education. The main task, which is to create a unified information and educational environment (IEE) [1].

IEE is considered as one of the conditions for achieving a new quality of education.

The new quality of education is its compliance with the modern vital needs of the country's development. Today, the school reflects aspects of the modern information society, in which there are serious changes, the establishment of a new civilization, brought up on the multimedia and digital culture [2].

Modernization of the school is connected with the need to solve one of the main tasks at the present stage:

- at the personal level-to form the information competence of the participants of the educational process: mastering the skills of working on the internet, the use of new electronic educational resources, information tools, technologies [3];
- corporate level-to master the skills of collaboration in the local network, the internet, joint project activities.

Local, global networks have changed the methodology of knowledge search and production. The core, the basic component of Informatization of education is the development of educational products with new information quality [4].

Information and educational environment (EE) should comprehensively provide all processes in the EE: training, education, innovation, management activities [5].

Information and educational environment of the school is a system of information and educational resources and tools that provide conditions for the implementation of the basic educational program of an educational institution [6].

School IEE includes a set of technological tools (computers, databases, communication channels, software products, etc.), cultural and organizational forms of information interaction, the competence of participants in the educational process in solving educational, cognitive and professional problems with the use of information and communication technologies (ICT), as well as the availability of support services for the use of ICT [7].

The basic principles of the systematic introduction of computers in the educational process.

The principle of priority. Informatization of education should become a priority area of state policy in the field of Informatization, which should be expressed in enhanced resource provision [8];

The principle of a systematic approach. This means that the introduction of computers should be based on a system analysis of the learning process. That is, the goals and criteria for the functioning of the learning process should be defined, structuring is carried out, revealing the whole complex of issues that need to be solved in order to design the system best meets the established goals and criteria.

Principles of continuous development of the system. With the development of pedagogy, private techniques, computers, the emergence of different types of educational institutions, new problems arise, improved, modified old. At the same time, the created information base should be subject to proper rearrangement, but not a radical restructuring [9].

Principles of document flow automation. The main flow of documents related to the learning process goes through the computer, and the necessary information about it is issued by the computer upon request. In this case, the teaching staff focuses on setting goals and making a creative element in the search for ways to achieve them [10].

Principles of a single information base. The meaning of it, first of all, is that the machine media accumulates and constantly updated information necessary to solve not one or more tasks, and all the tasks of the learning process. This eliminates unnecessary duplication of information in the main files, which inevitably occurs if the primary information files are created for each task separately [11]. This approach greatly facilitates the task of further improvement and development of the system.

2. METHODOLOGY

The methodological base of the research is represented by the reproductive, institutional and situational approaches, the approach based on simulation.

The basis of the development of the problem and the solution of the formulated problems were the principles of the system-structural approach to the study of socio-economic objects and the theory of decision-making. Methods of economic-statistical, logical, comparative analysis, tabular and graphical methods of statistical data presentation, as well as bootstrap methods and simulation models were used for processing, analysis and generalization of materials in accordance with the goal and formulated tasks.

The information and empirical base consist of the data taking place in monographic studies and publications of domestic and foreign scientists, materials of scientific conferences, Internet resources, materials of periodicals, as well as data obtained personally by the author in the process of research.

The main applied methods include:

- study and analysis of documents on professional education, planning educational documentation;
- generalization of best practices, survey method, questioning, testing, pedagogical observations;
- system analysis of cognitive activity, expert evaluation in the study of the level of professional self-development.

3. RESULTS

The main goal of the IEE is the unity of the educational space of the school, improving the quality of education, creating conditions for the gradual transition to a new level of education based on information technology, creating conditions for the provision of distance learning services.

Priority areas of activity of the teacher.

1. Awareness of Internet technology as part of the general information culture of the teacher [12].
2. The use of information resources of the Internet in the organization of cognitive activity of students in the classroom.
3. The use of Internet resources in the cycle of humanities, natural and mathematical subjects and in the course of computer science.
4. Distance education, advanced training.
5. Introduction of information technologies and Internet resources in separate stages of the traditional lesson.
6. The creation of the Internet – lessons, integrated lessons.
7. Lessons based on ready-made software products.
8. Development of own software, formation and use of the library.
9. Creation of a data bank for the development of students with the help of electronic programs.

