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## Problem-search technologies as a strategy for the development of critical thinking and abilities of pre-conscription military training students

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**Annotation:** Problem-search technologies are technologies based on the real implementation of research activities in teaching to solve social and professional problems that are relevant for students of pre-conscription military training in order to master universal methods of activity and develop on this basis critical thinking, creative, communicative and reflexive abilities.

**Key words:** "critical thinking", "correct solution", Piaget, Bruner, XX century, philosophizing, H.Johnson, David Wood, Hannah Arendt, John Dewey, G.V Sorina.

Problem - search approach involves a structured study of problem situations that do not have an unambiguous solution. This implies a very important conclusion for understanding the essence of the corresponding technologies that there is no single correct solution to the problem. Consequently, students of pre-conscription military training must analyze the whole variety of possible solutions, formulate selection criteria for themselves, argue and prove the optimality of the choice made for others. Indeed, if there is no "correct solution", then other learners can get a completely different answer, and it can also be "correct". Here we are already talking about the fact that to consider the whole variety of possible solutions, argumentation and proof of the chosen solution, students must have the ability to think critically.

Let's review various points of view on understanding the essence of critical thinking.

Although the term "critical thinking" has been known for a long time from the works of such famous psychologists as J. Piaget, J. Bruner, L. S. Vygotsky, in the professional language of practicing teachers in Uzbekistan this concept has been used relatively recently. The culturally historical basis of the fact that in the XX century defined under the name "critical thinking", of course, is the ancient "critical technique".

The ancient practice of critical philosophizing finds its expression in the style of interrogative philosophizing, presented primarily in the dialogues of Plato.

The Socratic-Platonic style of interrogative philosophizing becomes a model for all subsequent Western

philosophical thought. This style not only demonstrates the actual importance of criticism, the question system, but the response procedures for conducting and rationalizing the position put forward, but also includes a general questioning strategy within any area of reasoning.

Today, different definitions of critical thinking can be found in various scientific sources.

Most definitions of critical thinking are based on the idea of it as a reasonable, evidence-based, organized approach to making difficult decisions.

Robert Ennis defines critical thinking as "making deliberate decisions about what to do and what to believe."

Professor Ralph H. Johnson of Canada defines critical thinking as "a special type of mental activity that allows a person to make a sound judgment about the proposed point of view or behavior."

Judy A. Brows and David Wood argue that critical thinking should be understood as intelligent reflective thinking focused on deciding what to believe and what to do. Critical thinking is a search for common sense - how to reason objectively and act logically, taking into account both your point of view and other opinions, the ability to abandon your own prejudices.

David Cluster identifies five hallmarks of critical thinking:

- Firstly, critical thinking is independent thinking. When the lesson is

built on the principles of critical thinking, everyone articulates their ideas, assessments and beliefs independently of others. Nobody can think critically for us, we do it exclusively for ourselves. Therefore, thinking can be critical only when it is individual.

- Secondly, information is the starting point, not the final point of critical thinking.

Third, critical thinking begins with asking questions and clarifying the problems that need to be solved. The genuine cognitive process at any stage is characterized by the desire of the knower to solve problems and answer questions arising from his own interests and needs. "Therefore, the challenge in teaching critical thinking is partly in helping students see the endless variety of problems around us."

- Fourthly, critical thinking strives for convincing argumentation. The critically thinking person finds his own solution to the problem and backs up this solution with reasonable, substantiated arguments. He is also aware that other solutions to the same problem are possible, and tries to prove that the solution he has chosen is more logical and more rational than others.

- Fifthly, critical thinking is social thinking. Every thought is tested and honed when it is shared with others - or, as the philosopher Hannah Arendt puts it, "perfection" can only be achieved in the

presence of someone. "When we argue, read, debate, object, and exchange opinions with others, we clarify and deepen our own position. Therefore, teachers working in the mainstream of critical thinking always try to use all kinds of pair and group work in their classes, including debates and discussions, as well as various types of publications of written works of students. Any critical thinker works in a community and solves broader problems than just constructing his own personality.

Developing this idea, D. M. Shakirova emphasizes that critical thinking is built on the basis of the principle of communicativeness in order to comprehend the problem and discuss it, taking into account that this thinking is individual and independent, but it manifests itself in disputes, discussions, during discussions and public speech, communication skills of comprehension for the formation of this type of thinking play a decisive role.

