International Journal of Advanced Research in Engineering and Applied Sciences

ISSN: 2278-6252
Impact Factor: 7.687

SCIENTIFIC AND THEORETICAL BASES OF PRODUCTION AND INTRODUCTION OF INNOVATIVE METHODS IN EDUCATION AND IMPORTANT COMPONENTS OF INNOVATIVE ACTIVITY

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ANNOTATION

This article discusses the scientific and theoretical basis for the development and implementation of innovative methods in continuing education and the important components of innovative activities, along with the role and initiative of teachers in the effective organization of the teaching process in accordance with modern requirements. ways to increase children's interest in learning and creative thinking from an early age, to introduce important components to the public and to realize new talents, that is, to help gifted children to show their talents and effectiveness.

Keywords: component, method, method, innovative education, decentralization, mono innovation, innovation, molding, pedagogue-innovator, optimalnos, innovative pedagogy, professionalism, signs of talent, readability, ability, talent.

The Law "On Education" and the "National Program of Personnel Training", which determine the prospects for the development of the education system in Uzbekistan, provide the system of continuing education with a high level of general and professional culture, creative and socially active, in public life. set the task of training personnel capable of analyzing current events and solving promising issues. It is known that in the "National Program of Personnel Training" "... further strengthening of resource, personnel and information bases of educational institutions, filling the educational process with new teaching aids, advanced pedagogical technologies. The tasks of In order for our country to become one of the developed countries, the goal of accelerating and increasing the effectiveness of public education also requires the widespread use of advanced pedagogical measures and technologies. In the words of President Islam Karimov, “As we step on the path of building a modern state based on a developed market economy and ensure a consistent transition from a strong state to a strong civil society, only a combination of

national and universal values will prevail. We have always imagined that only people with a deep understanding of the need for modern knowledge, intellectual potential and advanced technologies can achieve the strategic development goals we have set for ourselves. ”

The reform of the system of continuing education in the Republic of Uzbekistan is aimed at developing in the future the young generation a high level of professional culture, creative and social activism, independent participation in socio-political life, free thinking. This, in turn, requires increasing the level of scientific knowledge and activity of students. In the process of teaching science in higher education institutions, it is advisable to use innovative methods that help students to become interactive in order to increase their interest in the subject, to develop independence and activism, to develop logical thinking. After all, logical thinking based on innovative technologies is one of the most important factors in the development of continuing education. They are manifested in a holistic system of various initiatives and innovations that lead to certain changes in the educational process, the effective organization of the content and quality of education. The rapid development of science, science and technology, the penetration of new techniques and technologies into all segments of society, the use of information technology in all governmental and non-governmental institutions require continuous education of teachers. The work of teachers is multifaceted, and they have to play the roles of leader, communicator, guide, organizer, and evaluator. The role of the teacher in the teaching process is complex and has its own historical and contemporary aspects. in the past, teachers were required to provide only modern knowledge, but now they are also required to provide educational, cultural, spiritual, political and practical knowledge. Other types of teaching methods are based on philosophical and logical models developed by a number of scholars, such as Socrates, communication, or corporate methods. Since then, the organization of teaching on the basis of educational models has begun on a large scale. In this case, the acquisition of knowledge by students in a particular field or subject was based on specific methods, models, educational standards or strategies. In some models, the teacher is in a dominant role, solving all teaching tasks on his or her own, while in others, students are given complete freedom to teach on democratic principles, while in others, the student and the process of

equality and creative exchange of ideas between teachers was carried out, and the process of interactive learning was carried out through interaction.

