

Theoretical Aspects Of Innovation Processes In The Holistic Educational Process

Alona Prokopenko[†], Liubov Chukhrai^{††}, Tetiana Behal^{††}, Sergii Pustovalov^{††}
Yuliia Kliuchko^{††}, Liliiana Khimchuk^{†††}

[†] Municipal Establishment «Kharkiv Humanitarian-Pedagogical Academy» of Kharkiv Regional Council, Ukraine

^{††} Kyiv National University of Culture and Arts, Ukraine

^{†††} Vasyl Stefanyk Precarpathian National University, Ukraine

Summary

The article is devoted to the research and search for effective pedagogical technologies. The definitions of "innovation", "technologicalization", "pedagogical technology" are analyzed. "Innovative pedagogical technology". The blocks that make up the innovative processes in education are studied. The importance and role of innovations in education (vocational education) are clarified. The components of pedagogical technology are studied: conceptual, content-procedural and professional. The signs of classifications of pedagogical technologies are investigated. The stages of evolution of the definition of "pedagogical technology", as well as the levels of its application in pedagogical science are highlighted. Criteria of manufacturability and signs of pedagogical technology are investigated. The algorithm for the analysis of pedagogical technology is investigated: identification of technology; name of technology; conceptual principles; the content of education; activity characteristics; organizational and methodological support of the educational process. Pedagogical technologies that should be implemented in vocational education institutions are analyzed.

Keywords:

educational institutions, Innovation, managerial, educational processes

1. Introduction

Innovation is creative destruction.

Increasingly, we hear and use the term innovation. In economics, social life, in cultural practices. And this is a general global trend. Today, innovation is defined as an important factor influencing not only the success of an individual organization, but also in general on the socio-economic development of countries. In fact, the innovations themselves are assigned a mandatory component

of positive change in various spheres of life, thanks to which new knowledge is implemented in everyday practice.

Currently, our country is undergoing significant changes in the national education policy. This is due to the transition to the position of personality-oriented pedagogy. One of the tasks of the modern school is to unlock the potential of all participants in the pedagogical process, to provide them with opportunities to display their creative abilities. The solution of these problems is impossible without the implementation of the variability of educational processes, in connection with which there are various innovative types and types of educational institutions that require deep scientific and practical understanding.

The modern school is the result of huge changes that have taken place in the system of national education in recent years. In this sense, education is not just a part of the social life of society, but its avant-garde: hardly any other subsystem of it can confirm the fact of its progressive development with such an abundance of innovations and experiments to the same extent.

The changing role of education in society has determined most of the innovation processes. "From socially passive, routinized, taking place in traditional social institutions, education becomes active. The educational potential of both social institutions and personal ones is being updated. Previously, the unconditional guidelines for education were the formation of knowledge, skills, informational and social skills (qualities) that ensure "readiness for life", in turn, understood as the ability of an individual to adapt to social circumstances. Now education is increasingly focused on the creation of such technologies and ways of influencing the individual, which provide a balance between social and individual needs, and which, by launching the mechanism of self-development (self-improvement, self-education), ensure the readiness of the individual to realize their own individuality and change society. Many educational institutions began to introduce some new elements into their activities, but the practice of

transformation faced a serious contradiction between the existing need for rapid development and the inability of teachers to do this. To learn how to competently develop a school, you need to be free to navigate in such concepts as “new”, “innovation”, “innovation”, “innovative process”, which are by no means as simple and unambiguous as it might seem at first glance.

In the literature, the problem of innovation has long been considered in the system of economic research. However, over time, the problem arose of assessing the qualitative characteristics of innovative changes in all spheres of social life, but it is impossible to determine these changes only within the framework of economic theories. A different approach is needed to the study of innovative processes, where the analysis of innovative problems includes the use of modern achievements not only in the field of science and technology, but also in the areas of management, education, law, etc.

The search for a solution to the pedagogical problems of innovation is associated with the analysis of the available results of the study of the essence, structure, classification and features of the flow of innovative processes in the field of education. At the theoretical and methodological level, the most fundamental problem is from the standpoint of a system-activity approach, which makes it possible to analyze not only individual stages of the innovation process, but also move on to a comprehensive study of innovations [1, 4-8]. Today, innovative search has entered the “calm channel”, has become part of the image of any self-respecting school, an element of the “regular situation” in the system of life of many educational institutions in the region. But there is a huge variety of innovations applicable to education in general and to schools in particular. They play a huge role in the existence and further development of the school.

