

# Pedagogical Innovations: Problems, Tendencies of Development of Modern Education

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## Summary

The article reveals the essence of the concept of "pedagogical innovation" and identifies trends in the development of a modern educational institution. A qualitative analysis of the scientific literature in the field of innovation science has been carried out. The essence of the concept of "pedagogical innovation" is revealed. The modern classification of pedagogical innovations is given. The factors of the success of the introduction of pedagogical innovations are determined. The main trends in the development of modern educational institutions are outlined.

### Key words:

*learning process, technologies, education system, innovative educational technologies.*

## 1. Introduction

In pedagogical science, a fundamentally new and important direction has arisen and is developing - the theory of innovations and innovative processes.

In general, innovations in education are a system of innovations aimed at radical transformation and improvement of the functioning, development and self-development of educational systems and education in general.

Innovative activities in the field of education should be carried out in order to ensure the modernization and development of the education system, taking into account the main directions of the socio-economic development of Ukraine, as well as the implementation of the priority directions of the state policy of Ukraine in the field of education. Innovative and experimental activities "... should be aimed at the development, testing and implementation of new educational technologies, educational resources. Innovation is focused on improving the scientific and pedagogical, educational,

methodological, organizational, legal, financial and economic, personnel, material and technical support of the education system and is carried out in the form of implementation of innovative projects and programs" [1-3].

A prerequisite for the formation of an innovative economy is the modernization of the education system, which is the basis for dynamic economic growth and social development of society, a factor in the well-being of citizens and the security of the country. The strategic goal of the state policy in the field of education is to increase the availability of quality education that meets the requirements of innovative development of the economy, the modern needs of society and every citizen.

The ambiguity in the understanding and application of these terms in the practice of teachers creates a certain problemativeness and the need to identify the essence of the described concepts, their classification and use in the development of a modern innovative educational space.

Another problem is to find out how the ongoing innovation processes affect the development of educational institutions - what development trends prevail, how innovative processes fit into the educational practice of institutions.

Purpose of the article: To reveal the essence of the concept of "pedagogical innovation" and identify trends in the development of a modern educational institution.

## 2. Theoretical Consideration

Innovations and innovations are characteristic of any professional human activity and therefore can naturally be the subject of study, analysis and implementation. Innovations do not arise by themselves, they are the result of scientific research, as well as the advanced pedagogical experience of individual teachers and entire teaching teams. The term "innovation" is consonant with such terms as "new", "innovation".

The concept of "innovation" in translation from Latin means "renewal", "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 [1-4].

Pedagogical innovation (innovation) is a purposeful change that introduces certain stable elements into the educational environment - innovations that improve the characteristics of individual parts, components and the educational system itself as a whole. The process of mastering an innovation - a new means, method, methodology, technology, program, goes through the search for ideal new methods and programs, their introduction into the educational process and their creative rethinking.

At the beginning of the 20th century, a new field of knowledge emerged, "innovatics" - the science of innovations, within the framework of which the regularities of technical innovations in the sphere of material production began to be studied. Pedagogical innovation processes have become the subject of special study in the West since about the 50s, in the educational system they started talking about innovations from the 80s of the XX century - in the last twenty years. With regard to the pedagogical process, innovation means the introduction of something new into the goals, content, methods and forms of teaching and upbringing, the organization of joint activities of the teacher and the student. It was at this time in pedagogy that the problem of innovation and, accordingly, its concepts and terminology became the subject of special research. The terms "innovations in education" and "pedagogical innovations", used as synonyms, were scientifically substantiated and introduced into the categorical apparatus of pedagogy.

Distinguish between socio-economic, organizational and managerial, technical and technological innovations. Pedagogical innovation is considered as one of the varieties of social innovation. Pedagogical innovations can be carried out both at the expense of the educational system's own resources - an intensive path of development, and by attracting additional capacities - investments: new funds, equipment, technologies, capital investments - this is the so-called extensive development path. The combination of these paths of development of pedagogical systems allows for the so-called "integrated innovations", which can be built at the junction of diverse, multi-level pedagogical subsystems and their components. With this approach, innovations will not look like far-fetched events, they will become conscious transformations coming from the depths of the needs and knowledge of the system. It is proposed to reinforce the so-called "Bottlenecks" by the latest technology, and improve the overall efficiency of the pedagogical system.