It should be taken into account that the changes taking place in our society in the economic, social, political and cultural spheres also depend on the education system, which determines the intellectual potential of our country in the future and is a key condition for its development. At the same time, the growth of intellectual potential, the development of quality will not only increase the effectiveness of education, improve the system in this area, but also significantly affect the growth of all areas of this social system . That is why one of the strategic directions in education today is the identification of innovative activities of educational institutions as a key factor. Understanding the need to reform the education system requires that educational institutions be involved in innovative processes in practice, to see themselves in an innovative space where there is an opportunity to create, and most importantly, to adopt concrete innovations. This situation is very important today, because this process (innovative process) serves as a condition for the survival of educational institutions (both literally and figuratively), as a condition for social protection of future generations and the pedagogical community. does. Life presents educational institutions with new, seemingly impossible tasks, that is, to work on the old ones, to develop concrete innovations and put them into practice. It is possible to understand the older generation, who are very careful about all the news, who are brought up in the spirit of faith in the riches and experiences of the past, who like stability, as well as educators who do not want any change. In this case, it is necessary to understand that "chasing innovation processes" is an integral part of our lives today. Whether we like it or not, the process of market and market relations is going on behind the walls of our educational institutions. This process is directly related to us, because the concept of competition between educational institutions, their competitiveness, the quality of education, social orders are all coming into our lives. Rather, we should always feel that this process is the environment in which we live, the way of life. It is useless and dangerous to resist this process. We do not have a choice and are forced to participate in this quick process (the chase process). The most important thing in this process is to participate wisely, in a useful way, for our organization. Many experts believe that the ability to change is a key factor in development today, a key factor in

ensuring the competitiveness of any educational institution. 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 (in- "lik", novus- "new") means to innovate, to innovate. "Innovative education" is usually defined as the introduction of new (useful) elements into the learning process. Therefore, innovation in the education system is directly related to change. Such changes in the education system:

• purpose, content, method, technology, form of organization and management system;
• to organize the originality of the pedagogical activity and the learning process;
• education monitoring and evaluation system;
• educational and methodological support;
• system of educational work;
• curricula and study programs;
• Depending on the student and teacher.

The novelty is relative in the historical aspect. Novelty has a clear historical character, that is, it can appear prematurely, become the norm in time, or become obsolete. In the development of a school or higher education system, perhaps the education system as a whole:

- Absolute novelty (similarity, lack of prototype);
- relative novelty;
- unique, inventive.

Types of innovations are grouped in school and higher education on different bases:

The first classification (group) is based on the relevance of innovation to the pedagogical process that takes place in the school and higher education system. Based on an understanding of this process, the following types of news can be distinguished:

- the purpose and content of education;
- Methodology, tasks, methods, technologies of pedagogical process;
- forms and means of organization of education and upbringing;
- management, teachers and students.

The second classification (group) in the education system is based on the scale of innovation. The following changes can be made here:

- unrelated local and separate (one-sided);
- complex, interconnected;
- Systematic, covering the whole school and higher education system.

The third classification (group) is based on innovation opportunities. In this case, consider:

- educational programs, curricula, improvement of structures, ingenuity,

certain perceptions related to changing views

modification;

- innovation in combinatorics (changes);
- radical change.

The fourth classification of a new entry (group) is grouped based on the characteristics of the previous ones. In this approach, the news is determined by the number of exchanges, cancellations or disclosures. In this case, as a source of renewal in the school and higher system:

- social order as a need of the country, region, city, district;
- Reflection of the social order in the laws and documents of regional and regional significance;
- Achieving a comprehensive human science, advanced pedagogical experience;
- Intuition and creativity of leaders and teachers in testing errors and shortcomings;
- experimental work;
- Foreign experience.

The developing innovative policy in our country is important for education and

puts in charge. The document on “Education for an Innovative Society in the 21st Century” adopted by the Group of Eight at the Summit in St. Petersburg in July 2006 calls for consideration and resolution of the problem. The strategy for the future development of science and innovation is to create an "innovative person", that is, regardless of how he works, he must be inclined to innovation and new knowledge. Today, modern innovative suitability is emerging. The term “innovative education” appears on the current national project website, which states that innovative education requires teaching in the process of