The purpose of the article: to study and characterize the traditions and innovations in education.

The modern concept of "education" is associated with the interpretation of such terms as "training", "education", "education", "development". However, before the word "education" was associated with enlightenment, it had a broader meaning. Dictionary meanings consider the term "education" as a noun from the verb "form" in the sense: "create", "form" or "develop" something new. Creating something new is innovation.

Thus, education is inherently already an innovation.

2. Theoretical Consideration

Education is the most important and reliable way to receive a systematic education. Education is nothing but a specific process of cognition, managed by the teacher. It is the guiding role of the teacher that ensures the full assimilation of knowledge, skills and abilities, the development of their mental strength and creative abilities.

Learning is a two-way process. The activity of the teacher is usually called teaching, and the activity of the student is called learning. The term teaching should be considered conditional, since the teacher not only teaches (presents) knowledge, but also develops and educates students. Teaching is not only a process of mastering what is given by teaching, it is a complex process of cognitive activity, in which the generalized experience accumulated by mankind in the form of knowledge is mastered, it is also the acquisition of individual experience of cognition with the help of independent operation of knowledge, mastering the necessary actions and methods.

Cognitive activity is the unity of sensory perception, theoretical thinking and practical activity. It is carried out at every step of life, in all types of activities and social relationships of students (productive and socially useful work, value-oriented and artistic and aesthetic activities, communication), as well as by performing various subject-practical actions in the educational process (experimenting, designing, solving research problems, etc.). But only in the process of learning, knowledge acquires a clear form in a special educational and cognitive activity inherent only to a person, or teaching.

The process of cognition of students takes place in joint activity with the teacher, under his guidance. The teacher directs this process in accordance with the age capabilities and characteristics of the students, he systematizes, concretizes the content of training, gives a logical justification to the knowledge that students master, he seeks the most rational ways to equip his students with the skills needed in independent cognition, develops skills. The learning process takes place in the constant communication of students with the teacher, which has a great influence on the nature of the course of cognitive activity.

The cognitive activity of students also takes place in communication with peers. On the basis of this, diverse relationships are created, which, although indirectly, have a significant impact on learning through the exchange of scientific information, support and mutual assistance in the search, public evaluation of the results of educational work. In the modern sense, learning is characterized by the following features:

- goal (general as an adaptation to life), tasks;
- joint activities of teachers and students;
- teaching (guidance by the teacher);
- teaching (independent work of students);
- Organization of the process;
- compliance with the laws of age development of students;
- combination of technology and creativity of teachers and students;
- compliance with the requirements of life;
- simultaneous implementation of education, development, formation of students.

The success of learning is ultimately determined by the attitude of schoolchildren to learning, their desire for knowledge, the ability to consciously and independently acquire knowledge, skills, and activity. The student is not only the object of teaching influences, he is the subject of specially organized cognition, the subject of the pedagogical process. Since the development of the student occurs only in the process of his own activity, the basis of learning should be considered not teaching, but learning. The need for a comprehensive implementation of all components of the content of education and the focus of the pedagogical process on the comprehensive creative self-development of the student's personality determine the functions of learning: educational, nurturing and developing. At the same time, the educational function is associated with the expansion of volume, the developing function with structural complication, and the educational function with the formation of relationships. educational function. The main meaning of the educational function is to equip students with a system of scientific knowledge, skills and abilities in order to use them in practice.

Scientific knowledge, the main component of education, includes facts, concepts, laws, patterns, theories, and a generalized picture of the world. In accordance with the educational function, they should become the property of the individual, enter the structure of her experience. The most complete implementation of this function should ensure the completeness, systematicity and awareness of knowledge, their strength and effectiveness.

The end result of the implementation of the educational function is the effectiveness of knowledge, expressed in the conscious operation of them, the ability to mobilize previous knowledge to obtain new ones, as well as the formation of the most important both special (in the subject) and general educational skills and abilities.

