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DEVELOPMENT OF SKILLS OF SELF-CONTROL OF LEARNING ACTIVITY IN UNIVERSITY STUDENTS

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Abstract

This scientific article examines the importance and need for specialists who are able not only to generate ideas and develop projects, but also to organize cost-effective production and release of competitive products. In a market economy with fierce competition, highly qualified personnel are required who are capable of creative work and the search for effective forms of organizing activities. The article focuses on the importance of self-control in the educational activities of students, as the basis for the formation of skills for checking and correcting their work. Various approaches to defining the essence of self-control consider it as a property of a person, an act of mental activity, a component of educational activity and a method of self-regulation of behaviour. The authors of the study consider self-control of students of a technical university in the context of the development of self-control skills and the formation of personality traits. The study shows that first-year students have a level of formation of self-control skills that meets the requirements of high school.

Keywords: Keywords: generation of ideas, self-control skills, formation of personality traits, learning activities, independence, personality formation.

Introduction

Today, more than ever, there is a great need for specialists who are able not only to generate ideas and translate them into specific projects and developments, but also to organize cost-effective production and release of competitive products based on high technologies.

A market economy with fierce competition requires highly qualified specialists capable of creative work, search and implementation of new, more efficient forms of organizing activities, continuously improving their professionalism. For the development of a person as a person, he needs the ability to transform the existing content to the level of specific actions, a high degree of adaptation of himself to the conditions of reality and the transformation of the conditions of reality to himself. Such a socio-cultural situation poses challenges for the education system that can only be resolved by multi-subject, equi-system thinking.

LITERATURE REVIEW

Decision-making is the basis of the activity of every person. An engineer constantly makes decisions in the creation and operation of equipment. Every mistake in making a decision has its price. Therefore, one of the tasks of public education is the formation of knowledge and practical skills that minimize the errors of specialists when they make decisions [1].

The educational activity of students as an important component of the professional training process is the basis for the formation of the ability to check and correct their own activities,

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which are further extrapolated to professional activities in general. Experience shows that a systematic analysis by students of their educational activities allows them to develop the ability to self-control, creates the prerequisites for the development of independence and creativity among students.

The psychological and pedagogical literature reflects a variety of approaches to determining the essence of self-control. Some authors consider self-control as a property of a person in the broad sense of the word, others consider self-control an act of a person's mental activity (a form of manifestation and development of self-consciousness, thinking, a quality of the mind, a sign of its criticality, discipline). In many works, self-control is considered as a component of the student's learning activity, which consists in analysing and regulating its progress and results, or as the ability (skill, habit) to control one's activity and correct the mistakes noticed. Finally, there are authors who consider self-control to be a method (means, condition) of self-regulation of behaviour, activity, and activation of learning. In some works, self-control is defined not by one, but by several signs, and all these definitions are not erroneous.

Self-control is a complex and multifaceted phenomenon. Self-control is a quality of a person associated with the manifestation of her activity and independence, a structural element of the process of self-education, the functions of which include managing a person by their activities and practical actions for self-assessment, correction and improvement of the work performed by him, mastering the relevant skills and abilities. In addition, self-control contributes to the development of thinking [2].

As part of our study, we consider self-control as an activity in which students test their knowledge (skills), correlate them with the accepted criteria for learning levels, and on this basis evaluate the quality of their learning and self-education.

Exploring the issue of developing self-control skills among students of a technical university, we proceed from the fact that the term "development" is used in the context of the theory of the mental as a process leading to the formation of personality traits. In first-year students, the level of formation of self-control skills meets the requirements of high school, and, as studies show, these skills are not enough for effective learning in new conditions and, in particular, for studying general engineering disciplines. When organizing self-control, it is necessary to take into account one of the important aspects of training a specialist in a technical university, which lies in the fact that an engineer in practice implements information and logical (search, collection, processing and transmission of scientific, technical, operational, production and economic information), logical - thinking (development and design of technical, technological, organizational and social solutions, calculations, analysis and planning of production processes) and organizational (organization of production and labour, systems of coordination, stimulation and control) operations [3, 5].

METHODOLOGY & EMPIRICAL ANALYSIS

Logical and mental operations in the activity of an engineer in solving a problem and its control, researchers [5, 6] assume the ability to practically apply the knowledge gained by a specialist in the study of general educational and special disciplines, which must be taken into account when organizing self-control at a university.

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As noted above, self-control contributes to the development of thinking. In turn, self-control relies on thinking and other mental processes. It is necessary to pay attention to the specifics of technical tasks (problems), in the course of solving which mental activity is carried out. Let's compare, for example, ordinary cognitive tasks (used in the educational and pedagogical process when students master natural science knowledge) and technical tasks (used in the course of education or arising in the course of production activities). The conditions of problems of the first kind contain, as a rule, all the necessary and sufficient data for their successful solution, but the process of operating with these data can be very complex and require great ingenuity and mental effort. On the contrary, in the conditions of many technical problems, these data are insufficient, and sometimes they are completely absent. So, in the design task, the purpose and functions of the technical device are indicated, but the data themselves are not defined. For example, in order to select the tolerance fields of mating parts for a given interface in a particular gearbox assembly, it is necessary to determine the principle of operation of the device, the nature of its operation, and select the necessary knowledge from a particular field of technology.

