

## THEORETICAL FOUNDATIONS OF DESIGNING THE PEDAGOGICAL PROCESS AS A SPECIAL TYPE OF GROUP ACTIVITY

### *FUNDAMENTOS TEÓRICOS DA CONCEPÇÃO DO PROCESSO PEDAGÓGICO COMO UM TIPO ESPECIAL DE ACTIVIDADE DE GRUPO*

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#### **ABSTRACT**

In the article, categories are considered, which are used to designate project educational activities in the conditions of an educational institution. The essence, defining characteristics of this type of training are revealed. The goal, principles, tasks and functions of the implementation of educational design technology, requirements for the organization of educational design are established. It was revealed that nowadays work on an educational project causes changes in the student's personality - it contributes to his development during the independent implementation of the project. Definitions of the concepts "educational project technology" and "educational project" are proposed. It is argued that project activity is a specific type of activity aimed at creating significantly new ideas, products that are the result of creative search efforts of an individual or a team and have personal and social significance. The project method is a learning system in which students acquire knowledge and skills in the process of planning and executing projects.

**Keywords:** Design. Development. Students. Professional and pedagogical training.

## RESUMO

No artigo, são consideradas as categorias que são utilizadas para designar as atividades educativas do projeto nas condições de uma instituição de ensino. A essência, as características definidoras deste tipo de formação são reveladas. São estabelecidos o objetivo, os princípios, as tarefas e as funções da implementação da tecnologia de design educacional, os requisitos para a organização do design educacional. Foi revelado que, atualmente, o trabalho num projeto educativo provoca mudanças na personalidade do aluno - contribui para o seu desenvolvimento durante a implementação independente do projeto. São propostas definições dos conceitos "tecnologia de projeto educativo" e "projeto educativo". Defende-se que a atividade de projeto é um tipo específico de atividade que visa criar ideias significativamente novas, produtos que são o resultado de esforços de pesquisa criativa de um indivíduo ou de uma equipa e que têm significado pessoal e social. O método de projeto é um sistema de aprendizagem em que os alunos adquirem conhecimentos e competências no processo de planeamento e execução de projectos.

**Palavras-chave:** Design. Desenvolvimento. Estudantes. Formação profissional e pedagógica.

## **Introduction**

“To achieve a new quality of general and vocational education, it is necessary to provide information on education and teaching methods, the active use of open education technologies; deepening integration and interdisciplinary programs, combining them with high technologies”.

The concept of "technology" came to us along with the development of computer technology and the introduction of new computer technologies. A special direction has appeared in science - pedagogical technology. This trend originated in the 60s of XX in the USA, England and has now spread to almost all countries of the world.

Currently, there are many pedagogical technologies that differ in goals, objectives, structure, accelerated learning methodology, group learning, educational games, distance learning, etc. Many of them are used not only in the educational process, but also in other areas. There is still a long way to go before the development of a universal teaching technology, based on which each teacher could form an ideal personality that meets all the requirements.

The difference between pedagogical technologies from any others is that they contribute to more effective learning by increasing the interest and motivation

of students in it. The leading link in any technology is a teaching tool, which allows us to conclude that learning technologies are formed at the same levels. In accordance with the classification of teaching aids in 3 levels (training session, subject, the whole learning process), learning technologies can also be divided into 3 levels:

- technology of the lesson;
- subject technology;
- technology of the learning process.

Of the classes held in educational institutions, technological ones fully include:

- classes or elements of classes to control the assimilation of knowledge using various technical means of control, allowing you to immediately assess the quality of knowledge;
- laboratory and practical work carried out by students independently using developments.

In the system of general vocational education, "technology" forms a system of technological knowledge and skills among students, which lays the foundations for successful professional activity. It is extremely important that "technology" can become the pinnacle of the educational process if you correctly understand the essence of education and the technological effectiveness of the discipline. It crowns education not only in the sense that it accumulates knowledge of all disciplines, and turns theoretical knowledge into activity, into concrete action, which they embody in the created objects of the surrounding world.

