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**INNOVATIVE EDUCATIONAL PRACTICES: CLASSIFICATION,
DESIGN, MODELING**

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Abstract

Innovative educational practices are local education phenomena created to solve actual problems in the field of education. Creators of practices implement an author's idea, which allows you to go beyond the boundaries of the normative field of educational activities. The multiplicity and variability of innovative educational practices, the lack of a description from the position of didactics make it difficult to use them as a resource for the development of education. The authors of this entry developed didactic models of various educational practices, carried out classification, determined and characterized the design stages. They analyzed and described the theory of solving inventive problems (TSIP), dramahermeneutics, the technology of education in the global information community (TEGIC), a tutor support of educational activity, action learning, panoramic learning, and others from the didactic positions. The classification of educational practices is based on the allocation of educational problems solved by a particular practice. The entry defines several stages of designing innovative educational practices: - Initiation of educational practice. - Planning and development of a practice. Definition of criteria for its intended effectiveness. - Implementation of a practice. It's institutionalization. - The stage of completion of a project. In developing models of educational practices, we proceeded from the fact that the didactic model is a descriptive model, including a description of target, value, content, procedural, effective components. The absence of a mathematical apparatus does not reduce its scientific significance.

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1. Introduction

The educational reality today is changing rapidly in accordance with the dynamics of socio-cultural transformations. According to the study, the source and driving force of such changes are often innovative educational practices. A practice is considered as the activity of the subject (collective subjects), aimed at the development and transformation of material and ideal objects of social experience; the act of creation of actual values.

Innovative educational practices were local educational phenomena aimed at solving urgent problems at the initial stage of their existence. The activity of the subject or group of subjects providing an exit for borders of a standardly certain field of educational activity is necessary for the emergence of such a practice. Creators of an innovative practice realize an author's idea which is initially presented in certain practices with a different degree of development. A specification, enrichment, didactic ensuring of an idea is carried out in a course of further realization of a practice. The focus of innovative educational practices is changing with the change of socio-cultural conditions: in the 1990s, innovative educational practices were aimed at the development of creative thinking, the construction of individual educational trajectories, the development of the emotional sphere of students, the development of communication. At the present time – the time of "management" of education – the focus is shifting towards the technological nature of the learning process, respectively, changing the nature of innovative practices that are now focused on the technologization of the learning process, the formation of students' skills to work with information. Mixed learning practices, mass open online courses (MOOC), various projects related to the implementation of e-school ideas are actively developing (Dreambox learning, 2019; Walberg & Paik, 2000). The development of cognitive-didactic theories has led to the need for understanding and creating practices of visualization of the studying material, drawing mental maps, infographics, frames, etc. Such studies are carried out everywhere, as the problems of education are largely global (Alber, 2015; Duran, Hikida, & Martinez, 2019; TeachThought, 2019; NSW Department of Education, 2014).

It should be noted that none of the innovative educational practices, which were actively developed in the 90s of the last century, has become institutionalized, not implemented in the country, although the problems solved by these practices remain relevant today: the problems of the development of students' thinking, communication skills, emotional and value sphere. Interest has shifted towards other educational practices.

Despite the fact that certain practices are not implemented in the institutional order, there are no normative prescribed instructions for their implementation across the country, they have had a significant impact on the development of education, reflected in the ideas of the Federal state educational standards (meta-subject, personal results), giving rise to new research (for example, anthropological essence of education). All this made it possible to conclude that innovative educational practices are the points of growth of educational systems, giving the opportunity to make a "breakthrough" in the development of education, to consider it from other positions, to include fragments of practices in the traditional pedagogical reality.

2. Problem Statement

The multiplicity of innovative educational practices, the variability of their description, the lack of the single holistic view on them as objects of study of pedagogical science, in particular, didactics, make it difficult to use them as a resource for the positive development of educational reality.

3. Research Questions

What didactic characteristics distinguish each innovative practice? How can you classify educational practices? What are the specifics of designing innovative practices? What elements are included in the model of educational practice?

