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THINKING AS THE BASIS FOR THE DISCOVERY OF NEW KNOWLEDGE

Summary. The article covers the problem of personality creative thinking development. The indisputable role of thinking in the discovery of new knowledge in the process of creating and solving problematic situations has been proved. The necessity to develop personality creative thinking in the context of contemporary social challenges has been substantiated.

Key words: *thinking, knowledge, discovery, problem situation, mental development.*

The main prospects for Ukraine's development are related to the use of the latest technologies and to people who are able not only to apply them, but also to produce them. At the beginning of the 21st century, humanity entered a new stage of its development: scientists and politicians, entrepreneurs and educators are increasingly talking about the onset of the information age, a knowledge society where not only certain knowledge is valuable, but the ability to produce new ideas, to introduce new technologies, where work becomes more intellectually capacious. The school as an institution must meet the modern requirements, meeting the state social demands. Therefore, the new education reform aims at the creative and independent development and knowledge application, the development of the ability to evaluate their activities.

The questions of creative thinking purposeful formation were considered in the works of R. Atakhanov, O. Vyakhireva, V. Gagai, V. Grigorieva, V. Ivanova, Z. Kalmykova, G. Kostyuk, S. Maksimenko, L. Maximov, N. Menchinskaya, V. Molyako, L. Skalich and others.

Since the very nature of creative thinking becomes understandable only on the basis of the general process laws, according to K. Abulkhanova-Slavska, first of all we take into consideration the concept of «thinking» [1, p. 18].

A considerable number of scientists (V. Davydov, G. Kostyuk, G. Lukov, S. Maksymenko, V. Palamarchuk, K. Platonov etc.) characterize thinking as an indirect and generalized reflection of objective reality in its regular, the most significant relationships. From the definition it becomes clear that the result of analytical and synthetic brain activity are concepts, ideas, judgments. Thus, an important feature that distinguishes thinking from other mental processes is productivity, that is, the focus on the discovery of new knowledge [3, p. 12, 25]. The modern researcher O. Shamis interprets thinking as an active process in the living brain, aimed at: 1) building in the brain an active hierarchical model of the environment necessary and sufficient for the environment perception and the active purposeful behavior management in an extreme environment; 2) implementation of the active environment perception process; 3) implementation of behavior management process in an extreme environment; 4) implementation of active learning process; 5) solving non-algorithmic (creative) problems [5, p. 4]. The interpretation given indicates the creative orientation of the thought process.

The definition of thinking, which is presented in the philosophical dictionary, also indicates the creative aspect of this phenomenon: in addition to the classic reflection of objective reality, thinking is directed to the creation of new ideas, predicting the result and arises and is realized through the formulation and solution of theoretical and practical problems [4, p. 39]. According to Z. Kalmykova, creative thinking arises when a person, trying to solve a problem on the basis of his formal-logical analysis with the direct use of the known methods, is convinced of the futility

of such efforts, which causes him to need new ones to solve the problem. Awareness of such a need indicates a problem situation [3, p. 13–21].

Therefore, creative thinking starts in a problematic situation, which means some difficulties in achieving the goals. In order to reveal the essence of this uncertainty, thinking is involved in the work, analyzing the problem situation and turning it into a conscious task, problem. Such a transformation means a preliminary breakdown of the given (condition) and the desired (question), which occurs in the verbal problem formulation, which allows at least a minimum to predict the future result. This kind of prediction is a concrete form of a consistent conflict resolution between the known and the sought. This contradiction has been revealed in the course of the discovery of both its members and the relations between them, and occurs through the analytical and synthetic brain activity (analysis as the selection of a certain object, synthesis as the disclosure of relationships, relations between objects) [2, p. 38–46].

As a result of a deep analysis of the specific subject task matter, a discovery is made that has not only the subject side (which opened its novelty), but also a psychological characteristic (adequate ways of thinking, emotional attitude to the case being performed, formation of certain concepts, judgments, development of motives, feelings, thought processes quality of analysis, synthesis, generalization; formation of new operating schemes, operations, actions, as higher level mental abilities) [2, p. 13, 52].

Therefore, problematic tasks encourage students to search for ways to solve these problems independently, to make guesses, purposeful attempts to confirm them, to reject the failed ones, to replace them with others, to a consistent argument. In this way, students learn to think independently. As the problem situation is transformed from its initial stage to its final resolution, the person transformation takes place as well as his mental development.

Literature:

1. Абульханова-Славская К. А. Мысль в действии (Психология мышления) / К. А. Славская. – М. : Политиздат, 1968. – 208 с.
2. Брушлинский А. В. Психология мышления и проблемное обучение /

А. В. Брушлинский. – М. : Знание, 1983. – 96 с.

3. Калмыкова З. И. Продуктивное мышление как основа обучаемости / З. И. Калмыкова. – М. : Педагогика, 1981. – 200 с.

4. Философский энциклопедический словарь / гл. редакция: Л. Ф. Ильичев, П. Н. Федосеев, С. М. Ковалев, В. Г. Панов. – М. : Сов. энциклопедия, 1983. – 840 с.

5. Шамис А. Л. Мышление: определения, типы, схемы процесса / А. Л. Шамис // Школьные технологии. – 2012. – № 2. – С. 3–14.