In modern pedagogical science, the interpretation, concept and acceptance of the term "innovation" affects the

problem of the effectiveness of innovative activity - which manifests itself in a misunderstanding, distortion of the essence of the term "innovation" itself. "Innovation is a new one, designed to ensure the gradual development, improvement of the system, its transition to a qualitatively new state in the existing conditions. Innovations are carried out at the expense of the resources of the system itself and are aimed at its complete change - this is their fundamental importance. They are not limited to only denying the old, generally accepted, conservative, assuming the purposeful nature of innovations and their orientation towards stability. Innovations in education are being introduced directly into the organization of the educational process, into curricula and methods. Changes may affect the nature of teaching activities, the system of financing and assessing the quality of educational services" [4].

Analyzing the material, it is easy to establish that "innovation" is a means - a new method, technique, technology, program, and "innovation" is the process of mastering this means, the introduction of innovations into practice. Summarizing, we can say that "innovation" is a purposeful change that introduces new stable elements into the environment, causing the system to transition from one state to a qualitatively different one.

In the opinion of many teachers, first of all, innovations in education should be aimed at "... creating a personality that is tuned in to success in any area of applying one's capabilities. Pedagogical innovations should be understood as a purposeful, meaningful, change in pedagogical activity through the development and implementation of new content of teaching, upbringing, management; new ways of working, new organizational forms. Accordingly, the development of innovative processes can be considered as a way to ensure the modernization of education, improve its quality, efficiency and accessibility" [5].

The main feature of innovations in education is innovations that are specially designed, developed, or accidentally discovered as a pedagogical initiative. The main thing: innovations are developed and carried out not by public authorities, but by actually working pedagogues-practitioners. Innovations in pedagogy are distinguished by the fact that the "object" of their influence, the object of activity is a living, developing, person with a unique "I" [3].

Pedagogical innovation, like any scientific concept, needs a certain classification. Pedagogical innovations can be classified according to the types of activity - pedagogical, providing the pedagogical process; managerial; by the nature of the changes introduced - radical, based on fundamentally new ideas and approaches, combinatorial - as a new combination of known elements and improving and complementing existing patterns and forms; by the scale of the changes introduced - local - independent from each other changes of individual sections or components,

modular - interconnected groups of several local; systemic - there is a complete reconstruction of the system as a whole; according to the scale of use - single and diffuse, according to the source of occurrence - external - implemented outside the educational system; internal - are developed within the educational system.

As you can see, innovations can be random, or far-fetched, or come in an administrative order, often they are not "tenacious", not systemic, not supported by the teaching staff, and do not correspond to the goals of the institution.

The so-called "useful" innovations have vague goals and are narrowly focused on achieving results.

Systemic innovations are problematic in their genesis, they are based on the real interest of all participants in the pedagogical process, they are well prepared methodically and organizationally. By the nature of the contribution to science and practice, innovations can be divided into theoretical and practical. It is important to distinguish new knowledge from innovations in the field of training and education. In one case, a new idea, new knowledge is formed, in the other, the process of its application is carried out [2-5].

The above classifications show the depth and ambiguity of all concepts that describe innovative processes. Any education specialist needs to take into account the typology of innovations when creating innovative educational projects. As practice shows, the systematization of concepts is very useful at the initial stage of acquaintance with new concepts and approaches, allowing in the future to avoid mistakes when creating projects and programs. This is especially true for pedagogical theory and practice, where the unambiguous interpretation of the term often leads to misunderstandings. The effectiveness of innovations, the formation of an innovative orientation in the development of pedagogical systems of any level involves an assessment of the development of the innovation process using a certain toolkit, a system of criteria. Based on the experience of some researchers, the following criteria of pedagogical innovations and their sequence are distinguished: novelty, optimality, high efficiency, the possibility of creative application of innovation in mass experience.

The main criterion for innovation is "novelty", which allows evaluating both scientific pedagogical research and advanced pedagogical experience. In this regard, for a teacher who wants to get involved in the innovation process, it is very important to determine what is the essence of the proposed new, what is the level of its novelty. For one it may be really new, for another it may not be so. Therefore, it is necessary to approach the inclusion of teachers in innovative activities, taking into account voluntariness, taking into account the peculiarities of personal, individual psychological characteristics. There are several levels of novelty: absolute, locally-absolute,

conditional, subjective, differing in the degree of fame and scope.

The next criterion - "optimality" determines the expenditure of efforts and resources of teachers and students to achieve results. Different teachers can achieve equally high results with different intensity of their own work and the work of students. The introduction of pedagogical innovation into the educational process and the achievement of high results with the least physical, mental and time expenditures testify to the optimality of innovation.