Thus, the modern meaning of the terms "pedagogical technology", "teaching technology" is revealed with an emphasis on the leading link of "technology" - the means of teaching. Currently, pedagogical technology is understood as a consistent, interconnected system of teacher's actions aimed at solving pedagogical problems, or the planned and consistent implementation in practice of a pre-designed pedagogical process.

The reasons for many pedagogical failures and miscalculations are rooted in the insufficient general cultural and theoretical and practical pedagogical literacy of teachers, the lack of genuine professionalism in many of them. Therefore, the purpose of the article is to determine the modern understanding and use of the category "pedagogical technology" in higher education institutions.

The modern paradigm of higher education provides for the creation of a new educational environment, which in the conditions of informatization of education should focus on the development of professional qualities of the future specialist. It is difficult to overestimate the role of project activity, the project method in solving these tasks, especially in the context of higher pedagogical education. Interest in design always appears in periods of unstable, innovative development. Today, cultural realities, stereotypes of life, social, political and economic institutions are once again being radically transformed, and design turns out to be a force capable of solving many dead-end problems of domestic education.

Therefore, the purpose of this article is to study the features of the use of design technology in the system of professional and pedagogical training of students of a creative higher educational institution.

## Literature review

Today, project technology has found its consideration in scientific works: (BOGOMOLOV, 2007), (PIDHURSKA, 2019), (DUMONT A., BERTHIAUME D., 2016), (ZHOC, K.C.H., 2020).

The analysis of the latest studies on the specified problem makes it possible to claim that they lack consensus in defining the basic concepts of pedagogical design. After all, the use of the concept of "design" in the educational sphere, its adaptation to a new environment, transformation into the concept of "pedagogical design" are connected with the solution of a number of methodological problems, since at the same time the terminological space of pedagogy as a science is expanded, ideas about some traditional categories, their interrelationship is

considered. But despite intensive searches of scientists with the aim of creating a unified theory, the issues of the terminology of the issue under consideration and its content have not yet been studied deeply enough.

Therefore, one of the most important tasks of modern pedagogical science is to ensure the clarity and certainty of the terminological apparatus, which also applies to the problem of pedagogical design.

In the article, the following research methods were used to solve the set tasks: theoretical (study and analysis of scientific and pedagogical, psychological and pedagogical, reference, specialized literature, regulatory documentation on the topic of research, additional professional advanced training programs; analysis, comparison, classification of the information received and generalization); empirical (pedagogical experiment, observation, questionnaire survey, survey, conversation, testing); mathematical (statistical data processing).

## Materials

In the process of performing this work, the following research methods were used: analysis of philosophical, psychological, methodological literature and works on the problem of distance learning. One of the decisive conditions for the successful course of the pedagogical process is its design, which includes analysis, diagnosis, determination of the forecast and development of the project of activity. The design technology of the pedagogical process can be represented as the unity of the technology of content design (projectively meaningful), design of material and materialized means (projective-material) and design of activities (projective-operational).

They are distinguished by the consistently carried out by the teacher analytical, ending with the diagnosis, prognostic, projective, creative and mental activities. Analysis, forecast and project are an indissoluble triad in solving any pedagogical problem, regardless of its subject-matter content and time constraints. The productivity of solving problems is equally determined by the quality of the

design technology, regardless of whether the project as its result was pre-recorded on paper in the format of a plan (outline plan) or not. The design technology of the pedagogical process cannot be reduced to thinking only of the teacher's actions, the content and possibilities of using pedagogical tools (BOGOMOLOV, 2007).

Then the stage pedagogical task connected with a specific stage of pedagogical activity in the educational or upbringing sphere should be comprehended, reflecting a certain stage in the formation of the personality. Finally, in each microelement of the pedagogical process, constantly emerging situational pedagogical tasks must be comprehended. Awareness of the pedagogical task is an indispensable condition for its productive solution. If the pedagogical task is not realized, then it is not solved as such. Novice teachers often omit the stage of comprehending and formulating a pedagogical task due to inexperience. Awareness of the pedagogical task predetermines the analysis of its initial data and diagnosis. Analysis of the initial data should be aimed at clarifying the state of its main components: educators, pupils and the nature of the relationship between them; content of education, cash and conditions in which the pedagogical process is carried out.