creating new knowledge. This requires a distinction between the current concept of "innovative learning technologies" and the new concept of "innovative education". Education is one of the first in our country to launch an active innovation movement. At some point, such movements began in the late twentieth century. For example, the views of A.G. Rivin and V.K.Dyachenko on collective teaching, D.B.Elkonin, V.V.Davydov, L.V.Zankov on the development of innovative education were of great importance at the time. At the same time, other innovative educational technologies: dialectical teaching methods (AIGoncharuk, VLZarina), individual-oriented teaching (AAYarulov), "Ecology and dialectics" (LVTarasov), heuristic teaching (AVXutorskoy) dialogue culture (VSBibler, S.Yu.Kurganov), projective self-reflection (GPShedrovitskaya) and others. The above technologies increase the mastery of teaching, increase interest in the learning process, improve comprehension of teaching materials, the formation of functional literacy, project literacy, theoretical thinking, environmental and economic thinking, communication, social activism, civic consciousness, was focused on self-awareness and solving other tasks. Now that other areas of activity, including manufacturing, have shifted to an innovative path of development, the education sector has only served to train leaders for them. But in reality, it looks different. In the past, there were only a handful of independent innovators in society. The innovators for the educational technologies listed above were only educators, and their innovations focused on the formation of the necessary qualities in students, with no focus on innovative thinking and ability to focus on innovative activities. The views expressed need to distinguish between the concepts of "innovative educational technologies" and "innovative education" as follows: innovative educational technologies and programs - all educational technologies, the result of innovative activities of the educator who creates and develops them is calculated.

- Innovative education is an innovative educational technologies and programs in which the teacher is the result of innovative activities, the learner is the creator (generation) of innovative ideas; mono-innovation of production (innovation of specialists) of education
- It is not mono-innovation - (pedagogical innovation), it is innovation, pedagogical innovation, their consequence, the innovation of the learners.

The urgency of the issue here is the development of existing "mono" innovative educational technologies to a "bi-innovative" state. These are confirmed by their own practical experience in the example of a number of foreign students, their experiments and inventions. Here it is proved that on the basis of modern scientific achievements it can be done through strong, talented thinking, that is, the theory of solving inventive problems can be solved through IMEN. In a number of scientific laboratories of developed countries (IMEN) a new method for IMEN-pedagogy called "inventing knowledge" has been created. The basics of IMEN integration have been developed in conjunction with all the most common innovative pedagogical technologies. An additional effect of this is the possibility of writing various pedagogical technologies in the language of practical dialectics. The process of global change in the world, changes in the economic and socio-cultural spheres of our country require serious attention to the training of specialists in the education system. In the field of pedagogical education in the 80s and 90s, we see that the system of training, retraining and advanced training has become innovative as a single and integrated system, focusing on the following processes:

- ✓ decentralization of education allowed the independent development of this field in certain regions and the formation of a "portfolio of orders" for certain specialists;
- ✓ democratization of higher education institutions provided an opportunity to ensure independence in determining the form, means and conditions of the organization of the pedagogical process;
- ✓ provided opportunities for educators to design their own pedagogical activities and use the subject they teach as a means of student development in accordance with the types of secondary schools and to take into account the needs of secondary schools in this regard;
- ✓ considers the need to satisfy the individual interests of the student, designed to develop individual educational programs, including the choice of the content and level of pedagogical education;

- ✓ It allows to train professional educators in a short period of time on the basis of different levels of capabilities.

While the above-mentioned processes have been strongly influenced in certain periods, it is here that there is a certain dialectical interrelationship between innovative processes in relation to traditional training. , without focusing on the unique aspects of each of traditional and innovative education. The content and organization of traditional pedagogical education is aimed at training teachers specializing in specific disciplines. In the traditional system of professional pedagogical training, the educational process is based on an active approach, and in this process the participants The relationship between them is established in the form of subject-object. Here, the subject-teacher is in a certain limited environment, his activities are governed by the curriculum and syllabus, and the relationship is strictly defined. The object-student is limited to a certain level of knowledge.

Traditional education is defined in terms of content as interrelated autonomous activities: teacher training activities and student learning activities; the student is the executor of the teacher's plan and the object of management. In the traditional learning process, cross-imitation, imitation, role modeling, homogeneity of social and interpersonal interactions, external control and evaluation of outcomes, all of which reduce the motivation to learn, know does not allow the expansion of motives.

