Individual’s (Student’s) Informational and Cognitive Activity

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Abstract: The article considers the timeliness of changing traditional model of the individual’s cognitive activity in the era of forming the informational society. The author introduces key components of the informational and cognitive activity system that is a contemporary model of the cognitive activity aiming to interrelate with a new informational reality.

Key words: Computerization · Informational environment · Informational space · Cognitive activity · Thinking · Informational activity · Engineering and research activity · Informational and cognitive activity

INTRODUCTION

Nowadays global computerization processes enter all spheres of life and cause the creation of quite different, informationally and technologically rich social and cultural environment. Close interrelation with this environment changes personal perception and the individual’s understanding of the realities of the changing world. At the same time it forms his informational space that is a combination of an individual’s generalized idea of objects, events and phenomena of the surrounding informational environment perceived by him in the process of his activity and reflected in his consciousness. (A.N. Leontiev [1], J. Welwood [2], J. Kelly [3], R. Sommer [4]).

Investigation and use of the environment opportunities stipulating the informative fullness of this space, its volume and boundaries require the individual’s readiness and ability to think critically, see problems, research them, find necessary information and individually develop variants of their solutions (G. Lindsey [5], D. Halpern [6], R. W. Paul [7]).

These specific personal features are developed most efficiently in the process of the individual’s (in our case, student’s) studying and performing of a special kind of the intellectual activity that is a contemporary model of the cognitive activity in the era of “informational civilization”.

We call this new model of the cognitive activity as informational and cognitive activity (ICA) and interpret it as a special kind of the individual’s intellectual activity. It integrates thinking and informational activity that is performed in the context of the project and research approach.

We emphasize that the ICA is fundamentally based on cognitive activity, taking into account the fact that the individual’s consciousness is formed; his personality is made up and developed in the cognition process. In the philosophical aspect consciousness means purposeful reflection of the external world, prior thoughtful design of actions and prediction of their results, the individual’s correct regulation and monitoring his interrelations with the reality.

Traditional model of the cognitive activity is changed by converting its structure due to:

- Extending the thinking sphere (and understanding it as the mental activity);
- Giving the informational activity (entering any kind of activity) an individual position;
- Changing the direction of the individual’s interrelation with the surrounding world that changes into active project and research investigation.

The core of the ICA system is thinking (mental activity). We interpret it as a process of the activity development of various forms and kinds of thinking,
the main individual’s tool to achieve a goal. Our argument about the activity development of thinking is, particularly, based on the point of view of Y.V. Gromyko. Generalizing opinions of many researches, he made the following conclusion: understanding thinking as an activity means that thinking can and must be constructed as an activity; it is possible to set goals, create tools, methodologies and technologies in thinking; it is necessary to constantly develop thinking norms, create its schematic, sign-oriented and symbolic languages and analyze and describe the use of knowledge about thinking (Y.V. Gromyko [8]).

Speaking about thinking as an activity, above all, we try to emphasize the importance of the individual gaining of the mental activity experience by the student. We think he must (being supported by the teacher and communicating and interrelating with other children):

- Experience those operations that help facts to join in ideas and notions, but not merely learn conclusions of someone’s mental operations;
- Master various techniques and methodologies of cognitive actions and construct their understanding on the tasks they aim to solve, above all and on this basis be able to choose the most efficient ones in each specific situation;
- Work out and develop personal meanings learning, first of all, ready thinking strategies and then constructing and modifying his own ones that spread inside the basic and tightly connected thinking processes: communication, thinking, actually mentality, understanding their reflections.

Informational activity has a key position in the ICA system. Its main goal is to meet the individual’s informational needs through searching, collecting, systematizing, analytic and synthetic processing and storing of the information, its reproduction, duplication and distribution. The informational need can be characterized as the need in information realized by the person and required to solve the set task. The individual’s developed ability to perform multi-aspect search and the most complete collection of the information sources (documents containing all necessary information) as well as the ability to provide information at the relevant moment and in the necessary form guarantee the efficiency of the individual’s researches and developments (i.e. perception and conversion of the reality) and as a whole increase the level of his life and activity (A. & H. Toffler [9]).

The core component of the ICA system is the project and research activity that organizes the process and structures the ICA. It is a special form of thinking, taking into account that the reality perception is the research, above all and its modification is projecting and modeling. We interpret projecting as “overthinking of those things that do not but must exist” and the research as “the regeneration of a fitness of things according to indirect features, signs of the general law in specific, occasional objects” (N.G. Alekseev, A.V. Leontovich, A.S. Obukhov, L.F. Fomina [10]). The intercomparison of the meanings of these notions helps to formulate the following: while projecting the things not yet existing are thought over and modeled and while researching the performed things are analyzed. It means that projecting and researching are two sides of a single process, the process of the individual’s perception and modifying of the surrounding world.

Thus, the introduced components of the ICA structure (thinking, informational and project and research activity) are the key ones of its system. The combination of their interrelations and intensification of their interactions and inter-transitions allows to change the traditional model of the cognitive activity turning it into informational and cognitive activity. It is focused on a more efficient interrelation of the individual with the developing informational reality in which process his subjective informational space is formed.

REFERENCES