Renowned American psychologist and educator John Dewey emphasizes that critical thinking occurs when students begin to deal with a specific problem. "The main question that should be asked about a situation or phenomenon, taken as the starting point of the learning process, is the question of what kind of problems this phenomenon creates." According to Dewey, focusing on problems stimulates students' natural curiosity and encourages

them to think critically. "It is only when fighting a specific problem, finding his own way out of a difficult situation, (the student) really thinks."

According to G.V. Sorina, "critical thinking presupposes the skills of reflection on one's own mental activity, the ability to work with concepts, judgments, inferences, questions, the development of the ability for analytical activity, as well as to assess the similar capabilities of other people." Critical thinking in general has a practical orientation. Because of this, it can be interpreted as a form of practical logic, considered within and depending on the context of reasoning and the individual characteristics of the reasoning subject. Within the framework of critical thinking, it is explored how a person thinks, making decisions, planning his life and actually realizing his practical plans.

Critical thinking is purposeful, specially organized thinking about an open problem situation, for the implementation of which objective and socially recognized ways of thinking and communication are used (proof, argumentation, validity, criteria, etc.), which allow to substantiate existing points of view, solutions and get their assessment in a social discourse environment.

Thus, the solution found as a result of the research is only an intermediate result and is only one of the phases of

working with a problem situation. At the same time, the student carries out such mental actions as analysis, criticism, rationing.

The next phase of problem-search technologies is the proof and evaluation of the solution found, for the successful implementation of which the student needs communication skills. One of the main tasks of the teacher is to create a discourse environment that allows students (as a rule, to work on a problem situation, they are united in small groups) to present for public discussion, criticism and evaluation of the results of their work in the form of a found solution.

A properly organized discussion allows pre-conscription military training students to take a reflexive position in relation to their own act of thinking and begin to separate two processes: the process of solving a problem and methods (strategies) for solving problems of a given class.

But to separate these two processes, there is another phase of work with a problem situation - reflection, aimed at understanding the general ways of solving such problems.

Now we have the opportunity to present a holistic description of the process of implementing problem-search technologies:

Phase 1: entering the problem: from the creation of a problem situation by the teacher to the appearance of the student's

cognitive interest and inclusion in the activity of analyzing the conditions of the task.

Phase 2, which includes two stages:

Statement of the educational problem: from the analysis of the initial conditions of the assignment to the statement of the educational problem (problems for oneself);

Search for a solution: from formulating ideas, hypotheses, planning search actions to solving a problem.

Phase 3, which includes two stages:

Proof of the legitimacy of the solution found through public discussion, criticism and assessment of the results of their work;

Comparison of the proposed solution with the solutions of other groups, their assessment and search for grounds for their synthesis in the strategy of increasing the benefits.

Phase 4: reflection on ways to solve problems, criterion analysis, proof and evaluation of solutions, own increments in terms of developing the ability to solve problems.

The listed phases together represent a full cycle of activity, the repeated repetition of which creates conditions for the development of critical thinking, creative, communicative and reflexive abilities in students of pre-conscription military training.

This cycle may not coincide with the boundaries of one lesson, it can be

carried out over several lessons, or vice versa, be one of the elements of the lessons. The leading factor here is not so much the assimilation of educational material as a step in the development of students, based on their mastery of new ways of activity and the development on this basis of the ability to carry out creative activity.

The actual task of the teacher when designing the zone of proximal development of students is to transfer students to the next, higher level of independence at each cycle of problem-search activity by creating problem situations of a more complex level.

Let's summarize some results in the form of theses.

The learning process in the implementation of problem-search technologies among students of pre-conscription military training is cyclical. Moreover, each cycle of educational activity should contain an educational problem situation and tasks for it, a general communicative space for discussion and criticism of the proposed solutions, as well as tasks for reflection on ways to solve it. In other words, educational activity in the implementation of problem-search technologies is carried out through the development of four types of activities by students:

Goal setting.

Study.

Communication.

Reflection.

The presence of all these spaces of activity and their consistent development by students is a condition for the successful implementation of problem-search technologies.

Problem-search technologies are technologies based on the real implementation of research activities in teaching to solve social and professional problems that are relevant for students of pre-conscription military training in order to master universal methods of activity and develop on this basis critical thinking, creative, communicative and reflexive abilities.

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