During 1990-2000, new approaches to pedagogical education were developed in theory and practice. Practical processes began "from above" and "from below". The “top-down” movement begins with the introduction of new curricula in higher education. Under the new curriculum, higher education will be able to take courses independently. Such "democratic freedom" has been embraced by departments and faculties with extraordinary creativity, and these "bottom-up" changes have led to many "pedagogical-innovative" movements. Several indicators of innovative action, including organizational, meaningful, methodological, have emerged and put into practice. These cases were discussed as the main issue of many meetings of the departments of pedagogy and psychology, and on the basis of the state curriculum, each university developed its own working curriculum and working curriculum. began to exit. This provided opportunities for the introduction and application of innovative technologies in the teaching of each subject on the ground. These

changes have led to an increase in the volume of pedagogical and psychological disciplines in the curricula of all universities in the country by 20-25%.

The development of modern education has given rise to a new direction - innovative pedagogy. The term "innovative pedagogy" and its specific research originated in Western Europe and the United States in the 1960s. The socio-psychological aspect of innovation was developed by the American innovator E. Rodgers. It examines the classification of participants in the innovation process, their attitude to innovation, and their readiness to perceive it.

Innovation is the introduction of something new. AI Prigogin means innovation in accordance with the purpose of introducing new, relatively stable elements into a particular social unit - organization, population, society, group. This is an innovative activity. Researchers distinguish between two approaches to the study of the components of innovation processes: the individual micro-level of innovation and the micro-level of the interaction of innovations introduced separately. The first approach highlights a new idea that has been put into practice. In the second approach, the interaction of the innovations introduced separately, their unity, competition, and consequently the replacement of one by the other. Scientists distinguish the concept of periodicity of life in the analysis of the microstructure of the innovation process. This is because the concept is a measurable process in relation to innovation. In the pedagogical literature the scheme of innovation process is given. It covers the following stages:

1. The stage at which a new idea is born or the concept of novelty is born also referred to as the discovery phase.
2. The stage of invention.
3. The stage of being able to put the innovation into practice.
4. Dissemination of innovation, the stage of its widespread implementation.
5. The dominant stage of innovation in a particular field. At this stage, the novelty loses its novelty, and an effective alternative emerges.
6. On the basis of a new alternative, the phase of reducing the scope of the novelty through replacement. The authors of the Systematic Concept of Innovation

distinguish two important forms of innovation processes. The first form includes a simple development of innovation.

This is especially true for first-time developers. The second type involves large-scale innovation. Innovation is both a logic and a dynamic system that is legitimately developed over time and represents its interaction with the environment. The concept of "new" is central to pedagogical innovation. There is also an interest in private, conditional, local and subjective innovation in pedagogy. A private innovation involves updating one of the product elements of a particular system in the current modernization. Conditional innovation is the combination of certain elements that lead to a complex and progressive update. Local innovation is defined by the use of innovation in a particular facility. Subjective novelty is defined as the fact that the object itself is new to a particular object. There is a difference between innovation and innovation in science. Innovation is a tool: a new method, technique, technology, and so on. The innovation process consists of a system that encompasses structural structures and laws. In the pedagogical literature there are 4 main laws of the innovation process:

- ✓ Cruel instability of the pedagogical innovation environment;
- ✓ the law of final implementation;
- ✓ the law of stereotyping;
- ✓ The law of periodic repetition and return of pedagogical innovation.

The law of ruthlessness disrupts holistic perceptions of pedagogical processes and events, divides pedagogical consciousness, evaluates pedagogical innovation, and disseminates the importance and value of innovation. Finally, the law of realization is the vitality of innovation, whether it is realized sooner or later, spontaneously or consciously. The law of stereotyping is that pedagogical innovation has a tendency to standardize thinking and move to practical action. In this case, the pedagogical stereotype is forced to fall behind and hinder the implementation of other innovations. The essence of the law of periodic repetition and return of pedagogical

innovation is that in it the novelty is restored in new conditions. Researchers of pedagogical innovation distinguish two types of innovation process:

1. The first type of innovation is spontaneous, ie the innovation process does not take into account the need for it, there is no conscious attitude to the system, methods and ways of all the conditions for its implementation.