Skill as a skillful action is directed by a clearly realized goal, and a skill, that is, an automated action, is based on a system of established connections. Skills are formed as a result of exercises that vary the conditions of educational activity and provide for its gradual complication. To develop skills, repeated exercises in the same conditions are necessary [2].

educational function. The educational function follows from the content, forms and methods of teaching, but at the same time it is also carried out through a special organization of communication between the teacher and students. Objectively, training cannot but bring up certain views, beliefs, attitudes, qualities to the personality. The formation of personality is generally impossible without the assimilation of a system of moral and other concepts, norms and requirements.

developmental function. Properly delivered education always develops, however, the developmental function is carried out more effectively with a special focus on the

interaction of teachers and students for the comprehensive development of the individual. In the context of traditional approaches to the organization of learning, the implementation of the developmental function, as a rule, comes down to the development of speech and thinking. Historically, the first known type of systematic learning is the method of finding truth by asking leading questions, widely used by the ancient Greek philosopher Socrates and his students. It was called the method of Socratic conversation - by posing a question, the teacher aroused the student's curiosity, cognitive interest, and himself, reasoning, in search of an answer to it, led the student's thought along the path of knowledge.

Dogmatic teaching is the first type of collective organization of cognitive activity, where the main types were listening and rote memorization.

Explanatory - illustrative training came as a result of the widespread involvement of visualization in the educational process. The main goal of this training is the formation of skills and abilities. This passive-contemplative learning is characteristic of the traditional school. The main task of the teacher is to present the material.

Self-acquisition of knowledge as a new type of learning appeared at the beginning of the twentieth century. In general, it looked like this: at the introductory lesson, the teacher posed a problem, pointed out the literature, instructed the students, and set deadlines for completing the task. In its pure form, this type of training had many shortcomings: systematic knowledge was not provided, there was no control, the position of the teacher was passive.

Education as a holistic phenomenon is one of the most significant subsystems of society, therefore its laws are a product of internal self-organization. Regularity is a broader concept than "law" and is considered as the result of the combined action of many laws.

Patterns of learning express essential and necessary links between its conditions and results. The laws of dialectics find their application in teaching:

the law of unity and struggle of opposites;

the law of the transition of quantitative accumulations into qualitative changes;

the law of negation of negations [3].

Of great importance for the organization and implementation of the learning process is the category of measure:

categories of essence and phenomenon;

unity of content and form;

category of necessity;

categories of randomness;

time categories.

The effectiveness of the learning process naturally depends on the conditions in which it takes place (material, hygienic, socio-psychological). Among the significant conditions for learning is the professionalism of the teacher, his creative

potential, the ability to reflect, the desire for timely replenishment of knowledge and correction of personal qualities.

The principles of learning are the initial didactic provisions that reflect the flow of objective laws and patterns of the learning process and determine its focus on personal development. The principles of teaching reveal theoretical approaches to the construction of the educational process and its management. They determine the positions and attitudes with which teachers and lecturers approach the organization of the learning process and the search for opportunities to optimize it.

Knowledge of the principles of teaching makes it possible to organize the educational process in accordance with its laws, reasonably determine the goals and discard the content of the educational material, choose the forms and methods of teaching that are adequate to the goals. At the same time, they allow educators and trainees to observe the stages of the learning process, to interact and cooperate. Since the principles of education are formulated on the basis of laws and regularities, among them there are those that are common to the organization of the educational process in all types of educational institutions.

Learning principles:

training should start on time and be gradual;

training should be conducted in a natural way in accordance with the psychological characteristics of students;

order and systematicity is one of the main conditions for success in learning;

training should develop amateur performance, activity, initiative;

learning should be within the reach of the students, neither too difficult nor too easy;

the teaching of any subject must without fail proceed in such a way that only as much labor remains for the share of education as his young forces can overcome [12].

All learning principles are connected with each other and penetrate one another, so they can be represented as a system consisting of substantive and procedural principles. Such their division is conditional: the value of each of them is not limited only to the framework of its group. However, it is methodologically justified, as it helps to answer the two main questions of didactics: what and how to teach? From the didactic principles follow the rules of teaching, which obey the principle, concretize it, determine the nature of the methodological techniques used by the teacher, and lead to the implementation of this principle. The principles reflect the essence of the learning process, and the rules are its separate aspects [10].

The content principles of education reflect the patterns that are associated with the selection of the content of education and its improvement. These include the principles of citizenship, science, educative nature, fundamentality and

applied orientation (connections between theory and practice, learning with life).

The principles of citizenship reflect the social aspects of learning. At present, its significance is generally recognized in connection with the change in state status, the need to revive the feeling of patriotism, the feeling of the Motherland, the development of the national character, the formation of national values and the development of the doctrine of national education. This principle is expressed in the orientation of the content of education on the development of the subjectivity of the individual, his spirituality and social maturity.