The criterion "effectiveness" means a certain stability and attainability of positive results in the activities of teachers. The terms of the criterion: manufacturability in measurement, observability and fixability of results, unambiguity in understanding and presentation, allow this criterion to be used in assessing the significance of new techniques, methods of teaching and upbringing [6].

The criterion "the possibility of creative application of innovation in mass experience" is interpreted as a criterion for evaluating pedagogical innovations. In fact, if a valuable pedagogical idea or technology remains within the framework of a narrow, limited application due to the peculiarities and complexity of technical support or the specifics of the teacher's activity, then it is hardly possible to speak of a pedagogical innovation in this case.

At the initial stage of implementation, the possibility of using innovations in mass pedagogical experience is first confirmed in the activities of individual teachers, and after testing and objective assessment, they can be recommended for mass implementation. Knowledge of the above criteria and the ability to use them in assessing pedagogical innovations create the basis for pedagogical creativity.

Analysis of special literature and the experience of educational institutions indicates the insufficient intensity of the introduction of pedagogical innovations into the practice of pedagogical activity. There are at least two reasons for unrealized pedagogical innovations:

- the first reason - innovations, as a rule, do not pass the necessary professional expertise and approbation;
- the second reason is that the introduction of pedagogical innovations was not previously prepared either organizationally or technically, and most importantly, in a personal, psychological sense [2-4].

A clear understanding of the content and criteria of pedagogical innovations, knowledge of the methodology for their application allow both individual teachers and heads of educational institutions to objectively assess and predict their implementation. The haste in the implementation of innovations more than once led to the fact that the recommended, often from above, innovation, after a short time, was forgotten or canceled by an administrative order and order. One of the main reasons for this situation is "... the absence 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 lack 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 innovation environment is realistically reflected in the attitude of teachers to pedagogical innovation.

The effectiveness of innovation in an educational institution depends on many factors: objective, subjective, external, internal, economic, management. The effectiveness of the institution's activities is the correspondence of the achieved quality of the result to the level of costs for ensuring this activity [4-6].

The effectiveness of innovation activity is largely determined by the innovation infrastructure of an organization, which is a set of interrelated, mutually complementary production and technical systems, corresponding organizational and management systems, necessary and sufficient for the effective implementation of innovation activities and the implementation of innovations.

The innovative activity of a modern educational institution is "... this is a process that includes strategic marketing, scientific research, organizational and technological preparation for the creation and design of innovations in the practice of teaching and upbringing, dissemination and exchange of pedagogical experience, development of new forms of interaction with society, their implementation and dissemination in other areas, aimed at meeting any educational need" [1].

A kind of "engine" for the development of a modern educational institution is innovative activities aimed at solving existing problems, the end result of which may be innovations or innovations. Effective management of the development of innovative activities in a modern educational institution is becoming especially important in modern conditions, as it is a condition for the "survival" of an educational institution and ensuring social security of both its pupils and all members of the teaching staff. It is the effective development of innovative activity that allows an educational institution to become competitive in today's difficult conditions. When managing an organization in a rapidly changing environment, the conditions of its development, the head of an educational institution performs a new type of activity - innovative, therefore, a new management subsystem appears - an innovative subsystem of an educational institution, which involves the implementation of changes through the search,

development and implementation of innovations in a specific part of the entire system ... Effective management of innovation in a modern educational institution can promote innovation or hinder its development.

From the above mentioned positions, they distinguish between functioning - passive-adaptive and innovative - developing types of development of an institution, in which managerial decisions are made on the basis of taking into account possible social and pedagogical changes. Based on the published regulation, some educational institutions operate in a functioning mode, others - in a development mode. It is the latter that can be attributed to innovative educational institutions, because their pedagogical systems are in development, constantly approaching the satisfaction of the ever-increasing demands of the individual and society [5].

Perhaps the whole "trouble" in the classical approach, which traditionally considers management as a system of planning, organization, coordination, motivation and control functions, attaches great importance to the role of the leader's personal characteristics, which are a synthesis of innate and acquired qualities and abilities. Obviously, it is necessary to rethink the traditional management in the field of education from the standpoint of constant development of one of the main resources of a self-learning organization of any educational institution - an intellectual resource.

Modern management in the field of education pursues the goal of creating new conditions conducive to the development of intellectual resources. Innovative activity should be singled out as a special "subject of education management", immersion in innovative activities aimed at the formation of an open educational space. The concept of "open educational space" reflects "the dynamic interconnection of educational concepts - value-semantic guidelines, goals, norms of educational activity, ways of organizing and implementing them in specific educational institutions, projects, strategies and practices.

