



# Modeling, Pedagogical Modeling and The Concept of Pedagogical Modeling of The Preparation of Future Teachers

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## ABSTRACT

The article illuminates the pedagogical interpretation of the problem of modeling and modeling. Definitions were studied given by teachers by teachers to pedagogical modeling, its components, types and methods of principles, a comparative analysis of the concepts of design and modeling was carried out. Based on scientific research, a model for the implementation of pedagogical training of future teachers has been developed.

## Keywords:

Model, Modeling, Pedagogical Modeling, Design, Personality, Teacher, Education, Pedagogical Preparation, Self-Development.

## Introduction.

Modeling was used in the history of science in order to study the internal connection of the object of knowledge, properties, knowledge of the world. Although the term "model" was not used, in ancient philosophy, the modeling method was used when studying things and phenomena by creating an analogue of the object.

The concept of "model" is used in the sense of a copy, in which something is the same or reduced, enlarged, becomes a template for many productions.

In modern science, as a research method, it is used in the following cases: when data on the object of research are incomplete; When it becomes necessary to predict the future activities of the facility; when existing ideas are not enough to disclose the essence of the problem; When it becomes necessary to check the created idea in a real situation; When the object of the study is too small or too large; When testing the object of research is dangerous to the environment or requires

significant costs; When there is a need to interpret the created idea in a real situation.

In pedagogical studies, modeling also relies on the general requirements of this method. Modeling pedagogical processes is very widely used due to the fact that the participants in the process can avoid risks for their psychological, spiritual and physiological health. In addition, modeling in the pedagogical process is essential in the scientific organization of the teacher's activities. Therefore, in pedagogical activities and scientific research, it is effective when optimizing the pedagogical process, modernization, intensification, testing of various approaches.

So, pedagogical modeling is a method of expressing the characteristics of this pedagogical system in an object known as a pedagogical model. In order for a specific object to be a second object model, which was originally designed, it will be necessary to meet the following basic requirements: to represent as a holistic system; have common

characteristics with the source object; differ from the source object by certain parameters; replace the source object in the testing process; help collect new and more complete information about the source object as a result of the study; When organizing research or practical activity should serve as a conceptual basis. [1; 110].

### **Literature review.**

As a result of the study of N.A. Kozyriev and O.A. Kozyreva, the term "pedagogical modeling" is defined as follows: Pedagogical modeling is a type of activity in which the teacher successfully identifies, identifies, complements, systematizes, converts (changes), processes the desired model Pedagogical activity, which provides the ability to distinguish adaptive (flexible) or non-verified (verified) information on a specific component or their combination. Simulation allows the teacher to determine the optimal mode of operation, performing features such as learning, research, detail, systematization, classification, programming, education, adaptation, socialization, correction, self-education, self-consciousness within the principles, restrictions and opportunities established in achieving the goal, tasks based on pedagogical interaction and communication [2].

In pedagogical studies, the model reflects a system of elements that allows participants in the pedagogical process, their activities, pedagogical relations, processing tasks and conditions.

A.M. Semenova writes: "A well-built model has a very important feature: its study helps to collect new information about the source object" [3; 98-102].

### **Scientific novelty of the article.**

From the analysis of this definition, it can be concluded that the model of professional training of future teachers provides for the possibility of managing the pedagogical educational process, determining the optimal management methods based on specific goals and criteria, forecasting direct and indirect results of the methodology used, the

technology of the process of professional training of future teachers based on pedagogical principles .

In order for future teachers to use pedagogical modeling as the main method of research in the process of training, the researcher must adhere to the following rules that improve modeling efficiency: whether to check whether the model with the original is compatible; collect and clarify additional information about the model as a holistic system, educational pedagogical science; Focus on collecting additional information, such as the establishment of new relationships and relationships affecting the effectiveness of model activity, identifying pedagogical conditions and learning conditions.

### **Analysis and results.**

Structural and functional models are widely used in modeling pedagogical processes and activities. When drawing up such models, components, parts, elements, object systems are taken into account. Parts of the system express the subordination, logical and temporal sequence of solving individual problems associated with structural relationships.

In science, design is always parallelly and in connection with pedagogical modeling. In some sources, these two common concepts complement each other, they are called synonyms. The term "project" has several values, and they are all pedagogical terms.

First, the project is the initial approximate text of any document. Secondly, it is understood that the action that is organized on the basis of one program to implement a single-speaking project of the project is the amount of events, and the activities of specialists in such projects are considered a "form of research". Thirdly, it is used in the sense of creating (developing, planning, creating) some kind of system, object or model. Over the next decades, the design method has become one of the leading methods. The same method helps the students to solve complex tasks, the development of creative abilities and independent activities.

Any experienced teacher will find a number of similar aspects of modeling and

design. Project creation is based on the development, creation, study of some kind of system, model, situations. But, unlike modeling, with the aim of a deeper study of past experience, the design serves to simulate future processes and situations. As components of project activity, specific models or modules are indicated (for example, functional bonds connecting the elements of the educational system).

The project is part of the systematics of the model as a system, and vice versa, the design itself can find content from small model blocks. Thus, the terms simulation and design are closely connected. In this regard, if the design implies the creation of private models, the simulation includes a set of elements, including the design theory itself.

