METHODOLOGICAL APPROACHES TO THE STUDY OF INNOVATIVE FORMS OF EDUCATION

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Abstract: Transformations in modern society's life, affirming the people's attitude as the highest value of social life, have become conditions for identifying and developing his creative potential and his functioning as a person and a citizen. This situation has actualized the problem of humanization, expanding the issues of the innovation space. All this could not but affect the pedagogical and theoretical views, including methodological knowledge. Recently, innovative processes have entered the field of education and raised the need to update research in methodological tools, defining the intensive development of methodological approaches. The work proves the ambiguity of methodological approaches to the study of innovative forms of education. Their characteristics and grouping are given. Based on this, the author's approach to analyzing innovative forms of education is presented.

Keywords: Education development, Innovative forms of education, Innovative space, Methodological approaches, Pedagogy.

1 Introduction

The need to study the methodology of innovative forms of education is due, firstly, to our society's need to bring education in line with the development of the nature of the economy [1]. Secondly, the analysis of scientific literature on this issue showed no common view on it. A generalization and classification of approaches to its study are required to develop evidence-based recommendations in the field of innovative forms of education [3].

In the twentieth century, there have been many different changes in the methodology of cognition. The realization came that the subject structure of knowledge does not allow developing a unified approach to solving complex problems related to systems of the highest level of organization [2].

In education as a whole, a paradoxical situation is developing when a general crisis is combined with new shoots, an awareness of a paradigmatic lag with an abundance of new ideas and concepts, anxiety for the level and quality of education with a sense of the new coming, thereby actualizing the philosophical understanding of the present and future education [10]. The possibilities of any modern civilizations based on the desire to rule over nature have been exhausted. They have brought humanity to the brink of catastrophe. It means that a new ecological crisis on a planetary scale is inevitable and that humanity is facing an inevitable civilizational restructuring of all the usual beginnings. And the existing element of development should be opposed by some reasonable strategy common to humanity [5].

At the present stage, the most intensive study is the methodological issues of pedagogical education, pedagogical research, and other scientific fields. The term "methodology" itself is defined differently in scientific research. The concept of "methodology" (from the Greek *"methodos"* – research, tracking) means a set of methods, techniques, and operations of practical or theoretical mastering of reality, that is, the path of cognition. Tracing the content of the concept of "methodology," you can identify different interpretations of this term and its derivatives. Recently, questions of methodology in pedagogical research have undergone significant changes, and the same is happening in other sciences and scientific fields [4].

2 Literature Review

Analysis of scientific sources allows us to identify the following groups of approaches to studying innovations in education. The first group of approaches connects innovation with scientific ideas and forms of their implementation in education. Several authors focus on the fact that a search, research nature distinguishes innovative activity [6, 8]. Search activity involves the formation of students' experience of independent search for new knowledge, their use in new conditions; that is, it activates students' activity to build their knowledge. In turn, the driving factor of the innovation process, according to these authors, is a research activity. The latter is a kind of search activity. It is characterized by the activation of the students' comprehension of knowledge in the course of the stage-by-stage formulation of the problem, the advancement, and testing of hypotheses, the formulation of ideas, the conduct of an experiment, etc. [12]. Consequently, innovative activity in education within the "search" framework is characterized as research, accompanied by qualitative changes, development, transformation, and obtaining new subjective experience at the end. Such an "innovation-research" activity is new knowledge, new ways of its transmission and assimilation; subjects – teachers and students [28].

Consideration of innovations in education from the standpoint of pedagogical innovations can be considered similar to the "search" approach [24]. Expanding the concept of "pedagogical innovation", the authors define it as such a content of possible changes in pedagogical activity, which leads to a previously unknown, not encountered result. Accordingly, when introducing pedagogical innovations, the theory and practice of innovative teaching and upbringing develop [11]. At the same time, pedagogical innovations can relate to both pedagogical activity as a whole and its individual components.