Thus, some features of the structure and conditions of technical tasks testify to their difference from educational and cognitive tasks widely used in the study of general educational disciplines. An analysis of the structure of technical problems led to the following conclusion: since there is no unambiguous solution to a technical problem, it means that in order to avoid a narrow approach to the solution, it is necessary to teach students to look for various options, select the necessary data, and formulate general approaches to problems of various types. Psychological studies show that the success of solving technical problems largely depends on how theory and practice are combined in human activity. When solving any complex technical problem (if a student solves it for the first time), a wide field of activity opens up, the sensorimotor and intellectual spheres of the personality "come into action". Describing technical thinking, one should emphasize its main feature, which is the close unity of the theoretical and practical components of activity, the continuous combination and interaction of mental (thinking) and practical actions [4].

Thus, technical intelligence is an "alloy" of thought and action (in the broad sense of the word) in their interdependencies and mutual transitions, while in other types of mental activity, either the theoretical (abstract) or practical (visual-effective) side prevails.

Another important feature of technical problems is the close relationship and interaction of the conceptual and figurative components of activity. Representation (image) is an equal component of thinking, without which the task cannot be solved. Here, the conditionality of the nature of technical thinking by the specifics of technical material is manifested [4]. Technical thinking is three-component in its internal psychological structure. Moreover, its theoretical (conceptual), figurative (visual) and practical (effective) components are not only interconnected, which takes place in other types of activity, but also in interaction and each of them acts as an equal member of the trinity and without each other, they therefore do not exist. Thus, the essence of self-control in a technical university is revealed through its content aspect.

During the perception of theoretical material and instruction on how to perform a practical task, the student correlates the information received with previously acquired knowledge and experience, comprehends them and fixes them in memory. In the process of correlation and

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comprehension, certain control actions are performed, without which the perceived information is formally assimilated. Self-control is based on a feedback system that makes it possible to evaluate and regulate activities based on the results of its course.

RESULTS

All this allowed us to define the structure of self-control. The structural links of self-control include:

- awareness and understanding by students of the purpose of the activity and initial acquaintance with the final result and the methods of obtaining it, with which they will compare the methods of work used by them and the result obtained;
- comparison of the progress of work and the achieved result with samples;
- evaluation of the state of work performed, identification and analysis of errors and identification of their causes;
- correction of work based on self-assessment data and clarification of the plan for its implementation, introduction of improvements.

The central links in the structure of self-control are the comparison of the current state of work with the given one (sample), its evaluation, detection and analysis of errors and their causes. This structure allows you to define the organizational aspect of self-control.

Comparison is the initial stage of self-control. It is implemented (like all other parts of self-control, including correction) on the principle of tracking systems. The tracking system of thinking is a program model in which various information about its implementation is reflected and compared with the given one, as if following it. This ensures constant feedback. Comparison is accompanied by self-assessment of the results of the work. Its main content is the mental activity to establish and analyze the mistakes made and their causes. Based on this analysis, ways to correct and improve the work are determined. Thus, the quality of self-control depends on the objectivity of self-assessment, determining the nature and size of the mistakes made and establishing their causes; from the correct choice of ways and means for correcting mistakes, from the willful efforts that the performer makes to correct and improve his work. That is, self-control and independence can only be conscious actions aimed at improving their own mental processes and state, their own self-consciousness, expressed in the I-concept. The self-concept acts as its own installation, consisting of the following components:

- cognitive (cognitive);
- evaluation (own knowledge and actions);
- forward-looking (what can I achieve);
- practical (where and how I can apply).

The self-control procedure should be organized in such a way that the student, who exercises self-control using the means offered to him, thinks and independently realizes what should be paid special attention to, which aspects of assimilation are checked by this or that task, their totality. Through self-control, one can achieve the activation of those procedures for mastering scientific concepts that are most appropriate in future professional activities, and contribute to the development of the individual traits necessary for this.

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Thus, given the importance of self-control and the real state of affairs in the practice of the educational process, we can conclude that it is necessary not only to purposefully form readiness for self-control, but also to create conditions that encourage students to resort to it as a means of managing their activities. The expediency of carrying out self-control is due to the possibility of deviation of real results from the expected (given). Self-control encourages a responsible attitude to the work performed, teaches you to adequately evaluate the results of your actions and work.

CONCLUSIONS

To ensure the high quality of self-control, it is necessary to organize the preparation of students for its implementation. This preparation includes: the assimilation of theoretical and practical material related to the upcoming work; analysis of this work in order to identify sensory signs that serve as signals for self-control; mastering the techniques of self-control, methods for solving intellectual problems (diagnostic, prognostic, by recognizing visual and other signs necessary for self-control, and understanding their meaning, by making a judgment about the progress of work, the presence of deviations, errors based on the analysis of these signs); organization of classes with students on the study of these features and the development of techniques. For the successful development of self-control skills among students of a technical university, it is necessary to create pedagogical conditions that involve the development of the content of control and self-control, taking into account the integral system of professional activity of future qualified specialists, the use of pedagogical forms of training that provide real interaction and exchange of educational information between participants in the educational process, the implementation of reflective positions students.

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