

THE RELATIONSHIP BETWEEN PSYCHOLOGICAL STATES AND COGNITIVE PROCESSES IN EDUCATIONAL ACTIVITIES

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Abstract

In this article, in order to identify the factors of the quality of education of cadets, one of the main tasks of organizing a modern military educational process, the relationship of emotional states with cognitive processes in the educational process was analyzed. The article is based on the scientific research of N. D. Levitov, A. O. Prokhorov, V. A. Yakunin. In particular, experiments conducted on the basis of students' educational activities at different times were studied, and detailed conclusions were drawn on this problem.

Keywords: Military education, educational process, quality of study, objective factors, emotional states, cognitive processes, analysis of relationships, research, students' educational activities, experiment.

Introduction

One of the main tasks of the organization of the modern military education process is the quality factors of cadets' education, which includes the psychological training of trainees, their psychological characteristics, emotional stability and control of emotions in non-standard situations, prevention of emotions on the quality of education. Indeed, the influence of an individual's psychological states on cognitive functioning is enormous. N. D. Levitov stated that one of the most important tasks in the study of mental states is the study of the interaction of mental state with cognitive processes in educational activities [1, - B 24]. This can help to improve the quality of teaching in practical terms, to develop effective methods to eliminate negative situations in learning, to create

grounded methods of pedagogical influence based on understanding the mental state of cadets.

LITERATURE REVIEW

The study of the relationship between emotional states and cognitive processes in educational activities is of great importance in improving the quality of education. Unlike the process of military education and, say, engineering psychology in military psychology, in the example of military education, the relationship between mental states and cognitive processes, no matter how significant, has not been studied. Few studies have addressed this problem in the case of schoolchildren, students.

For example, the Russian scientist A. O. Prokhorov, who studied psychological states in different aspects, while studying the typical states of students, singled out 80% of the states as the most common ones: anxiety, anxiety, cheerfulness, liveliness, curiosity, laziness, joy, fatigue. According to his conclusions, the number of significant cases among students is higher when compared with the activity cases of schoolchildren, teachers and teachers of higher education institutions. The number of cases was 37 for teachers, 24 for schoolchildren, and 17 for higher education teachers. These results show that the form and content of students' activities are more diverse than those of other groups. The scientist believes that the reason for the large number of important psychological conditions among students is the coincidence of the period of professional training with the formation of important professional traits in the personality of students and the development of them as a future specialist, which can lead to an increase in the number of important situations [2]. The scientist's book "Psychology of Moral Situations" investigates the influence of mental states on the dynamics of cognitive processes. During the exam, there was a division of the dynamics of cognitive processes, that is, in some students there was a stabilization of cognitive indicators and the effectiveness of cognitive processes in accordance with the situation, while in others there was a decrease, blocking, dispersion of productivity. For individuals who exhibit dynamics of the first type, the conditions are characterized by increased intensity and concentration, and for those who show dynamics of the second type, there is an increase in fear and anxiety, loss of self-confidence due to lack of confidence in knowledge. Thus, states determine the effectiveness of cognitive processes according to their

qualitative characteristics [3, –B.76]. The relationship between mental states and cognitive processes is also passed through a system of state self-management. This is due to the active participation of cognitive processes such as perception, imagination, memory, thinking, due to the implementation of individual self-management processes [3].

According to A. O. Prokhorov's research on the role of cognitive processes and situations in the self-management of the individual, methods in which the individual relies on such cognitive processes as changing focus, analyzing the situation, positive thinking play an important role in the regulation of situations. Analysis of the links between different emotional state regulation techniques and active cognitive processes shows that "high-performing" students use more "physical" and intellectual self-regulation methods, while "low-performing" students use more communicative and passive self-regulation methods. Another study investigated the effect of reflexion on self-control of students' mental states. In it, students are asked to describe situations specific to the learning activity: the current state, the desired state, that is, the ideal state that the subject wants to achieve, and the transitional states (meaning the state in the process of transition from the existing state to the desired state). In addition, it was necessary to determine the individual duration of the transition to the desired states ("fast", "slow", "gradually", "one minute", "one month", etc.). Reflexion indicators are calculated based on a qualitative indicator that characterizes individual states. As determined, the duration of transition to a desired state is directly related to the level of perception of the state. Students with a high level of reflexion achieve the desired state 2-3 times faster, at which time the achievement times are clearly indicated. Students with "low reflexivity" usually give vague answers such as "I don't know", "long", "various". In addition, students with higher levels of reflexion described the current situation more fully. So the higher the level of reflexion, the better the quality of self-regulation in different emotional states. As the individual becomes aware of emotional states, the rate of transition to the desired state increases and the process of self-regulation becomes successful. Conversely, when reflexivity is low, the process of regulating the state becomes more difficult and decisions are made impulsively [4].

The scientist V. A. Yakunin, who studied the connection between the reactions of higher intelligence to frustration, in his study of the intellectual and personality traits D. Wexler's set of intellectual tasks and

He used R. Cattell's personality questionnaire. As the study found, intelligence plays an important role in shaping the direction of emotional reactions. The higher the level of intelligence of students, the more likely they are to have an increased emotional reaction to blaming the object. Individuals with lower levels of intelligence take more blame on themselves in cases of frustration. Thus, with respect to the forms of influence expressed in frustration, cognitive processes perform a "function of giving and regulating information" [5, –B.23].

When students' psychological states were studied on a computer, it was found that the attention and thinking efficiency of computer users were helped by states such as interest, concentration, good mood [6].