In the French-language literature, two types of education innovations are characterized as spontaneous ones (innovation occurs regardless of official initiatives and is carried out by the teachers themselves) and controlled innovations (innovative activity is carried out under the supervision and management of scientists) [9]. In turn, controlled innovations in education are subdivided into classical (first, a new one is developed and studied based on several educational institutions, then it is refined and distributed en masse) and autonomous, when the initiative comes from below, from teachers, and the governing bodies carry out only coordination functions experiment in a large number of schools or universities [7].

3 Materials and Methods

The first – "technological" – group of approaches to the study of educational innovations focuses on its authors' attention on the search and research nature of teachers and students' activities [19, 22]. However, this overlooks the new forms of activity of the subjects of the pedagogical process in the university (teachers and students), the formation of which is considered within the framework of the second group of approaches [13].

The second group of approaches is based on the study of innovative activities from the standpoint of comparing innovative and traditional approaches in education [23, 34]. The traditional approach is characterized by a "knowledge" paradigm of education, an orientation towards the formation of a stable body of knowledge, skills, and abilities, strict regulation of the educational process, and the reproductive nature of education. Accordingly, the subject of the teacher and students' joint activities within the framework of the traditional approach is the educational material, knowledge, skills, and abilities of the trainees, which are mastered mainly through verbal explanations and reproduction [20]. On the contrary, an innovative (as opposed to the traditional) approach means implementing the scientific foundations for the inclusion of personality development mechanisms, the acquisition of knowledge by the subject himself instead of passive perception [18]. Innovative teaching means methods that stimulate the teacher and students' productive, creative activity related to the production of a socially useful product at all stages of the educational process [25].

The third group of approaches to the study of innovations in education focuses on the personality of students [21, 24]. The interaction of philosophical methodology, social, cultural, and psychological-pedagogical components of innovative educational activities can contribute to the formation of the student's personality. Therefore, such a person-centered approach is based on the following provisions:

- The need to take into account, during the implementation of educational innovations, the age and psychological characteristics of students, their mental strengths and cognitive capabilities, the pace of development of their consciousness and self-awareness as individuals with a certain creative potential [26];
- The orientation of education to the current and future needs of society in personnel, for which it is necessary to train specialists adapted to real life, in particular, to the conditions of the emergence of a market economy;
- Increasing the intellectualization of students, their awareness, developing their own spiritual experience;
- Implementation of a holistic approach to teaching, which allows students to be included in broad social ties, using the university's capabilities as an open system, in which, with the help of teachers, the didactic principle of connecting learning with life is implemented.

The fourth group of approaches – "practice-oriented" – should be considered that innovative pedagogical processes that allow effectively solving the assigned tasks are due to progressive trends in society's development [32]. An innovative approach to training a specialist in higher education is determined by the idea of a scientifically controlled process. Such an innovative process is associated with democratization, humanization, and differentiation of higher education. It is organized based on theoretical modeling of educational and professional programs' content and structure aimed at achieving a high level of readiness of a university graduate for their professional activities [37, 40]. In this regard, there is currently a surge of so-called "innovative practices" in educational institutions. It is due to the following objective prerequisites:

- Awareness of the need for radical changes at all levels of the educational system (regional, municipal, separate educational institution);
- Updating new characteristics of education, such as variability, multilevel, training specialists within the educational order of business structures, the development of the educational services market and increased competition in it;
- The growth of requirements for the level of higher education on the part of employers and the students themselves, along with the inertia of educational programs in determining the value quality priorities of the development of higher education;
- The simultaneous implementation of several reforms – political, economic, social, and education – is not a priority. Against this background, some authors rightly note the rather "free" normative base of education that regulates innovative activity, as a result of which "true" innovations are lost in a large number of their imitations.

