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TEACHING FUTURE MATHEMATICS TEACHERS BASED ON A CONTEXTUAL APPROACH

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Abstract
Principles of teaching (didactic principles) are the basic (general, guiding) provisions that determine the content, organizational forms and methods of the educational process in accordance with its goals and laws. Such guidelines characterize the ways in which laws and regulations can be used in accordance with intended purposes. The principles of teaching, by their origin, are a theoretical generalization of pedagogical practice. They are objective in nature, arise from practical experience, and therefore are guidelines that regulate activities in the process of teaching people. The principles cover all aspects of the learning process. At the same time, they are subjective in nature, since they are reflected in the teacher's consciousness in different ways, with varying degrees of completeness and accuracy.

Keywords Mathematics teacher, contextual approach, teaching, educational system, evaluation methods.

INTRODUCTION

There are various methodological approaches to explaining the essence of learning. Of the foreign concepts, the most common ones that reveal the mechanisms of teaching are behavioristic and pragmatic theories. Behavioral theory has become widespread in pedagogical practice in the USA and many European countries. Its adherents consider all phenomena of mental life as a set of acts of behavior. They identify the psyche of man and animals, reducing all complex life activity to the formula "stimulus - response".

From their point of view, the learning process is the art of controlling stimuli in order to cause or prevent certain reactions, and the learning process is a set of reactions to stimuli and stimulating situations. The development of consciousness is identified with the formation of students' reactions, i.e. They view learning as the development of the ability to react in a certain way to certain situations, and not as the development of the ability to act or think. Thus, a person's conscious activity in the learning process is explained not by mental, but by physiological processes.

Conscious actions of students are replaced by purely reflexive ones. Behaviorists see the difference between humans and highly organized animals in the fact that they can be influenced by secondary, verbal stimuli, to which responses also occur. Unlike behaviorists, pragmatists reduce learning only to expanding the student's personal experience in order for him to adapt as best as possible to the existing social system. Education

can only contribute to the manifestation of the capabilities inherent in a person from birth. Therefore, his goal is to teach the child to live. And this means adapting to the environment, satisfying personal interests and needs without focusing on the social environment, based on subjectively understood benefits.

In accordance with these views, pragmatists argue that learning is a purely individual process. They do not consider it necessary to develop systematic knowledge, skills and abilities, and therefore deny the scientific basis of curricula and programs. Pragmatists belittle the importance of the teacher in the learning process, assigning him the role of an assistant and consultant. For them, the main mechanism and, accordingly, the method of acquiring knowledge, skills and abilities is "learning through doing," i.e. performing practical tasks and exercises. In addition to behaviorism and pragmatism, there are other theories of learning. Some of them reject both the physiological and psychological foundations of the educational process, reducing it only to the reactions occurring in the student's soul. They either do not explain the mechanism for acquiring knowledge, skills and abilities, or reduce it to intuition, insight, discretion, etc. Existentialism and neo-Thomism have this orientation, which belittle the role of learning and subordinate intellectual development to the education of feelings.

The explanation for this position comes from the assertion that only individual facts can be known, but without their awareness, without taking into account the interconnection of patterns. There are other approaches to explaining the learning mechanism. Currently, most scientists share the point of view that the theoretical and methodological basis of teaching is the materialistic theory of knowledge (epistemology), according to which the real world is objective and exists outside of human consciousness, it is knowable. Cognition is a reflection of reality in consciousness, active mental and emotional activity, the result of which is knowledge, generalizations in the form of theories, laws, scientific concepts. The dialectical path of cognition of truth, objective reality goes from living contemplation to abstract thinking and from there to practice.

In the process of living contemplation, i.e. through sensations, perception, active study of objective reality, certain ideas arise about certain phenomena and objects. These ideas provide the basis for generalizations.

Abstract thinking makes it possible to establish the general characteristics of cognizable phenomena, to assimilate concepts, judgments, conclusions, and to establish significant, necessary, stable connections between phenomena, i.e. derive certain laws and patterns. All these provisions of epistemology are directly related to educational knowledge. Teaching is always associated with cognition. The task of teaching is to ensure that the laws of nature, the development of society and human mental processes become the property of the consciousness of students. There are many similarities between cognition and learning. The student also learns about the world around him. Teaching, therefore, can be considered as a variety, a unique form of knowledge.

However, there are significant differences between cognition and learning:

• knowledge is a socio-historical category. Over many centuries, scientists have discovered many patterns in the development of nature, society and human thinking. This means that scientists learn new things in their original form, so they may be incomplete. In the learning process, students perceive the known as new, assimilate ideas, concepts, and facts already accumulated by science. They seem to rediscover known truths for themselves, study simplified material that is

didactically adapted to the age-related educational capabilities and characteristics of the students. In addition, educational cognition necessarily involves the direct or indirect influence of the teacher, and the scientist often does without interpersonal interaction;

• in the process of cognition, the path to discovery often represents a long period (sometimes centuries) of searches, experiments, scientific reflection, trial and error, and testing in practice. In the educational process, the path to assimilation of knowledge is shorter, it is significantly facilitated by the skill of the teacher;

• the process of cognition requires the perception of material or spiritual objects, while practice is the criterion of truth. It serves as a prerequisite for the discovery of patterns. The logic of the cognition process goes from living contemplation to comprehension and practice. In teaching, a teacher can change the links in the process of acquiring knowledge, alternate or combine them with practical skills.

Thus, there are both common features and differences between cognition and the learning process. The educational process develops according to its inherent internal logic on the basis of patterns occurring in the mental activity of students. However, recently, works have appeared in which teaching methodology is understood differently. VC. Dyachenko proves that learning and cognition are not only different, but also, in a certain sense, opposite processes. Cognition is a kind of reflection of objects and phenomena of the objectively existing world, their properties, features, essences.

Teaching is a joint activity between teacher and student, their real, primarily physical, communicative interaction through sounds and signs, using language. If this physical, material interaction does not exist, then learning cannot occur. Learning is the practical activity of people, it is an objective reality, and cognition is a reflection, a secondary phenomenon. Unlike cognition, which is a function of the brain, the internal mental properties of a person, learning takes place in a classroom, workshop, or factory. These processes are as opposite as real things and real phenomena are opposite to the concepts and ideas about them in people's heads. If the essence of learning and the essence of cognition coincided, then both learning and cognition would occur in consciousness.

But learning is a real, physical interaction between people teaching and being taught, and it does not happen in their minds. Therefore, the theory of knowledge, no matter how thoroughly and specifically it is presented in relation to teaching, cannot serve as a methodological, scientific and theoretical basis for teaching. It is necessary to analyze the interaction between student and teacher, carried out with the help of language, sounds and signs, that is, to consider learning not as a special case of cognition, but as a special case of communication. Therefore, the essence of learning is communication. This is the position of V.K. Dyachenko [9]. This approach is not widely accepted.

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