All this constitutes the basis for the formulation of a pedagogical diagnosis, i.e. such a practical action, which is based on verified scientific evidence. Diagnosis in practical pedagogy is an assessment of the general state of the pedagogical process or its individual components at one time or another of its functioning on the basis of a comprehensive holistic examination.

Thematic planning of educational material. In traditional didactics, it is customary to distinguish between 2 stages in preparing a teacher for a lesson - preliminary and immediate. The result of the first is a thematic plan, which is a scientifically grounded distribution in time of the content of educational material on the subject. When specific dates for the lessons are put down in the thematic plan, it becomes calendar-thematic.

In order to give a detailed long-term plan for studying the course as a whole and related issues, the teacher performs the following actions: draws up a calendar

plan for studying the material for a long time (six months, a year); establishes interdisciplinary connections throughout the course; distributes repetition material that helps systematize student knowledge; correlates the study of the course material with extracurricular educational work in the subject. Preparation of a detailed long-term plan for studying the material of each topic and related issues includes the following actions of the teacher: planning a system of questions on the topic; selection of a system of tasks and exercises in a new way and a related section; planning a system of independent work and homework on the topic (PIDHURSKA, 2019).

The lesson planning stage itself includes three interrelated stages: the definition of the lesson goals, the specific development of the didactic apparatus and the establishment of the lesson structure with the study of the educational situation.

- Stage I. When determining the goals of the lesson, it is necessary to provide for the unity of educational, developmental and educational goals aimed at assimilating knowledge, developing skills and abilities, developing the experience of creative activity and the formation of personal relationships.

- Stage II. Planning a lesson in accordance with general and specific goals, content is selected, forms and methods of work are selected, the use of the necessary means is thought out, and exercises of a creative nature are outlined.

- Stage II. The structure of the lesson is being redefined and educational situations are being developed. It is important that the teacher thinks over his actions at the stage of direct transfer of information (BOGOMOLOV, 2007).

The result of the preparatory work for the lesson is its work or lesson plan. Its form and volume are not strictly regulated, but depending on the experience of the teacher and the specifics of the topic, the short plan can develop into a outline plan. A detailed plan testifies to the thoughtfulness of all the details of the upcoming lesson.

The lesson plan, regardless of its design, should include:

- date of the event, number according to the thematic plan, class;
- topic, goals and objectives of the lesson;

- the structure of the lesson with an indication of the sequence of its stages and the approximate distribution of time for these stages;
- content of educational material;
- methods and techniques of work of teachers and students in each learning situation;
- educational equipment, teaching and visual aids, the place of their use in the lesson;
- samples of problem solving.

The logical result of the technology of constructing the educational process is the materialization of the project of pedagogical activity in the form of a plan, outline plan or outline, depending on the teacher's experience. It is important to note that when drawing up plans for organizing educational and cognitive activities, the teacher has the opportunity to refer to the available recommendations, and when planning educational work, taking into account its specificity and fundamental difference from teaching, many, including experienced teachers, experience great difficulties. Planning should be based on a scientifically grounded forecast and project of the forthcoming coordinated activity of teachers and pupils, their interaction and strictly meet the educational tasks facing the team (ZHOC, K.C.H., 2020). The tasks of teaching and upbringing are the main initial data for drawing up specific plans for the life of the teaching and educational team.

Individual processes in modern education are associated with the search for ways to transform traditional education into productive, based on the organization of active creative, research activities of students to create a specific product, a result that has direct practical significance for production and for the lives of people around. The most effective technology for productive student learning is instructional design technology.

Typical for this concept of program learning (from the Greek. Pragma - deed, action) are methods that provide learners' discoveries, focused on scientific research as a model for building a learning strategy (BOGOMOLOV, 2007). The value of the project is determined by its educational, developmental and upbringing



potential: the ability to include students oriented towards scientific research as a model for building a teaching strategy.