In the fifth group of approaches, the authors included studies devoted to developing meaningful criteria for the classification of innovations in education [41]. It is expedient to divide these studies into two directions. The first area includes the classification of innovations, in which the object of analysis and order is the management of innovation. The second area includes those classifications that consider innovative approaches to learning.

The sixth group of approaches to the study of innovations in education includes developing methods for analyzing foreign experience in this area [43]. One of the ailments of domestic pedagogy is the separation from world experience, both in the scientific and applied spheres. As a result, according to this author, the innovative didactic findings of world pedagogy remain little known even for specialists, and teachers, experiencing a huge need for fresh ideas, have the opportunity to get acquainted only with fragments of foreign innovative educational technologies [26].

4 Results

Innovative teaching is designed to remove the fundamental shortcomings of the traditional: first, underestimation of the leading role of subjects of learning, second, the lack of targeted management of the achievement of the predicted result, and third, the lack of continuity of learning [17].

These shortcomings of traditional education lead to its failure to fulfill its primary function – the development of trainees' abilities, which allow them to navigate in changing life and work situations freely [22]. Therefore, one cannot ignore the fact that the existing educational system aggravates social contradictions. In particular, professional incompetence, low legal culture, inability to conduct political dialogue, social irresponsibility, economic and environmental illiteracy, ignorance of the experience of domestic and world history and culture make it difficult for many members of society to choose a life position [25]. Within the framework of the "comparative" group of approaches, the lagging behind the new realities of life, the devaluation of its social significance, and, ultimately, the exhaustion of the traditional educational system's capabilities were investigated. Therefore, it will be appropriate to give an opinion that it is necessary to refer to the main innovations in the field of education as changes in the following areas: in the financing and management of education, in the context of education (in curricula and programs in all or individual subjects), in the organization of teaching, in relationships teachers with trainees, in educational technologies [30].

In this regard, it should be noted that, within the framework of the second group of approaches, the implementation of innovative learning does not mean a refusal to acquire solid knowledge [36]. However, this emphasizes the problem of the development of the personality of trainees, which is emphasized from the content of the third group of approaches [31].

Following the methodology of the personality-oriented approach to the disclosure of innovations, it is noted that one of the important characteristics of innovative activity in education is the reflexive position of its subjects. Reflection as a way of rethinking by the subjects of the educational process of their own thinking and activity includes the stages of self-awareness, self-determination, self-expression, self-realization, and self-regulation. Accordingly, it contributes to the awareness of the need to make changes in the previous nature of activities and encourages the search for new ways of it, thus being realized in innovations [39].

Thus, the inclusion of reflection in the content of training contributes to the stimulation of critical comprehension of students' activities, an active search for a solution to the problem posed. Consequently, the fundamental aspect of understanding innovations in education through students' reflection is that innovation in the educational process is accompanied by reflection, and reflection is accompanied by innovation. However, without diminishing the importance of highlighting the personal aspect of educational innovations, one cannot fail to note researchers' weak attention within the third group of approaches to an environment favorable for the development of the innovative activity [29]. An attempt to solve the problem of defining an innovatively favorable educational environment was made within the framework of the fourth group of approaches to the study of the content of innovations in education.

Based on the fourth group of approaches, innovation is seen as a complex process of creating, disseminating, and using new practical experience. In this regard, one cannot ignore the opinion that educational innovations are substantively manifested in various activity aspects of improving the education system [27, 29]. These aspects include:

- Development of concepts for the development and self-development of an educational institution;
- Updating the content of education [15];
- Change or development of new methods, techniques, pedagogical technology of teaching, upbringing, personal and collective development [14];
- Improvement of organizational forms of education, upbringing, personal and collective development [16];
- Changing the management and self-government of an educational institution, etc.

However, it should be borne in mind the position that "adjusting" a significant part of practical activity in education for innovation levels the meaning of the latter, reducing it to zero. A number of authors typologize educational innovations link this process with meaningful features.