The principle of citizenship in education implies a humanistic orientation of the content of education, which allows you to meet social and personal needs. It is associated with the formation of civic consciousness, a system of ideas about the social and political structure, about the psychological characteristics of the ethnos, its mental structures, the priorities of national politics and culture.

According to the principle of citizenship in education, the content of education should be selected through the prism of its social and personal significance, have interpretative material that reflects current events, regional and local specifics.

The principle of scientific education presupposes that the content of education corresponds to the level of development of modern science and technology, the experience accumulated by world civilization. The principle of scientific character requires that the content of education, implemented both in school and outside of school, should be aimed at familiarizing students with objective scientific factors, phenomena, laws, basic theories and concepts of a particular industry, approaching the disclosure of its modern achievements and prospects. The principle of scientific character determines the requirements for the development of curricula, programs and textbooks, and also requires the use of additional material containing information about global problems and modern achievements. Pedagogical interaction, based on the principle of scientific character, should be aimed at developing students' cognitive activity, creative thinking, and creativity [1,3,7].

The principle of nurturing education is based on the regularity of the unity of education and upbringing. Education in the learning process is associated with intellectual development, and above all, with the development of creative, individual cognitive abilities, taking into account the interests of students. The assimilation of educational material develops not only the cognitive sphere, but also forms personal properties and qualities, such as organization, independence, perseverance, efficiency, diligence, discipline.

The principle of fundamental and applied orientation of education requires a thorough theoretical or practical training of students.

Fundamentality in education presupposes scientific character, completeness and depth of knowledge and requires systematic content, according to the main branches of knowledge, the optimal ratio of their theoretical and practical nature, and practical orientation - modeling and extrapolation of this knowledge to real situations in human life and activity.

The content of education, according to this principle, should reflect the transformations in the economy, politics, culture, that is, in the social context in which the life of students takes place.

The study of the most modern and fundamental theories is insufficient for the normal course of the learning process. No less important is practical knowledge, understanding of the conditions and methods of their application, as they expand the range of possibilities and enrich personal experience, make knowledge more thorough and in demand in everyday life, and not just in educational situations.

The principle of consistency and systematic learning is due to the objectively existing stages of cognition, the relationship of the sensual and the logical, the rational and the irrational, the conscious and the unconscious.

Continuity concerns the content of education, its forms and methods, strategies and tactics of interactions of subjects in the educational process, personal neoplasms of trainees. It allows you to combine and hierarchize individual learning situations into a single holistic learning process of the gradual development of regular connections and relationships between objects and phenomena of the world. Consistency and systematicity in teaching allow resolving the contradiction between the need to form a system of knowledge, skills and abilities in subjects and the formation of a holistic conceptual vision of the world.

The development of a systematic approach to teaching made it possible to more clearly construct educational material, create sets of teaching and visual aids for the subjects studied.

Consistency in teaching ensures the availability of educational material, the strength of its assimilation, the gradual increase in difficulties and the development of the cognitive abilities of students [5].

The principle of unity of group and individual training presupposes their optimal combination. This learning is due to the fact that the individual becomes a person due, on the one hand, to his communication and interaction with other people, on the other hand, to his desire for isolation.

Traditional education is basically group education, as it is organized for study groups of up to 30-40 people, and lectures are organized for entire "streams" of the course, faculty (up to 100-300 people) [7].

Group training, reflecting the common interests of students, creates conditions for dialogue, provides a joint search for the most productive ways to solve problems, creates conditions for the manifestation of mutual assistance, increases the sense of responsibility, social and personal significance under favorable circumstances of learning.

Training, however, cannot be successful if the individual characteristics of the trainees, the difficulties experienced by each, differences in the pace and degree of assimilation of the material, etc. are ignored. This means that along with group forms of training, individual training should also be used. At the same time, it is important to achieve the optimal combination of collective and individual work of trainees.

The principle of matching training to the age and individual characteristics of the trainees involves the implementation of age and individual approaches.

Each age stage of development corresponds to certain shifts in mental and personal development. With age, individual typological differences become of great importance. An individual approach requires studying the complex inner world of students, analyzing the system of existing relationships and the diverse conditions in which personality is formed.

