Aspects of achieving efficiency in the educational process based on an innovative approach

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ABSTRACT

Today, the basis of the sustainable development of any state is an innovative activity. History has shown that man has come a long way with his intelligence, from inventing the first tools of labour to inventing algorithms and nanoparticles, modern innovative computers, the sun and other high technologies. At the same time, it has an impact on the education system, but also on the development of all spheres of society. Logical thinking based on innovative technologies is one of the most important factors in the development of a system of continuing education. They are reflected in a holistic system of various initiatives and innovations that lead to certain changes in the educational process, enriching the content, quality and effective organization of education.

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Innovatsion yondashuv asosida ta’lim-tarbiya jarayonida samaradorlikka erishish aspektlari

ANNOTATSIYA

Bugungi kunda har qanday davlatning barqaror taraqqiyotini asosini innovatsion faoliyat tashkil etadi. Tarix shundan dalolat beradiki, inson o’zing aql-zakovati bilan dastlabki mehnat qurollarini o’ylab topishdan, algoritm va nanozarralar, zamonaviy innovatsion kompyuter, quyosh va boshqa yuqori texnologiyalarni kashf etishgacha bo’lgan murakkab yo’ini bosib o’tdi. Shu bilan bir qatorda, ta’lim sohasi tizimiga, balki jamiyatning barcha sohalarining rivojiga o’zing aks ta’sirini ko’rsatadi. Innovatsion texnologiyalar asosida mantiqiy fikrlash...
Аспекты достижения эффективности образовательного процесса на основе инновационного подхода

АННОТАЦИЯ

Сегодня основой устойчивого развития любого государства является инновационная деятельность. История показала, что человек своим интеллектом прошел долгий путь от изобретения первых орудий труда до изобретения алгоритмов и наночастиц, современных инновационных компьютеров, солнца и других высоких технологий. В то же время он оказывает влияние на систему образования, а также на развитие всех сфер общества. Логическое мышление на основе инновационных технологий является одним из важнейших факторов развития системы непрерывного образования. Они отражаются в целостной системе различных инициатив и нововведений, которые приводят к определенным изменениям в образовательном процессе, обогащая содержание, качество и эффективную организацию образования.

INTRODUCTION

It serves as a key factor in educating young people to be creative and independent in all respects, which determines the future intellectual potential of the Republic and its prosperity and development. Therefore, the most important strategic direction in education is the innovative activity of educational institutions. This has been one of the most pressing issues in all educational institutions, especially in higher education institutions that train creative, high-potential professionals in the form of innovative technologies.

In particular, there is a growing interest in the use of innovative technologies, and pedagogical and information technologies in the educational process. It is known that in the national program of Personnel Training "the tasks of" further strengthening the resource, personnel and information bases of educational institutions, complete provision of the educational process with new educational-methodical complexes, advanced pedagogical technologies have been defined [1-3].

The goal of accelerating and increasing the effectiveness of public education for our country to become one of the developed countries also requires the widespread use of advanced pedagogical measures and technologies. Logical thinking based on innovative technologies is one of the most important factors in the development of a system of continuing education. They are reflected in a holistic system of various initiatives and innovations that lead to certain changes in the educational process,
enriching the content, quality and effective organization of education. The rapid development of science, science and technology, the penetration of new techniques and technologies into all segments of society, and the use of information technology in all governmental and non-governmental institutions require continuous education of teachers [3-7]. The work of teachers is multifaceted, and they will have to play the roles of manager, communicator, guide, organizer, and evaluator.

Understanding the need to reform the education system requires that educational institutions be involved in innovation processes in practice, to see themselves in an innovative space where there is an opportunity to create, and most importantly, to adopt concrete innovations.

The research aims to theoretically study the pedagogical possibilities of improving the effectiveness of education based on an innovative approach.

**LITERATURE REVIVE**

Education is one of the first in our country to launch an active innovation movement. At some point, in the late twentieth century, such movements were launched. For example, the views of A.G. Rivin and V.K. Dyachenko on team teaching, D.B. Elkonin, V.V. Davidov, L.V. In addition, other innovative educational technologies: dialectical teaching methods (A.I. Goncharuk, V.L. Zarina), individual-oriented teaching (A.A. Yarulov), “Ecology and dialectics” (L.V. Tarasov), heuristic teaching (A.V. Khutorskoy) dialogue culture (V.S. Bibler, S.Yu. Kurganov), projected self-reflection (G.P. Shedrovitskaya) and others [7-13].

**MATERIALS AND METHODS**

Today, the traditional and popular forms of education and upbringing in the school and higher education system are being replaced by innovative processes in the development of educational institutions. Innovation (Novus- “new”) means news, to innovate. Integration of science and industry, cooperation between private entrepreneurs and the state, and support for international relations of small and medium-sized innovative businesses are important conditions for the development of innovative activities. It should be noted that in the developed countries of the world, almost half of the innovations are carried out by organizations, small and medium-sized businesses. For example, according to the U.S. National Science Foundation, the number of innovations implemented in small firms is much higher than in medium and large firms per unit of cost. In addition, small firms are about a third more advanced in terms of innovation and customer delivery than large firms.

