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Efficiency of Using Innovative Learning Technologies in Enhancing Students' Cognitive Activity

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Abstract: The article deals with the issues based on the use of modern technologies in the educational process caused by the integration and information processes taking place in society, the formation of a new education system focused on entering the global educational space. As we know, development is an integral part of any human activity. Moreover, while accumulating experience, improving methods, methods of action, expanding their mental capabilities, a person himself constantly develops.

Keywords: cognitive activity, integration, teaching process, innovative technologies, mental capabilities.

Introduction

The scientific innovations that drive progress cover all areas of human knowledge. This is a set and system of functioning of all personal instrumental and methodological means used to achieve pedagogical goals. It acts both as a science that explores the most rational ways and means of learning, and as a system of principles, algorithms and regulators used in the educational process, and as a real educational process. Innovative technology should answer the following questions: how best to organize educational (collective) activities and manage them to achieve the goals; what the subjects of pedagogical interaction should be able, know and have in order to ensure successful activity. Under these conditions, the teacher, the leader of the educational process needs to navigate a wide range of innovative technologies, ideas, schools, directions, and not waste time discovering what is already known. Today, it is impossible to be a pedagogically competent specialist without studying the entire vast arsenal of educational technologies.

Currently, there is a need for in-depth study and application of innovative technologies in pedagogical activity in elementary school. The main goal of the activities of teachers: education of moral-legal, emotional-aesthetic, intellectual-informational and communicative culture, as well as a culture of health of a younger student. The teacher needs to navigate the sea of a wide variety of learning technologies in order to build his own concept and technology of the lesson, which is necessary for the children of the particular class in which he works. The introduction of new technologies into pedagogy also affects the teacher, stimulates him to improve the level of his pedagogical activity, requires from him the breadth of erudition, flexibility of thinking, activity and desire for creativity, the ability to analyze and introspection, readiness for innovation.

Methods and Analysis

The results of research in the field of pedagogical technologies show that their perspectives are related to the development of three models of pedagogical technologies: semantic, structural and parametric. At the same time, the model of pedagogical technology is understood as a purposefully designed and, in general, repeatable components of the educational process of students, which lead to an increase in the effectiveness of the integrated pedagogical system. Modeling includes determining the educational goal (why and why?),

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selecting and building educational content (what?), organizing the educational process (how?), methods and methods (using what?) takes, the interaction between teachers and students (who?).

When creating a semantic model of students' educational technology, the subject of research is limited to the scope of pedagogical reality: what is the content of education, forms of organization of the educational process, results and their evaluation system. However, in certain conditions of equipping the pedagogical process, depending on the level of pedagogical skills of teachers, the readiness of students to perceive and process educational information, the essence of the main technological acts' changes. In this regard, changes and permissible possibilities of reproduction of authoring technologies are studied in the specific conditions of the pedagogical process in semantic modeling.

Concretization of the semantic model depends entirely on the purpose for which it is being developed. On this basis, several directions for detailing the general semantic model of pedagogical technology can be distinguished:

The model can serve to form a fundamentally new technology of education, which involves the formation of innovative, scientific and pedagogical thinking;

Digital whiteboards allow teachers and students to replicate the physical whiteboard experience online, and are not limited in space. They offer form libraries and pre-made templates that you can use to create content. Thus, both traditional and interactive boards are useful in any type of classroom. Strengths of using e-board:

- boards, but at the same time they help the teacher to use the teaching tools easily and naturally, while being in constant contact with the class.
- Interactive whiteboards help expand the use of e-learning tools because they convey information to learners more quickly than standard media.

Weaknesses:

- ✓ Since it is normal to write on boards with chalk, one has to deal with another unpleasant phenomenon: within a radius of a meter or two from the board, everything is covered with a layer of chalk chips.
- ✓ As well as, interactive whiteboards are much more expensive than standard whiteboards or a projector with a screen.
- ✓ The surface of interactive whiteboards can be damaged, and replacing a damaged surface is also a very expensive service.

The image transmitted to the surface of the interactive whiteboard may be obscured by a person near the whiteboard. As well as, flashcards are the most effective learning methods to use. Working with this type of methodological material allows the teacher to:

- ✓ instill interest in the subject;
- ✓ establish feedback with students;
- ✓ save time in class
- ✓ make the learning process more vivid, interesting and memorable;
- ✓ individualize and differentiate the educational process;
- ✓ teach learners to work independently.

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This technique increases the efficiency of mastering the material, motivate students and make the lessons interesting! The task of the teacher is to correctly select and apply the material. This can be done in groups or in pairs by using breakout rooms online.