The principle of matching teaching to the age and individual characteristics of students requires that the content, forms and methods of organizing their activities correspond to the age stages. The level of cognitive abilities and personal development determines the organization of educational activities of younger students, the provision of independence and initiative to adolescents and older students. In accordance with this principle, the individual characteristics of the temperament, character, abilities, and will of the trainees should be taken into account.

The principle of consciousness and creative activity of students affirms their subjectivity in the educational process. This is justified by the fact that the activity of the individual is social and subjective in nature. It is an integrated indicator of its orientation and active essence. The activity of trainees can be reproductive or creative.

Education, which is based on reproductive teaching, leaves unclaimed the personal potential of the trainees, their creative attitude to learning activities, personal initiative, independent thinking. At present, it has been experimentally proven that the creativity of students is directly dependent on the creativity of teachers who broadcast it in the process of solving educational problems. With his teaching strategies, the teacher, as it were, "dooms" the student to creativity, "forces" to be aware of the course and results of learning, to outline the stages of completing educational tasks [9].

The principle of accessibility of training with a sufficient level of its difficulty requires taking into account in its organization the real possibilities of trainees, the rejection

of intellectual and emotional overloads that negatively affect their physical and mental health. The implementation of this principle is also connected with taking into account the level of development of the cognitive sphere of students [5].

However, learning should not be overly easy. It must comply with the measure of mental tension and uncertainty necessary to maintain students' intellectual and energy tone, activity and intensification of search actions related to overcoming educational difficulties.

The principle under consideration involves the construction of the educational process in such a way that students have a desire to overcome difficulties and experience the joy of success and achievement. This helps them relieve increased anxiety and uncertainty about success in solving educational problems.

Innovations, or innovations, are characteristic of any professional activity of a person and therefore, naturally, become the subject of study, analysis and implementation. Innovations do not arise by themselves, they are the result of scientific research, advanced pedagogical experience of individual teachers and entire teams. This process cannot be spontaneous, it needs to be managed.

Dictionary S.I. Ozhegova gives the following definition of the new: new - first created or made, appeared or emerged recently, instead of the former, newly discovered, related to the near past or to the present, insufficiently familiar, little known. It should be noted that in the interpretation of the term nothing is said about progressiveness, about the effectiveness of the new.

The concept of "innovation" in Latin means "update, innovation or change". This concept first appeared in research in the 19th century and meant the introduction of some elements of one culture into another. At the beginning of the 20th century, a new field of knowledge arose, innovation - the science of innovation, within which the laws of technical innovation in the field of material production began to be studied. Pedagogical innovation processes have become the subject of special study in the West since about the 50s and in the last twenty years in our country.

With regard to the pedagogical process, innovation means the introduction of something new in the goals, content, methods and forms of education and upbringing, the organization of joint activities of the teacher and the student.

The modern concept of "education" is associated with the interpretation of such terms as "training", "education", "education", "development". However, before the word "education" was associated with enlightenment, it had a broader meaning. Dictionary meanings consider the term "education" as a noun from the verb "form" in the sense: "create", "form" or "develop" something new. Creating something new is innovation.

Innovations in the educational system have been discussed since the 1980s. It was at this time that the problem of innovation in pedagogy and, accordingly, its conceptual support became the subject of special studies. The terms "innovations in education" and "pedagogical innovations", used as synonyms, were scientifically substantiated and introduced into the categorical apparatus of pedagogy.

Pedagogical innovation - an innovation in pedagogical activity, changes in the content and technology of training and education, with the aim of increasing their effectiveness. Thus, the innovation process consists in the formation and development of the content and organization of the new. In general, the innovation process is understood as a complex activity for the creation (birth, development), development, use and dissemination of innovations. In the scientific literature, the concepts of "innovation" and "innovation" are distinguished. Innovation is precisely a means (a new method, technique, technology, program, etc.), and innovation is the process of mastering this means. Innovation is a purposeful change that introduces new stable elements into the environment, causing the system to transition from one state to another. Innovation in this consideration is understood as the result of innovation, and the innovation process is seen as the development of three main stages: generating an idea (in a certain case, a scientific discovery), developing an idea in an applied aspect, and implementing an innovation in practice. In this regard, the innovation process can be viewed as the process of bringing a scientific idea to the stage of practical use and the implementation of the associated changes in the socio-pedagogical environment. An activity that ensures the transformation of ideas into innovation and forms a management system for this process is an innovative activity. There is another characteristic of the stages of development of the innovation process. It includes the following actions:

- determining the need for change;
- collection of information and analysis of the situation;
- preliminary selection or independent development of innovation;
- making a decision on implementation (development);
- the implementation itself, including trial use of the innovation;
- institutionalization or long-term use of an innovation, during which it becomes an element of everyday practice.