4. Purpose of the Study

is to create a classification of innovative educational practices on the developed grounds, to consider the stages of design and modeling of variable educational practices.

5. Research Methods

The authors use comparative analysis of innovative educational practices, classification, and modelling in the framework of the system, subject and personal, activity approaches in this research.

6. Findings

Attempts to comprehend the existing diverse experience in terms of its applicability in their own activities lead to the understanding of the need to create a single "format" of its description and analysis. The abundance of problems, approaches, views on the learning process has generated today a lot of innovative practices, each of which on the one hand is aimed at solving specific urgent problems, and on the other — they are all designed to improve the educational process. The didactic analysis and generalization of this pedagogical activity will allow using of innovative potential of practices to the greatest extent.

During the research the analysis and description from didactic positions of innovative educational practices was carried out: TSIP-pedagogy (Guin, 2012), dramogermeneutics, education technology in the global information community (TEGIC) (Guzeev, 2010), tutor support of educational activities, volunteering as an open educational practice, action learning (action learning), panoramic training (Kazinik, 2018) and others (Gasparskiy & Bothan, 2017; Revans, 2016).

The analysis was based on the previously developed scheme of didactic analysis of innovative educational practices, which includes: identification of the problem, that the practice aims to solve; didactic basis of a practice; value, socio-cultural orientation of a practice; source and purpose of updating the components of the content of education, implemented in a practice; methods and forms of means of implementation of fundamental ideas; representation of learning results; novelty in the organization of educational activities, the nature of interaction between teachers and students; additional specific features of a practice.

The paper presents the classification of innovative educational practices based on the allocation of educational problems that are solved by a particular practice. This made it possible to identify two large groups of practices: focused on the problems of technologization of the learning process and the problems of humanitarization of education (with an emphasis on the development of humanity, ie, appeal to the person, and, accordingly, the development of the emotional side, personal values and meanings, the ability of a person to act in situations of uncertainty).

As an example, we present the most indicative educational practices in relation to the considered guidelines.

1. Innovative educational practices focused on the technologization of education:

1.1. Without the use of information and communication technologies (ICT): a technology of full assimilation of knowledge; modular learning.

1.2. Using ICT: blended learning; gamification of learning; web quests.

2. Innovative educational practices focused on the humanization of education:

2.1. Focused on the development of students' thinking: a practice of mental activity; the technology of education in the global information community (TOGIS) (Guzeev, 2010); development of critical thinking through reading and writing; cognitive-didactic practices: mental maps, frames, visualization practices; TSIP-pedagogy (Guin, 2012).

2.2. Development-oriented communication: communicative didactics (understanding learning); the practice of controlled dialogue; debates.

2.3. Focused on emotional development: drama hermeneutics; panoramic learning (Kazinik, 2018); the technology of “not-the lesson”.

2.4. Individualization practices: learning according to individual curricula; tutor support of learning; educational travel.

It is necessary to make two remarks concerning our classification of innovative educational practices:

1) A wide variety of innovative educational practices in the field of pedagogical reality leads to the complexity of their abstract description, the complexity of the allocation of common features that characterize all practices without exception. Even it is not always easy to reveal the existence of the obvious author's beginning which we allocated as a sign of practice for its demarcation from other didactic objects (for example, the mixed learning, volunteer practices). The consequence of this is the difficulty of unambiguous classification of practices, as some practices can be attributed to several selected groups.

2) The recognition of the orientation of a number of practices on humanitarian values, and, accordingly, the recognition of their educational and socializing orientation leads to the impossibility of their description to remain rigidly within the learning process, it is necessary to pedagogical reality, implemented in innovative educational practices, to approach more widely. Thus, the subject of consideration is expanded to education, including both learning and training (Ivanova, & Osmolovskaya, 2018).

The research of innovative educational practices necessitated the study of their design process. We considered the procedure for creating a new educational practice from the point of view of project

management, while the algorithm of the design process, its basic and mandatory elements reflect the specifics of educational activities.