2. The second type of innovation is the product of conscious, purposeful, science-based activity.

Based on the innovative processes of higher education, the following approaches can be identified:

- cultural approach (priority development of human cognition);
- approach in terms of personal activity (new technologies in education);
- Multi-subject (dialogic) approach, humanization of professional training;
- individual-creative (teacher-student interaction) approach.

One of the conditions for innovative activity is a change in the pattern of communication between teacher and student. The new relationship, as is customary, should be free of coercion and obedience. They should be built in the form of peer cooperation, mutual management, mutual assistance. The most important feature of their relationship is the creative collaboration between teacher and student. Innovative activity is explained by the following main functions:

o conscious analysis of professional activity;

o critical approach to norms;

o readiness for professional news;

o have a creative approach to the world;

o realize their potential, integrate their spouse and aspirations into their professional activities.

This means that the teacher is the author, producer, researcher, user and promoter of new pedagogical technologies, theories and concepts. In today's society, culture and education, the need for teacher innovation is measured by:

• Socio-economic modernization requires a radical overhaul of the education system, methodology and technology of the educational process. In this context, the

teacher's innovation activity consists of creating, mastering and using pedagogical innovations;

• Humanization of educational content requires constant search for new organizational forms and technologies of teaching;

• a change in the attitude of the teacher to the acquisition and implementation of pedagogical innovations.

The analysis of the teacher's innovative activity requires the use of certain criteria that determine the effectiveness of innovation. Such criteria include novelty, optimality, high efficiency, opportunities for creative application of innovation in mass experiments. distinguish absolute, limited absolute, conditional, subjective levels, which vary according to the degree and field of popularity. The criterion of acceptance refers to the effort and resources expended by the teacher and the student to achieve the result. Effectiveness and pedagogical innovation must, by their very nature, be the property of mass experimentation. Pedagogical innovation is first introduced into the work of some teachers. At the next stage, after testing and objective assessment, it is recommended to apply the pedagogical innovation to the public. V.A. Slasten's research provides an opportunity to determine a teacher's professional readiness for innovative activity. They consist of the following descriptions:

• predict the success of the planned innovation as a whole and its individual stages;

• identify gaps in the innovation itself and its implementation for future processing;

• compare innovations with other innovations, select the most effective of them, determine their most important and mature level;

• check the level of success of innovation implementation;

• Assess the innovative ability of the organization implementing the innovation.

The teacher's innovative activities include analyzing 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. The preparation of teachers for innovative activities should be carried out in two ways:

- formation of innovative readiness to perceive innovation;

- Teach new moves.

Innovative activity of a high school teacher is one of the main problems of school pedagogy. One of the most important components of a teacher's innovation is high professionalism - acmeology, the Greek word for high point, the most prosperous period, high professionalism. Represents professional intellectual maturity and skill. The following are some of the key factors in achieving high professionalism:

• badges of talent;

• readability;

• ability;

• talent;

• family upbringing conditions;

• educational institution;

• Behavior.

Acmeology is viewed from a scientific point of view in relation to professionalism and creativity.

The following categories are distinguished:

• creative individuality;

• the process of self-growth and self-improvement;

• Creative experience in realizing their potential.

The creative individuality of the teacher consists of:

• intellectual - creative initiative;

• intellectual ability of breadth and depth of knowledge;

• Vigilance against contradictions, critical approach to creativity, the ability to fight from the body to creativity;

• Thirst for information, unusualness and novelty in problems, professionalism, thirst for knowledge.

One of the most important components of a teacher's innovation is creativity. The term creativity first appeared in Anglo-American psychology in the 1960s. It refers to an individual's ability to create new concepts and develop new skills.

In short, the scientific and theoretical basis for the development and implementation of innovative methods in education and the important components of innovative activities, in accordance with today's requirements, help to effectively organize lessons and improve the quality of lessons.

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