The process of integration of science and industry will be most effective only when universities and technical institutes, together with manufacturing companies and firms, determine their share in patented development and implement research and innovation projects. It is no coincidence that 85% of all international patents issued by the European Patent Office are the result of such joint development. World experience shows that only in countries with a well-developed innovation system, innovation processes are carried out effectively, and technologies and other science-intensive products are commercialized [11-14]. The participation of the state in this process, the real sector of the economy and the support of innovative activities of leading companies are important. After all, science is the basis of this integration mechanism, which ensures the technical progress of the state and the socio-economic development of society.
RESULTS AND DISCUSSION

Before examining the content and direction of innovation in the education system, let’s define the concepts of “Pedagogical system” and “Innovation in the pedagogical system”. We know that the pedagogical process is based on the pedagogical system. The pedagogical system is an integrated set of founders who remain resilient to change. If the changes (innovations) exceed any possible limits, the system breaks down and is replaced by a new system with other features. The pedagogical system is a very strong combination of elements. The structure of any pedagogical system today consists of a set of the following interrelated elements: student; the purpose of education; educational content; educational process; teachers (or TTV – technical means of education); organizational forms of educational work. Each of the components of this system can be divided into elements of any size and spread. We have reason to believe that the system under consideration is not a perfect structure. Those who do not agree with this may believe that the important components of the pedagogical system are “results”, “management of the educational process”, and “technology”.

They are reflected in the model of the pedagogical system in the given diagram. The goals are consistent with the results and form a continuous process. The full alignment of goals with the results serves as a measure of confidence in the pedagogical process. The pedagogical system is a relatively independent part of management, uniting all its components, because they have their own goals and structures. Emphasizing the unity of individual factors as an integral part of the pedagogical system, they are often referred to as the technology of the educational process. In this approach, the pedagogical system becomes a strong organizational and technological complex that ensures the achievement of the intended goal. It should be noted that the pedagogical system is always technology. It is in this sense that it is easy to distinguish the components of the pedagogical system from any arbitrary “set”. Technology is the intrinsic quality of a system that defines its capabilities under strict organizational logic. At the same time, at the level of task evaluation, the technologist relies on certain processes and events. Certain processes are used as evidence of success, and the results of remarkable events are used as sources of new causes and formulas. Designing learning technologies does not provide an “impossible” conclusion other than methodological “generalization of experience”. For the technologist, this is just a matter of time and expense. Technology is based on well-known, proven, well-founded, unquestionable ideas. The technologist does not conduct experiments but works with clearly defined results. Technology does not allow variance, its main task is to get a clear guaranteed result, it is always simple in the basic solution. Understanding the basic solution reveals everything else, the system of elements, the content of the order. No part of technology can be removed, there can be no excess, and there can be no excess.

This is a very complex situation, as every second teacher is engaged in research research, which increases the uncertainty of the outcome of the child’s school life. There are always those, especially among the so-called “exact” disciplines, who criticize teachers for their behaviour, and they, as always, begin with the revision and modernization of models of the pedagogical system. Let us now consider some of the principal characteristics of the processes that take place in the pedagogical system [14-17].

We proceed from the principle that each specific modification of the pedagogical system has specific features and capabilities to achieve the desired result. These capabilities are strictly defined by the specific features of the system. In this way, if we
want to achieve the desired level and quality of education, we need to think about the appropriate pedagogical system, and its operation should provide the necessary direction and intensity of the pedagogical process.

As a result, the higher efficiency of the educational process is always the result of improving the pedagogical system. This is a very complex problem, and the world is now beginning to develop them. The possibilities of intensive development of pedagogical technology are over: the existence of the school is a return to the fate of modern educators, who have tried all ways for thousands of years, a deep reminiscence of the content and mission of education, a deep understanding of its primary foundations. Again, if a school is not yet dead, if it is living, developing, and educating children, it is only because of its conservative nature. Some theorists argue that in the very near future, innovation in pedagogy will only mean one thing – a return to the past, a thoughtful and rational upbringing, a spiritual educator, and a return to a peaceful system without innovation and effort.

Western schools are expanding their pedagogical output extensively through new information technologies, the allocation of time to a variety of learning activities, and classroom differentiation and individualization. At the same time, the quality of pedagogical products is improving, and the question remains clear: many independent experts are sceptical. The way out of this situation is the development of a pedagogical system called “interconnected innovation” that allows you to combine intensive and extensive approaches. This requires an in-depth examination of the possibilities of the use of pedagogy, which is manifested at the point where they come together in different forms, with different characteristics and at different levels of the pedagogical system [17-18]. One can try to improve the overall effectiveness of the pedagogical system by strengthening the gaps with new technologies. In this approach, innovation is not an imaginary “external” measure, but a profound demand and knowledge of the system, a conscious transformation. If you look at innovation challenges from that perspective, it seems like they have almost nothing new. In particular, there are no new “recipes” for solving old problems.

In general, we have to include innovative ideas based on new knowledge about the process of human development, unprecedented theoretical approaches to solving pedagogical problems, and high results from specific practical technologies. The number of general and partially innovative projects on the adequacy of the level of development of ideas in the field of pedagogy, as well as the analysis of their use in pedagogical practice allowed to include them in general pedagogical innovations.

CONCLUSION

Understanding the need to reform the education system requires that educational institutions be involved in innovation processes in practice, to see themselves in an innovative space where there is an opportunity to create, and most importantly, to adopt concrete innovations. Today, the traditional and popular forms of education and upbringing in the school and higher education system are being replaced by innovative processes in the development of educational institutions. The strategy for the future development of science and innovation is to create an “innovative person”, that is, regardless of his work, he must be prone to innovation and new knowledge. Today, modern innovative suitability is emerging. Now that other areas of activity, including manufacturing, have shifted to an innovative path of development, education has only served to train them as leaders. Changing the pattern of communication between teacher and student is one of the conditions for innovative activity.
The new relationship, as is customary, should be free of coercion and judgment. They should be built in the form of peer cooperation, mutual management, and mutual assistance. The most important feature of their relationship is the creative collaboration between teacher and student. The teacher’s innovative activities include analysing and evaluating innovation, formulating goals and concepts for future actions, implementing and editing the plan, and evaluating effectiveness. The effectiveness of innovative activities is determined by the personality of the teacher.

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