We identify several stages of designing innovative educational practices.

1. The project initiation phase, which includes:

- Analysis and fixation of the problem that educational practice is designed to solve, identifying the type of problem: whether it is focused on strengthening the technologization of education, or on the humanization of education.

- A concept of practice reflecting its basic orientation. Designing a new educational practice, a teacher necessarily identifies important theoretical positions for him, didactic approaches that will be the basis of a practice, which will build a coherent system of educational activities. This may change a place, a role, functions of knowledge, skills, and actions of students depending on the basic orientation of a practice.

- The goal setting is a description of the planned practice as an ideal representation of a result of innovative activities in the field of education, its characteristics, as well as stages of achieving this goal, taking into account necessary resources. Creating a perfect idea of a practice, its creator focuses on current trends. So, currently these include: the organization of the energetic activities of students, including with the use of modern tools and materials (in various quantum, inventorium, science and technology parks, etc.); the use of design and research activities, elements of gamification; organization of an educational process in the information and educational environment using its rich educational resources.

- A conception of results of a practice includes, among other things, the directions of dissemination of innovations, that is, vertical or horizontal implementation of possible innovations. Depending on this, you may see the scale and depth of potential changes.

- Creating of the project team is a development of a common vision of the future practice, its goals, problems to be solved, ways to create a practice, definition of cooperation procedures, search for like-minded people willing to develop this practice. Teachers tend to do this if, firstly, they understand goals, objectives, advantages of innovations; secondly, they receive (at least, at the initial stage) ready-made tools that provide the entire didactic cycle from setting goals and objectives to monitoring and evaluation of results. Thus, there is a potential opportunity to go beyond local practices and institutionalize them.

2. The project planning and development phase is based on a set of planning principles. To create innovative practices in the field of education, the most important are the following:

- Single-mindedness is a priority of the main goal of the project, the creation of a set of subordinate sub-goals, consistency of short-term and long-term goals and objectives. General ideas about a new educational practice should be didactically concretized with the identification of the main components of the learning process. To do this, a creator of a practice answers the questions: whether the new content of education is required, or it is planned to work with the traditional; what forms and methods will be preferred; whether it is necessary to develop specific technologies, etc.

- Consistency is a systematic approach to the analysis of external and internal factors affecting a projected practice, a development of its integral structure. This principle aims at the pedagogical

arrangement of teachers, students, managers. It is very important to see the "pain points" of traditional education, which will be most affected by innovative practices in order to offer specific mechanisms for working with them during its design. This may include issues of scientific and methodological support for teachers, control and measuring materials, embedding new practices in the existing system.

- The principle of flexibility and adaptability aims the creators of innovative practices to take into account possible changes. When planning practice it should focus not only on the problem to be solved and the desired result, but also make provision for the possibility of its rapid change without loss of quality. On the basis of the previously implemented goal-setting, a creator choice of the most favorable alternatives that can lead to the result with the maximum speed and minimum costs. A creator chooses actions, their sequence to solve the problem within the framework of the goal (Rybalkina, 2017).

It is important to develop criteria for its intended effectiveness at the phase of planning and development of innovative educational practices. They include necessarily, firstly, the criteria characterizing the success of solving the problem for which the practice was created, and, secondly, the solution of traditional didactic tasks related to the development of the content of education by students.

3. The phase of implementation (fulfilment) of the project involves the implementation of consistent actions aimed at obtaining an intermediate or final result, to achieve the goal, the implementation of a practice model.

It is required special attention at this phase to maintain consistency between intermediate results and the main objective. In the existing conditions of constant changes of subjects of a practice (teachers, students, parents), requirements to the education system, ideas about forms, methods, means, and results of training and education at its different levels there is a problem of the plurality of intermediate results of designing innovative practices. As mentioned earlier, many of the existing modern innovative educational practices "manifest" immediately at the stage of implementation of the author's ideas in pedagogical reality, developing and settling directly in the course of activities. "Micro-steps" on the way to achieving the main goal, constant clarification and specification of sub-goals in accordance with achieved intermediate results are the features of the stage of implementation of such educational projects.