The following can be said regarding the first direction. In the pedagogical literature, some authors use their examination and implementation path as a criterion for classifying innovations. In this regard, they distinguish three types of innovations in education: political-administrative, normative-reductive, and empirical-rational [12].

5 Discussion

From the point of view of management, the controlled and autonomous (initiated) types of innovations are divided into four subtypes: scientific (scientific organizations perform control functions), scientific and administrative (they carry out control with the support of educational authorities), administrative and scientific (control and management are carried out by bodies management, based on science), administrative (the authorities assume control functions) [31].

Depending on the existing constraints, such types of innovations in education are investigated as deterministic, based on certain norms and rules, and natural, when innovation develops naturally [38].

Within the framework of the second classification approach to educational innovations, there are two types of them:

- Innovations – modernization, transforming the educational process, aimed at achieving guaranteed results within its traditional reproductive orientation framework [33]. The underlying technological approach to learning is aimed, first of all, at communicating knowledge to learners and forming methods of action according to the model, that is, at reproductive learning;
- Innovations – transformations that transform the traditional educational process, ensure its research nature, the organization of search educational and cognitive activities [39].

Also, innovations are associated with a new educational product (new educational services, new specialties), with new levels of education, and in this regard highlights the following criteria for their classification:

- Temporary – the criterion for the innovativeness of educational services is the time of their development and implementation [21];
- Differentiation of educational services from their analogs and prototypes;
- A multi-purpose focus, characterizing various aspects of the novelty of educational services and products (for example, multi-level distance training of specialists with higher education, masters and graduate students, etc.) [19].

Since there are no limits to learning, there can be many types of mastering knowledge [24]. On this basis, he distinguishes between normative learning, the acquisition of knowledge based on the so-called "Shock" experience under the influence of crisis situations, fundamental and innovative training [24]. The latter's main difference is the focus on the development of the trainees' ability to act jointly in new, possibly unprecedented situations. Thus, in the study of innovations in education, the emphasis is placed on the anticipation of problems in learning and the mandatory active participation of all educational process subjects in this.

When analyzing pedagogical innovations, one can base not only on the novelty of the educational ideas and technologies themselves but also on the novelty of the conditions in which they are implemented [40]. In this regard, there are three substantive aspects of the analysis of educational innovations:

- Research of innovations in education involves the identification of the absolute novelty of educational ideas.
- It is necessary to study adapted, expanded, and redesigned pedagogical ideas and actions, which become relevant in a particular environment and a specific period.
- It is necessary to consider pedagogical innovations in a new situation, in changed conditions, when they guarantee positive ideas.

Analysis of methodological approaches to the study of innovative forms of education allows us to highlight the following provisions:

- In scientific research, as the main qualitative characteristics of the innovative educational process, most authors emphasize activity, search, creativity. Most authors agree that innovative activities in the educational sphere affect the nature of the interaction between the teacher and the students. This character is distinguished by a democratic teaching style, encouraging a proactive position, an orientation toward joint, partner assistance, and various forms of intergroup interaction [25].
- On this basis, most authors see pedagogical innovations (new forms and methods of teaching), which are associated with new pedagogical technologies as the main form of implementing innovative activities in education. However, this emphasizes the importance of transforming the organizational aspect of higher education, introducing new forms of management of educational activities of universities, and the integration of university science and education [27].
- In the course of the development of innovative activity in education, the nature of the educational process's management inevitably changes. In particular, the simple assimilation of knowledge, routine memorization develops into searching mental activity, where research and discussion forms are brought to the fore [35]. In this process, the character of the trainees' motivational and semantic knowledge is enhanced; the sphere of manifestation of the individual's creativity expands.

As understood by many authors, educational innovations are closely interconnected with changes in the mechanisms for assessing the knowledge, skills, and abilities of students. It is manifested in the departure from the overwhelming role of assessment, fixed mainly by the method of conformity to a given pattern, in the development of self-control [4, 41].