The combination of all these stages forms a single innovation cycle.

Innovations in education are considered to be innovations specially designed, developed or accidentally discovered as a result of a pedagogical initiative. The content of innovation can be: scientific and theoretical knowledge of a certain novelty, new effective educational technologies, a project of effective innovative pedagogical experience, ready for implementation, made in the form of

a technological description. Innovations are new qualitative states of the educational process, which are formed when the achievements of pedagogical and psychological sciences are introduced into practice, when advanced pedagogical experience is used.

Innovations are developed and carried out not by state authorities, but by employees and organizations of the education and science system.

There are different types of innovations, depending on the basis on which they are divided.

The main pattern of innovation design: the higher the rank of innovation, the greater the requirements for science-based management of the innovation process.

For a complete and accurate representation of the specifics of innovative processes taking place in the modern educational space, two types of educational institutions can be distinguished in the education system: traditional and developing. Traditional systems are characterized by stable functioning, aimed at maintaining the once established order. Developing systems are characterized by a search mode [11-13].

Once the situation in the school has been comprehensively analyzed, and what school results need to be improved have been determined, naturally, there is a need for an informed choice of ideas with which this could be done in the best way. The choice of ideas is inevitable because different innovations can be selected to achieve the same goals, certain results, each of which has its own strengths and weaknesses. It would seem that such a logic of thinking is obvious, but in real practice it is often not maintained. Instead of a reasoned approach to choosing ideas, we see:

the desire to introduce, almost without any choice, to master literally everything that did not exist before, that they heard or saw somewhere (it is no coincidence that they say about such schools that they are developing so "madly" that they do not have time to function normally);

the desire to try, learn new things in a row, in order to find the best idea for your school. This is, in fact, a blind work (blind trials and, of course, numerous errors);

the desire to master by all means what neighbors from neighboring schools master in order to withstand competition in the struggle for a contingent of students, for the good opinion of parents, heads of educational authorities of their district;

there is a clear desire to keep up with fashion at any cost, to be on its crest, and therefore they are headlong striving for the status of an innovative school and, of course, with an elaborate, complex name;

willingness to accept for implementation any recommendation, any indication of local education authorities regarding the development of a particular new idea.

It is easy to understand that all these approaches to innovations at school are fraught with serious costs, such as

colossal overloads of children and teachers, a decrease in academic performance in those subjects that are not covered by "experimental" work, since the development of an irrelevant, non-optimal someone else's idea, and even the development of an illiterate takes away from the teachers involved in this activity, all the strength and time, which inevitably leads to the destabilization of the pedagogical process.

The choice of ideas is realized by discussing them, thinking through a group of competent persons - experts (these are the most mature and progressive employees of the school, invited specialists). It involves a comparative evaluation of ideas on a number of parameters and is a creative act. Evaluation of ideas can be carried out both with the help of mental experimentation and on the basis of the development of projects for the activities of the alleged participants in the transformation.

It is necessary to think over the entire organizational mechanism for choosing ideas, including collecting suggestions from teachers, children and parents through interviews and questionnaires, identifying the preferences of all groups of people involved in the innovation process, discussing selected innovations at meetings of methodological associations, creative microgroups, departments, and, if necessary, at a board meeting. To achieve the goal, the leader must go not only and not so much from himself, but from others - performers, implementers of future innovations. It is very important that they themselves participate in the search, evaluate and select new ideas for development. Otherwise, their work will not be motivated and there will be no update in the way innovation is managed.

An analysis of the specialized literature and the experience of schools indicates the insufficient intensity of the application of pedagogical innovations in the practice of educational institutions. There are at least two reasons for the lack of implementation of pedagogical innovations. The first reason is that an innovation, as a rule, does not pass the necessary professional examination and approbation. The second reason is that the introduction of pedagogical innovations has not been previously prepared either organizationally or technically, or, most importantly, in a personal, psychological sense.

A clear understanding of the content and parameters of pedagogical innovations, possession of the methodology for their application allow both individual teachers and heads of educational institutions to objectively evaluate and predict their implementation. The haste in introducing innovations more than once led the school to the fact that the recommended, more often from above, innovation after some (short) time was forgotten or canceled by order or order.