4. The project completion phase. At this phase, the head of a practice summarises up results, analyzes errors, prepares documents reflecting the progress and results of work. In the education system, the completion of the designing of innovative educational practices is possible if it was a research project. An author of the project, having developed and implemented an innovation, can either look for the prospects of using results and creating new practices, or leave it as a potential opportunity for activities of other teachers. At the same time, a successful, popular educational practice can be institutionalized.

It is important to emphasize that not every practice is institutionalized, fully recognized by the pedagogical community, becomes an integral part of the educational system. If this does not happen, a practice continues to exist locally, as long as there is a community that implements its ideas, and then becomes less popular and, eventually, "leaves" the pedagogical reality, remaining a fragment of the history of education.

Solving the problems of modelling innovative educational practices, we proceeded from the ideas of Kraevskiy (2003), who showed that didactic research begins with an empirical study of pedagogical reality, continues the study of the essence of the studied objects and in the field of the study of things ends

with the construction of a theoretical model. This model is further correlated with the pedagogical reality and transformed into a, which gives a teacher guideline for the construction of the learning process. On the basis of this normative model, which passed an experimental test, a teacher designs and implements a new project of an innovative educational practice.

Note that there can be a lot of models of one didactic object. It depends on a concept, initial didactic representations in which a model is developed. Didactic objects are complex, multidimensional objects. By highlighting different elements as key parts of a model, we can get different models.

In addition, in didactics, a model can act as a project of learning, not yet implemented, but only constructed, and as a result of idealization of pedagogical practice, abstraction from their insignificant elements. We took into account that a didactic model, by its nature, is a descriptive model, which is concretized by a structural form, including a description of goal-value, meaningful, procedural, effective components. The absence of mathematical apparatus (which is typical for descriptive didactic models), however, does not reduce its scientific value. It was taken into account that in didactics the model can act as a project of training, not yet implemented, but only constructed, and as a result of idealization of pedagogical practice, abstraction from its insignificant elements.

In the modeling of educational practices a creator determines a problem solved by practice, a purpose and values of a practice, specifics of the content of education, methods of implementation of a practice, an idea of results, a nature of the interaction of participants in the educational process. This highlights didactic specifics of practices.

The research defines the requirements to the didactic models of innovative educational practices: the adequacy of the model, the accuracy of the simulation, the universality of the model, appropriate efficiency. Developing a didactic model, we described the learning process, abstracting from the specific practice, but keeping its essential properties.

Considering the effectiveness of innovative educational practices, we have established the importance of changes in both substantive and procedural characteristics of a practice. The content of educational practice includes new scientific fields, and new subject and meta-subjective methods of activity, new types of creative experience are being updated, new general cultural and professional activities are being developed, personal results of education are expanded. Changing the content of education entails a change in the nature of educational activities.

Updating of educational activity is expressed in the fact that students solve new educational tasks, get new products, qualitative and quantitative results, implement new ways of thinking, new guidelines, and patterns of performance of educational tasks. And a teacher uses, respectively, new ways to assess their achievements. When designing a real innovative practice, it is important to consider the content and technology of teacher's training for the implementation of this educational practice. The readiness of teachers to an innovation, as shown by the analysis of numerous innovative practices, involves adequate acceptance of the value and meaning of this activity, its program-target settings for each stage of the ontogenesis of the student's personality in the school period of its socialization, the assimilation of social and project technologies of its implementation, criteria and methodological tools for the design of situations and events of a school life of students, collective interaction with students (Serikov, 2018).

7. Conclusion

The study allowed to comprehensively consider the phenomenon of innovative educational practices, to develop their classification, which provides guidance in the design of new educational practices; to present models of existing practices and to raise the problem of developing a universal model of educational practices that are appropriate to create in the current socio-cultural conditions, i.e. those practices that do not yet exist. These models will have a predictive property, i.e. they will show in what direction to work to improve the educational process, the methods of activity of teachers and students.

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