Priority activities of the student

1. Internet technologies are part of the general information culture of students.
2. Use of information resources of the Internet in the course of self-education.
3. Internet technologies in the organization of additional education of children [13].
4. Training on individual routes.
5. Distance learning.
6. Computer technology to prepare for the lesson.
7. Extracurricular activities: organization of circle and optional activities based on computer technology.
8. Training testing programs.
9. Computer competitions.
10. Distance learning olympics.
11. Discussion of current problems on the Internet forum of the school site. This academic year our school became a participant of distance learning. Two teachers of our school gave remote lessons (in mathematics for the 11th and 9th grade).

Priorities of the parent

1. Development of information literacy courses.
2. Attending computer literacy courses.
3. Getting information about the schedule of training sessions; about the school activities and their results through the school website.
4. Internet communication with school management and teachers on the forum site [14].
5. Internet familiarity with the legal and regulatory support of the educational process.
6. Electronic journal.

Properly organized information and educational environment in an educational institution, in particular the competent use of ICT in the educational process, allows for a new level of differentiation of training, increase the motivation of students, provide visibility of almost any material, teach modern methods of self-knowledge, which, of course, is a condition for achieving a new quality of education.

4. CONCLUSIONS

In the conditions of developing information educational environment of the school, the intensification of all levels of the educational process is carried out, the efficiency and quality of the learning process is increased due to the opportunities provided by the information educational environment. Formation of information and educational environment of educational institution on the basis of application of information and communication technologies is the key point in creation of optimum conditions for development and self-development of the teacher, improvement of his educational and methodical activity, pedagogical creativity and information competence.

Efficiency of implementation of information and educational environment

- Improving the quality of education through the effective use of modern pedagogical technologies and ICT.

- Ensuring access of teachers and students to information resources.
- Availability of information culture of teachers and students, increase of their level of General education and professional training in the field of modern information technologies.
- Use of computer information technologies for teaching various subjects.

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**БІЛІМ БЕРУДІҢ ЖАҢА САПАСЫНА ҚОЛ ЖЕТКІЗУ
ШАРТЫ РЕТІНДЕ БІЛІМ БЕРУ МЕКЕМЕЛЕРІНДЕ
АҚПАРАТТЫҚ-БІЛІМ БЕРУ ОРТАСЫН ҚҰРУ**

Аннотация. Мақалада білім беру ортасы жүйесінің негізгі даму деңгейлері қарастырылады; оқытудағы жаңа технологиялардың ерекшеліктері сипатталады; жаратылыстану – математикалық бейіндегі мамандарды даярлау әдістері; жоғары білім беруде жаңа технологияларды пайдаланудың негізгі бағыттары сипатталады. Мақалада білім беру инновациясының түрлі түрін енгізу қажеттілігі бойынша міндеттер қарастырылған; жоғары білім берудегі жаңалықтардың сипаты мен бағыттылығы сипатталған; білім беру субъектілерінің субъективті факторлары мен құндылықтық бағдарларының рөлі көрсетілген; Қазақстанның жоғары білім беру жүйесіндегі инновациялар мен оларды басқарудың негізгі сипаттамалары құрылымдалған. Білім берудің жаңа сапасына жету үшін білім беру мекемелеріндегі білім беру ортасының ерекшеліктері құрылымдалған.

Түйін сөздер: инновациялық технологиялар, жоғары оқу орнында оқыту, жаңартылған білім беру элементтері, Білім беру, білім беру ортасы.

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**СОЗДАНИЕ ИНФОРМАЦИОННО-ОБРАЗОВАТЕЛЬНОЙ СРЕДЫ
В ОБРАЗОВАТЕЛЬНЫХ УЧРЕЖДЕНИЯХ КАК УСЛОВИЕ ДОСТИЖЕНИЯ
НОВОГО КАЧЕСТВА ОБРАЗОВАНИЯ**

Аннотация. В статье рассматриваются основные уровни развития системы образовательной среды; описываются особенности новых технологий в обучении; методы подготовки специалистов естественно-математического профиля; основные направления использования новых технологий в высшем образовании. В статье рассмотрены задачи по необходимости введения различного типа образовательных инноваций; описаны характер и направленность нововведений в высшем образовании; указана роль субъективных факторов и ценностных ориентаций субъектов образования; структурированы основные характеристики инноваций и их управления в системе высшего образования Казахстана. Структурированы особенности образовательной среды в образовательных учреждениях для достижения нового качества образования.

Ключевые слова: инновационные технологии, обучение в вузе, элементы обновленного образования, образование, образовательная среда.

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