One of the main reasons for this situation is the lack of an innovative environment in schools - a certain moral and psychological environment, supported by a set of

organizational, methodological, psychological measures that ensure the introduction of innovations in the educational process of the school. The absence of such an innovative environment is manifested in the methodological unpreparedness of teachers, in their poor awareness of the essence of pedagogical innovations. The presence of a favorable innovative environment in the teaching staff reduces the coefficient of "resistance" of teachers to innovations, helps to overcome the stereotypes of professional activity. The innovative environment finds a real reflection in the attitude of teachers towards pedagogy.

Conclusions

Thus, integrated lessons occupy a special place in the system of our pedagogical activity. They help to develop the cognitive and creative activity of students, increase the motivation for learning. Conducting such lessons is one of the ways to improve the efficiency of the educational process based on the implementation of the principles of the activity approach in teaching.

The inclusion of students in active learning work, while using a variety of forms and methods of cognitive activity, significantly expands the educational opportunities of the lesson, which is the leading form of organizing learning activities.

Innovative methods in teaching are new methods of communication with students, a position of business cooperation with them and familiarizing them with current problems. Innovative methods are methods that allow students to assert themselves. And self-affirmation is the way to the right choice of your profession. In the modern learning process, both traditional and innovative teaching methods are used. It is necessary not only to promote innovative methods, but also not to forget about traditional methods, which are no less effective, and in other cases they simply cannot be dispensed with.

References

- [1] Alekseev N.G. Principles and criteria for the examination of education development programs. Methodological issues 1994, NN 1,2.
- [2] Coombs PH. The World education crisis. A systems analysis. Paris, 1968.
- [3] Coombs P.H. The World crisis in education: the view from the eighties. New York, 1985.
- [4] Encyclopedia of Global Studies / Ed. H.K. Anheier, M. Juergens Meyr. Los Angeles, London and others, 2012.
- [5] GEO-5. Global'naya ekologicheskaya perspektiva. Rezyume dlya politikov. YuNEP. Nairobi, 2012.
- [6] Botkin J., Elmanjra M., Malitza M. No limits to Learning. Bridging the Human Gap. A Report to the Club of Rome. Oxford. 1979.
- [7] Itogovyi dokument Konferentsii OON po istoichivomu razvitiyu «Budushchee, kotorogo my khotim» // URL: <http://www.un.org/ru/sustainablefuture>
- [8] Iasechko, M., Shelukhin, O., Maranov, A.: Evaluation of the use of inertial navigation systems to improve the accuracy of object navigation. International journal of computer science and network security, 2021, 21, 3, p. 71-75. Available at: http://paper.ijcsns.org/07_book/202103/20210310.pdf.
- [9] Mykhailo Sherman, Yaroslav Martynyshyn, Olena Khlystun, Liubov Chukhrai, Yuliia Kliuchko, Uliana Savkiv. Optimization of the Educational Environment Using Information Technologies. IJCSNS International Journal of Computer Science and Network Security, VOL.21 No.4, April 2021. pp. 80-83.
- [10] Lazorko, O, Zhanna, V., Yahupov, V., Valchuk-Orkusha, O., Melnyk, I., & Sherman, M. (2021). The Safety of Professionalization Subjects in Psychological and Neuropsychological Aspects. BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 12(1), 19-39.
- [11] M. Iasechko, O. Shelukhin, A. Maranov, S. Lukianenko, O. Basarab, O. Hutchenko (2021). Evaluation of The Use of Inertial Navigation Systems to Improve The Accuracy of Object Navigation. IJCSNS International Journal of Computer Science and Network Security. Vol. 21 No. 3, pp. 71-75.
- [12] S. Piskunov, M. Iasechko, O. Yuhno, N. Polstiana, Y. Ghusov, K. Bashynskiy, A. Kozyr. (2021). Application Of Probability Filter For Maintenance Of Air Objects. IJCSNS International Journal of Computer Science and Network Security. Vol. 21 No. 5, pp. 31-34.
- [13] M. Iasechko, N. Sachaniuk-Kavets'ka, V. Kostrytsia, V. Nikitchenko and S. Iasechko. The results of simulation of the process of occurrence of damages to the semiconductor elements under the influence of multi-frequency signals of short duration, Journal of Critical Reviews, 7(12), 2020, pp. 109 - 112. doi:10.31838/jcr.07.13.18.