Discussions

The problem of innovative technologies has been and continues to be dealt with by a large number of talented scientists and teachers. Among them, V.I. Andreev, I.P. Podlasy [11], professor, doctor of pedagogical sciences K.K. Kolin, Doctor of Pedagogical Sciences V.V. Shapkin, V.D. Simonenko and others. All of them have made an invaluable contribution to the development of innovative learning technologies. When active methods of teaching are used, the awareness and knowledge of students is much higher than simple traditional methods, it creates conditions for the development of students' cognitive abilities, special attention is paid to their independent work, cognitive activities have a searching and creative character.

Today's task of education is to teach students to use the flow of information wisely, to be able to function independently in the conditions of the information-educational environment that is increasing day by day. For this, it is necessary to provide them with the opportunity and conditions for continuous independent work.

Accordingly, we would not be wrong to say that the urgent problem of today is to prepare general professional subjects through information and communication technologies and to try to form more knowledge and skills of the youth based on the demands and wishes of the youth.

Until then, in traditional education, students (or students) were taught to acquire only ready-made knowledge. Such a method would suppress independent thinking, creative research, and initiative in students (or students). Nowadays, it is better to say that there is an interest in increasing the effectiveness of education using interactive methods (innovative pedagogical and information technologies) in the educational process. The focus on education is increasing day by day. Classes using modern technologies are aimed at students (or students) to find the acquired knowledge by themselves, study and analyze it independently, and even draw their own conclusions. In this process, the teacher creates conditions for the development, formation, learning and education of the individual and the team. In such an educational process, the student (or learner) becomes the main figure.

It is known that information and communication technologies are associated with discoveries in the fields of microelectronics, computing (hardware and software), electronic communications and electronics - microprocessors, semiconductors and optical fiber cables. These discoveries allow the development and storage of vast amounts of information and their rapid distribution through communication networks. Connecting computers and configuring them to communicate with each other allows creating a new powerful technological system, network information systems using a common protocol. They connect people, their homes and offices and develop and execute a huge number of tasks in a very short time. This will fundamentally change the nature of information use and the structure of communication. At the same time, computer networks allow communication with all points of the Earth. For the educational system, it creates new opportunities for communication between teachers and students.

In the context of educational reforms, innovation activities aimed at introducing various pedagogical innovations have acquired particular importance in educational institutions [1]. The complexity of innovative processes is determined by the fact that they require a large psychological restructuring of the teacher's activity. In order to transform a school into a gymnasium, a vocational school into a lyceum, a technical school into a college, it is necessary to abandon the authoritarian style of thinking, master a new, democratic style of pedagogical activity based on cooperation between teachers and students, master new pedagogical technologies of creative activity.

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According to M.V. Klarin, pedagogical technology is the design of the educational process based on the pre-defined goal indicators, approaching the educational process [5].

Consideration of education as a process presupposes, firstly, the distinction between its two sides: teaching and learning (learning), where the terms themselves, as already noted, are interpreted ambiguously. Secondly, on the part of the educator, the educational process always represents, voluntarily or involuntarily, the unity of training and education. Thirdly, the process of nurturing education itself includes, from the perspective of the student, the acquisition of knowledge, practical actions, the implementation of educational research-transformative, cognitive tasks, as well as personal and communicative training, which contributes to its comprehensive development. Education as a result can be considered in two ways. The first is the image of the result that should be obtained by a particular educational system, and fixed in the form of an educational standard. Modern educational standards include requirements for the qualities of a person completing a certain course of study, for his knowledge and skills. It is obvious that the content of the standard is a potentially achievable representation of the socio-cultural experience, preserved in an ideal form.

The second part of existence of the result of education is the person himself, who has been trained in a certain educational system. His experience as a set of formed intellectual, personal, behavioral qualities, knowledge and skills allows him to act adequately on this basis in any situation. The result of education in this regard is education, which can be general and professionally meaningful. So, the school forms the general education of the graduate. A graduate of any higher educational institution on this basis is characterized by a special professional education. A broad and systematic education that makes a person educated lays the foundation for self-esteem, confidence, and competitiveness in changing conditions of life.

Conclusion

Thus, as a conclusion we can say that, the process of creating new developments in the educational process, the process of introducing new technologies, its content includes ensuring the implementation of innovative processes in terms of practicality and flexibility in certain social conditions, and includes variable organizational work.

To fulfill the orders placed on the educational process, first of all, differentiation and individualization of the educational process, humanization and democratization of pedagogical relations, and a unified and differentiated approach to the selection of educational programs are required.

The technology of humanization and democratization of pedagogical relations embodies the humanitarian ideas of philosophy, psychology and pedagogy. The focus of this technology is the idea of forming a person who puts his potential into practice to the maximum extent, is creative and socially active, who understands various life situations, who is consciously independent and correctly understands the goal.

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