In the laboratory of psychological problems of the Higher School of Kazan State University, the psychological and psychophysiological features of students were studied. Very little research has been reported in the laboratory that specifically correlates with the problem of the relationship between self-control and cognitive processes in different situations. In one of them, students studied their functional states after long, psychologically difficult work. The study used a self-assessment methodology called "SAN" (an abbreviation of the initials of the words "self-feeling", "activity", "mood" in Russian, i.e. self-feeling, activity, mood). According to empirical studies, average levels of self-perception, activity, and mood during stressful activities decrease regardless of gender and academic specialty. The author suggests that the interaction of the cerebral cortex and cortex structures in this case increases the active participation of self-regulatory mechanisms [7].

Thus, research on the correlation between different psychological states and cognitive processes in student learning activities has been conducted primarily in the context of self-regulation, intelligence, and functional states.

The relationship between cognitive processes and the functional structure of psychological states has been studied more extensively in recent times. The Laboratory of Differential Psychology and Anthropology of the University of St. Petersburg conducted a comprehensive study of the process of normal teaching activities of students and the process of intellectual pressure (during exams) and experimental data were obtained. According to him, the most important factor in the overall mental development indicator of the structure of a student's personality is the intellectual factor, which was associated with a number of positive correlations (0.81), verbal (0.57), non-verbal intelligence (0.72), attention (0.62),

and overall mastery (0.40). When comparing the functional tests before (anticipation) and after the exam (experiencing success or failure, mental fatigue, etc.), psychophysiological changes were found among different students, characterizing "intellectual pressure" in relation to personality traits. Thus, a high intellectual level is characterized not only by higher levels of attention and other cognitive processes, but also by lower energy expenditure of the body in the process of mental activity. The study of energy-information relationships, according to the researchers, allows students to identify indicators of individual psychophysiological dependence [8, -B.257].

The main role in the study of educational activity and the practice of its formation is played by the methodology of the theory of general activity, which was developed by L. S. Vigotsky, S. L. Rubinstein, A. N. Leontev and others. According to the definition of S. L. Rubinstein: "... Activity is the activity of a subject aimed at changing the world, producing or creating a certain objectified product, material or spiritual culture" [9, -B. 172]. The object of activity manages and transforms the activity of the subject, at the same time, the properties of the object appear as the product of psychological reflection as a result of the subject's activity [10, -B.29]. See also E. Gaziev defines "In psychophysiology, activity is interpreted as the physiological meaning of activity, while work, labor activity is used in the sense of" labor activity". In social psychology, there are pairs of "activity-activity-work-work", "activity-behavior", "labor-behavior-activity". S.L. Rubinstein was able to explain the need to create an activity psychology by advancing and substantiating the principle of the unity of consciousness and activity. He argues that work is a 'social category' rather than a psychological one, while psychology investigates 'the psychological aspects of work' [11. -B82]".

The theory of educational activity was developed on the basis of the theory of general activity on the basis of the efforts of the scientific school of D. B. Elkonin and V. V. Davydov. Learning activities were seen as one of the main types of activities that arise from a person's specific need. "... Learning activity is, of course, an objective activity that makes changes in objects. However, its purpose and result are not the changes that occur in the objects, but the predetermined changes in the subject" [12, p.161].

The basic principles of the theory of educational activity and its difference from other types of activity were studied by V. V. Davydov.

According to the approach of D. B. Elkonin and V. V. Davydov, educational activity should be aimed at the formation of theoretical thinking. Theoretical thinking is related to the formation of concepts and occurs in the teaching process in the sequence of "acceptance-reflection-concept". A concept is detached from the characteristics of individual perception and reflection and, as a result of generalization, makes a transition from the concrete, the perceptual to the abstract, the contemplator [12, -B.21-23].

B.B. Davidov's research emphasizes the need to work with students in practical ways of learning and methods of performing them in order to successfully form educational activities. In particular, E. Gaziev said: "The effectiveness of mastering directly depends on the willpower, spiritual need and conscious motivation of students. Therefore, it is important to train them to overcome difficulties, not to be overwhelmed by the failures they sometimes face, but to teach them to be self-governing. To do this, it is desirable to develop in them the ability to overcome difficulties, the qualities of self-control.

Arming students with educational methods of work, individual work, teaching skills and qualifications in high school increases the effectiveness of teaching, builds the skills of self-control, creates the opportunity for creative thinking, independent knowledge." [11] –B 99].

Therefore, the effectiveness of educational activity directly depends on objective and subjective factors, the main regulator of which is the emotional states and intellect of the person – the recipient of knowledge.

Given that the process of training cadets is under high all-round psychological pressure in relation to the process of weaving students, the need for a practical study of this problem is very high. Taking into account the specific requirements of military education, the formation of a cadet's personality and studying the influence of difficulties in his educational process is an important task.

CONCLUSION

The problem of the relationship between mental states and cognitive processes is always relevant in the educational activities of cadets and students, as this issue has not been sufficiently studied within the framework of educational psychology. It also has important theoretical value in understanding the function of the psyche as a holistic system.

Mental states and cognitive processes have specific characteristics as different psychological phenomena. However, many researchers have recognized these

psychic phenomena as the only system influencing each other. Therefore, the interaction and dynamic approach can be regarded as a grounded methodological approach for empirical research.

The interaction between emotional states and cognitive processes affects not only the characteristics of states or cognitive processes themselves, but also many individual factors such as motivation, attitude to activity goals and objectives, self-control, self-assessment, emotional intelligence. Therefore, it is necessary to see the interaction between psychological states and cognitive processes as an individual phenomenon, which requires the disclosure of the active, regulatory nature of personality traits.

Among the most important factors that affect the interaction between individual characteristics, situations, and cognitive processes are individuality and subject's reflex. In addition, the relationships between states and cognitive processes are dynamic, and studying the functional roles of these traits in interaction together can help to understand them more deeply.

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