Scientifically grounded planning assumes a thoughtful correlation of the plans of individual teaching and educational groups with the general school plan. The content of plans for educational work, naturally, depends on the state of the educational and material base of the school, the possibilities of cooperation with other educational, cultural and educational, sports and health institutions. A number of essential requirements are imposed on the plans of educational work as documents guiding the activities of teachers. Summarizing the available approaches, the totality of these requirements can be represented in the following form:

- purposefulness and concreteness of educational tasks;
- reasonable detail and concreteness of the plan, its compactness;
- a variety of content, forms and methods, the optimal combination of education and organization of children's activities;
- continuity, systematicity and consistency;
- combination of perspective and relevance of the planned types of work;
- unity of pedagogical leadership and activity of pupils;
- reality, taking into account the age and individual characteristics of students, their level of preparedness and living conditions;
- linking classroom work with work outside of school;
- consistency of the plan with other plans of the school and children's community organizations, flexibility and variability of planning.

The teacher must be proficient in the technologies of design and scientific research. Research is aimed at solving any problem in the work of the pedagogical system, in the educational process, the interaction of teachers and pupils, etc. Contradictions can exist between the components of the pedagogical system, the results and the order of society (citizens), between the interaction of the school and the environment, the expenditures of the forces of the subjects of the pedagogical

process and the results, etc. The design technology of pedagogical research can be represented by the following sequence of actions:

1. We analyze the pedagogical system and its functioning, identify problems;
2. Determine the research topic, which outlines the scope of research work;
3. We define the object of research - the area where there is a problem, a contradiction, where we will look for new knowledge;
4. We define the subject of research - an element in the pedagogical process, the study of which gives us new knowledge;
5. Determine the purpose of the research - the knowledge that we must receive in the course of research;
6. We form tasks - those paths or steps that we go through in order to achieve the goal of the study;
7. We form a hypothesis (the truth, which has not yet been proven, but is probable). A hypothesis is the starting point of a study that predicts the relationship between an object and a subject of study, patterns that will be identified and substantiated in the course of the study.
8. We select the methods of scientific research (observation, conversation, questioning, testing, theoretical analysis of sources, study and generalization of pedagogical experience, comparative-historical method, method of theoretical modeling, pedagogical experiment, etc.)
9. Determination of the direction and stage of research work, terms.
10. Determine the research participants, if it is a team or a group of teachers (DUMONT A., BERTHIAUME D., 2016).

Thus, the project as a system is a subsystem of the model, and vice versa, the design itself can consist of smaller models. Design involves the creation of private models, modeling, in turn, consists of a set of elements, including design theory. Any design begins with clarifying the structure of the educational paradigm, its content,

i.e. methodological foundations. In this sense, the educational paradigm is a fundamental model for any scientific activity, including design theory.

One of the decisive conditions for the successful course of the pedagogical process is its design. The design activity of the teacher, at the preliminary stage of preparation for the lesson, ending with the drawing up of a thematic plan, can be represented as a specific technology. The design technology of the pedagogical process cannot be reduced to thinking only of the teacher's actions, the content and possibilities of using pedagogical tools. Design is aimed at creating models of planned processes and phenomena. The teacher must be proficient in the technologies of design and scientific research. Designing the pedagogical process as a technology can be used by a teacher in any kind of creative activity.

## Conclusions

Project-based learning, the project method, is a useful alternative to the system, it should be used as a complement to the others

types of direct or indirect learning, as a means of accelerated growth both personally and academically. When applying non-traditional forms of educational activity in the process of psychological and pedagogical training of students should have a leading role to the teacher, since the pedagogical process, having objective internal laws, at the same time is a product of conscious constructive activity of the teacher and his creative interaction with students. The pedagogical process requires the use of those forms educational activities, which will maximally ensure the needs of students in self-realization, will promote professional development necessary personal qualities. Application of non-traditional forms of activity based on the principles of consciousness and activity, requires a high level of independence of the students themselves, which, in turn, requires restructuring of the pedagogical management of the learning process. Psychological-pedagogical training should contribute to students' opportunities and encourage them to meet objective needs, both in identification with a group of peers, as well as self-realization and

professional reflection. The formation of professional pedagogical skills is carried out using intensive learning technologies and educational design tools.

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