For a modern, dynamically developing society, rapid and continuous changes occurring in various areas of life are characteristic. Increasingly, they talk about the formation of an informational and technogenic civilization, which makes higher educational requirements for a modern person. At the same time, the emphasis is shifted to the formation of value orientations of the humanistic order, the development of productive thinking, creativity, and not only to the assimilation of the ever-increasing flow of information and increasing the level of subject learning.

The objects of innovative activity in education can be educational institutions, upbringing and training systems, relations between students and teachers, as well as organizational and pedagogical and necessary psychological and pedagogical conditions.

The effectiveness of the activities of a modern educational institution and its any structural subdivision is directly

related to "... the operational development of the necessary innovative activities by administrative and pedagogical personnel, which consists in the development and implementation of innovative strategic documents: development programs and activities of the institution, concepts of the educational system, additional educational programs, scientific programs. Experimental sites, innovation projects, programs for the development of scientific and methodological services. "Any innovative activity at the present stage requires special management techniques, new methods, means and forms of organizing the educational process, as well as monitoring the introduced and ongoing innovations [7].

The development of an institution based on innovation is a complex and lengthy process. As a condition for the success of the innovative development of an educational institution - the development of an appropriate management strategy. The choice of an innovation strategy is one of the most important problems in innovation management. The results of numerous studies confirm that the success of an organization's pedagogical activity is based on the chosen strategies of innovation.

An innovative strategy is a purposeful activity to determine the most important directions, priorities, prospects for the development of an organization and develop a set of measures required to achieve them. It is determined by the state policy in the field of education, social order, regional and local characteristics and can vary depending on the state of the educational system and society.

The strategy sets out general attitudes, in which it is found that conceptual approaches to managing the development of the educational system of an institution should be reflected. It is well known that "... an educational institution, being in the "innovation field", acquires a certain immunity of social security, protection for both students and teaching staff [5-7].

The signs of an innovative environment include: the ability of teachers to be creative, the presence of partnerships and friendships in the team, good feedback with students, families, society, as well as the integral characteristics of a highly developed team, a community of value orientations, interests, and goals.

As his experience shows, one of the main conditions for increasing the innovative potential of an organization is the involvement of teachers in innovative activities. The participation of teachers in innovative processes can go through: participation in collective experimental and research activities within the framework of a common problem, the use of interactive methods of scientific and methodological work; participation in permanent seminars on topical issues, advanced training; participation in pedagogical and methodological councils, in organizing round tables, participation in business, role-playing, heuristic games to generate new pedagogical ideas;

creative work in school and district methodological associations; self-education, work with scientific and methodological literature; description and presentation of innovations as work experience, speeches at scientific and practical conferences and seminars.

The result of innovation activity can be specific changes in the object of transformations, the quality of educational, pedagogical and management activities. Organized pedagogical monitoring allows to carry out continuous scientifically grounded diagnostic and prognostic monitoring of the state, development of the innovation process, and the quality of its management.

## Conclusions

This brief review, devoted to the interpretation and use of the concepts of "innovation", "innovation", "innovation process" showed the depth and ambiguity of the use of these concepts in pedagogical theory and practice. Despite its long history, pedagogical innovations at the present stage of development of education are experiencing a "rebirth". These concepts have been introduced into new regulatory state documents, are widely discussed in the pedagogical literature, are given in textbooks, and are key in the development of pedagogical innovative projects.

In general, pedagogical innovations should be understood as the end result of the introduction into educational practice of "innovations", or innovations: new forms, means, methods, techniques, technologies. The main goal of pedagogical innovations is qualitatively new positive approaches in teaching and upbringing of schoolchildren. Pedagogical innovations have their own assessment criteria and a classification system that allows the teacher to meaningfully design innovations, to translate them into pedagogical projects. The success of pedagogical innovations depends on many factors - external, internal, objective and subjective - all of them must be taken into account when developing innovative pedagogical projects.

Trends in the innovative development of modern educational systems are reflected in the practice of educational institutions: changes in concepts and approaches are manifested in regulatory documents, development programs, educational programs of the institution.

The main trends in the development of modern educational institutions are: humanization of education, manifested in increased attention to the personality of each child as the highest social value of society, emphasis on the formation of a new type of citizen - an intellectual with high moral and physical qualities, democratization of education, unification of the initiative of students and teachers, differentiation and individualization of education - broad public participation in education management as the integration of all the upbringing forces of society, the organic unity of schools and other special institutions in order to educate the younger generations.

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