In the approaches discussed above, there is no consensus regarding the semantic content of innovations in education, their internal conditioning [11, 42]. Some authors borrow the concept of innovation, especially without going into its conceptual meaning and the essence of the social mechanism of their action in education [34]. Simultaneously, innovations are interpreted as an analog of the concepts of "innovation" and "innovation," which automatically transfers them to the educational sphere's phenomena – mainly in that part of it that describes the pedagogical process itself.

On the contrary, other authors try to initially determine in relation to the meaning of the used concept of innovation and analyze its place and role in the transformation of the educational process as a means of changing it [27]. Another group of authors, faced with the theoretical limitations of the possibilities of the first two approaches, are looking for ways to

conceptualize innovation in the educational sphere as a self-development way. It forces them to penetrate more deeply into the essence of the very phenomenon of innovation in education. However, this part of the research is quite small and, at the same time, allows you to optimally combine the possibilities of innovation as a special sphere of theoretical knowledge with the specifics of the organization of the education sector in general and the educational process in particular [29, 39]. It would be correct to talk about educational and pedagogical innovations, but about innovations in pedagogy, pedagogical technologies, education, and training.

6 Conclusion

The proposed approach to innovation in higher education is based on their main characteristic – a higher level of organization of the educational process, new consumer qualities of the object of educational innovation in comparison with the previous analog. Therefore, in relation to higher education, where innovative educational forms are any university changes [40], leading to improvements in the educational, organizational, financial, scientific, and other areas of its activities, systemically interconnected and interdependent [1].

As the main goal of innovation in higher education, we see such changes in the educational system that lead to improvements in certain characteristics or to the removal of an unsolved educational problem. In addition to achieving the main goal, educational innovations are designed to solve problems:

- To improve the efficiency of higher education institutions;
- To bring the results of the educational activities of the university under the educational needs;
- To improve the quality of educational services and increase their availability;
- To develop the trainee's personality and adapt knowledge, skills, and abilities to the new realities of life.

The goals and objectives we have identified for innovation in higher education allow us to determine the number of functions of innovation that they perform in the university and society's development as a whole. These functions include the following:

- Increasing the scientific character of educational activities, taking into account the growing intellectualization and informatization of society;
- Expanding the range and improving the quality of educational services and products;
- Accelerating the satisfaction of the educational needs of individuals and society as a whole;
- Activation of the use of new teaching technologies, development of new educational services with less labor, financial resources, time;
- Bringing the structure of the reproduction of highly qualified personnel into conformity with the structure of changing needs in the labor market.

The end result of the implementation of innovations in higher education is qualitative changes in the results of the activities of the subjects of the educational process (for example, the development of creative, communicative abilities of students, the elimination of gaps between the requirements of the labor market and the knowledge, skills, and abilities transmitted during university training, etc.)

The above gives grounds to single out the elements of innovation in higher education as a process objectively conditioned by profound changes in its course's socio-economic environment. We include the following among such elements:

- Forecasting innovative activities in higher education, which includes the activities of the subjects of the educational process (teachers) are to select effective educational innovations, determine the potential demand for innovative educational services, form their market, design the organizational structure of a higher educational institution [37];
- Innovative design as the selection of the most promising innovative objects in higher education, preparation of an investment proposal, development of business plans;
- Innovative investment in higher education. It implies the definition of goals and sources of investment in educational innovations;
- Innovation management in higher education, an important element of which we see the stimulation of innovation in universities [41];
- Pedagogical technologies – the formation of an educational and methodological complex containing pedagogical innovations;
- Development of new teaching technologies, including computer technologies, the introduction of world quality standards in education [42];
- Monitoring and analysis of the pedagogical results of the implementation of educational innovations, etc.

There are two directions for developing the management of innovative activity in the higher education system should be distinguished. The first direction is the activation of state regulation of innovative activity at the regional, municipal, and interstate levels. The second direction is to manage the university's development and implementation of innovative projects and programs.

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