As for the role of modeling in the didactics (theory of education), the student will have little effect from explaining a new material without schemes, devices, markup formulas, in one word, models. Modeling in didactics is effectively used in the process of facilitating educational materials and techniques used in the educational process, planning pedagogical activities, management of educational and cognitive processes, forecasting, diagnostics. Any science at the training stages should be based on the model. Mathematics and physics cannot be represented without formulas and schemes, without devices denoting languages, without a model of the environment of a stranger to us, without the preparation of sections of the biology of another structure (composition).

The use of modeling is directly related to a deeper understanding of the essence of educational situations and processes, a serious study of the theoretical foundations of the study.

Consequently, modeling is a method for studying objects of knowledge in their models; To determine or improve the characteristics of certain existing objects, events and constructed objects.

The model is a natural or social being of a certain appearance, human culture, a product of ideological and theoretical education, analogue of the original (drawing, composition,

sign system). This is similar to originality, its properties and structure, it serves to store and expand knowledge (information) about its conversion or management. The model is a "representative", "substitute" in the knowledge and control of the original. Under certain conditions, the results of the preparation and study of the copy are transferred to the original. The model performs as a means of explanation, predictable, detection, the role of permanent knowledge.

It differs from the project in accordance with the purpose of creating and preparing the model. Models are commonly used to explore things and phenomena, to collect information (information) on the object, to study its internal structure, to change and control it in the future. The project is usually used in creating, systematizing things and planning educational and cognitive activity.

Another distinctive feature of the model, according to the above description, is that it reflects the properties of the object existing in real state. And the project describes the circumstances that are not yet created and which are planned to be created. The model is an analogue of a certain part of the object; When it is compiled, ambiguous data is not taken into account. It marked the main parts and descriptions. Life structure model. In the project, on the contrary, information on future things and situations in which the requirements are taken into account. The professional training model for future teachers, developed on the basis of our study consists of the following components: Personality; the science; society; Pedagogical preparation; education. We will consider in detail each of the components of the developed model. A person is a subject and object of pedagogical education and the educational process as a whole. That is, in the developed model, participants in the pedagogical educational process - students and teachers perform the main functions as a person.

From a traditional point of view, in pedagogy, personality is understood as the systemic social quality of the person, which, as the human consciousness develop, is increasingly enriched with a deeper content. In

scientific views, it is emphasized that the socialization of the person is manifested in the ability to be a participant in historical development, to belong to a specific social group, follow its values and beliefs, carry out various social functions, influence historical events, change society, nature and themselves. Society Requirements for Personality and Professional Training of Future Teachers determine the content and standards of pedagogical education. Ultimately, both frames prepared in the process of pedagogical education and the educational sphere in which they work should serve the future and development of this society.

Education is the process of preparing future teachers with theoretical, practical and methodological knowledge, which is carried out in pedagogical educational institutions. At the same time, continuous pedagogical education is organized in the process of improving the qualifications and independent work.

Pedagogical preparation includes the development of professional skills, professional competence and professional psychological training based on pedagogical education. The purpose of the model developed during our study is the upbringing of primary school teachers, ready for professional activities in pedagogical, psychological and methodological terms.

When modeling the process of professional training of future teachers, it is necessary to rely on a number of principles that ensure the effectiveness of this process:

1. Compliance of the content of pedagogical preparation with the requirements of the state and society. According to this principle, it is necessary to take into account the requirements and needs of the state and society when modeling the teacher training system. At the same time, these standard requirements also contribute to the development of the main criteria of the teacher's profession in the process of modeling.

2. Continuity, continuity and systematization of pedagogical education. This principle ensures the interrelation of continuous ("education for life") and the

systematic implementation of pedagogical education entities provided for and implemented in the model.

3. Compatibility of continuous pedagogical education with real reality. According to this principle, pedagogical education should be aimed at finding the content of knowledge, skills and skills necessary for the future society, as well as on the basis of real reality and life needs that meet modern, prepared personnel, which should be suitable for educating pedagogical activities.

4. Unity of the theory and practice in pedagogical preparation. Theoretical knowledge obtained in the process of pedagogical education should serve for practical activities. It is also required that the parallel implementation of education and practice helps to future teachers constantly complement the knowledge and skills they acquired.

5. The functions of the model are as follows:

1. Development of pedagogical training of students in accordance with the requirements of the Company;

2. Implementation of psychological preparation for pedagogical activities and pedagogical communication;

3. Armament of future teachers with knowledge, skills and skills associated with the methodology of non-complicated education;

4. Work on continuous self-improvement of pedagogical activities in a virtual educational environment and teach the scientific organization of activities.

## Conclusion.

The model of professional-pedagogical training of future teachers will have the following areas: implementation of pedagogical preparation; holding psychological training; implementation of methodological training; Development of self-development system in a virtual educational environment.

Modeling the process of professional training of future teachers makes it possible to effectively organize a system for providing the pedagogical process by qualified specialists.

On the one hand, if the modeling of the pedagogical process helps to form a clear idea of the components of the process, the implementation strategy and the final result in the organization and study of the pedagogical process, then on the other hand, it allows you to carry out an in-depth analysis, the processing of the process. Thirdly, this is one of the main methods for theoretical solution of pedagogical problems, which is of theoretical and practical nature.

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