



## How to develop critical thinking when using independent learning skills

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### ABSTRACT

At the same time, among the teachers of higher education, there is an opinion that critical thinking of students is formed in the educational process automatically, and it reaches the highest level in professional activity only as a result of many years of experience. But practice and research do not confirm a direct relationship between the length of service of a specialist and the level of formation of critical thinking. Therefore, an important task of vocational education is the search for technologies for the purposeful and systematic formation of critical thinking of students already at the stage of vocational training. This article is also about organizing critical thinking in student independent learning.

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## Mustaqil o'qish ko'nikmalarida tanqidiy fikrlashni qanday rivojlantirish mumkin?

**Kalit so'zlar:**

talaba faolligi va tafakkuri,  
tanqidiy fikrlash,  
zamonaviy ta'lim,  
o'z-o'zini o'qitish,  
mustaqil ta'lim,  
tanqid.

### ANNOTATSIYA

Oliy ta'lim muassasalari o'qituvchilari orasida talabalarning tanqidiy fikrlashi o'quv jarayonida o'z-o'zidan shakllanadi va u ko'p yillik tajriba natijasidagina kasbiy faoliyatda eng yuqori cho'qqiga chiqadi, degan fikr mavjud. Ammo amaliyot va tadqiqotlar mutaxassisning ish staji va tanqidiy fikrlashni shakllantirish darajasi o'rtasidagi to'g'ridan to'g'ri bog'liqlikni tasdiqlamaydi. Shu sababli kasb-hunar ta'limining muhim vazifasi – bu kasbiy tayyorgarlik bosqichida o'quvchilarning

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tanqidiy fikrlashini maqsadli va tizimli shakllantirish uchun texnologiyalarni izlashdir. Ushbu maqola ham talabalarning mustaqil bilim olishida tanqidiy fikrlashni tashkil etishga qaratilgan.

## Как развивать критическое мышление при использовании независимых навыков обучения

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### АННОТАЦИЯ

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**Ключевые слова:**

деятельность студента, мышление, критическое мышление, современное образование, самообучение, самостоятельное обучение, критика.

На сегодняшнее время, среди преподавателей вузов бытует мнение, что критическое мышление студентов формируется в учебном процессе автоматически. А в профессиональной деятельности оно достигает наивысшего уровня, только в результате многолетнего опыта. Но практика и исследования не подтверждают, такой прямой, зависимости между стажем работы специалиста и уровнем сформированности критического мышления. Поэтому, важной задачей профессионального образования, является поиск технологий для целенаправленного и систематического формирования критического мышления студентов уже на начальном этапе профессиональной подготовки. Данная статья, также посвящена организации критического мышления в процессе самостоятельного обучения студентов.

In the psychological dictionary: "Thinking is a process of reflection of objects, insofar as it is a creative transformation of their subjective images in human consciousness, their meaning and meaning for resolving real contradictions in the circumstances of people's life, for the formation of its new goals, the discovery of new means and plans their achievements" [9, 77].

A.N. Leont'ev defines thinking as "the process of conscious reflection of reality in such objective properties, connections and relations, which include objects inaccessible to direct sensory perception" [7, 27].

The representative of cognitive psychology R. Solso offers the following definition: "Thinking is a process by which a new mental representation is formed; it does this by transforming information, achieved through a complex interplay of mental attributes of judgment, abstraction, reasoning, imagination, and problem solving. Thinking is the most meaningful element of the three components of the mental process and it is characterized by comprehensiveness rather than exclusiveness" [10, 459].

The modern society in which we live, in which the young generation is growing, makes new demands on the individual. Now the tasks of the school and the entire educational process are: the extraction and processing of information, the selection of the main one, quick orientation in a specific situation, and, therefore, the role of the teacher is to bring up a new kind of student: a socially adapted personality.

If the teacher adheres to a student-centered approach, then the learning process can be made effective and joyful for every child. With this approach, teacher and student work together to achieve a common goal. At the same time, the teacher often acts only as an

organizer of the learning process, a group leader, a creator of conditions for students' initiative.

The implementation of critical thinking, and, therefore, its formation to a certain extent is possible at all stages, wherever there is an alternative: when analyzing a problem situation (analysis requires a critical attitude); in the speech formulation of the problem; when putting forward a hypothesis, since critical thinking is associated with proof and refutation, with affirmation and denial. This is where creative thinking becomes critical. There is an assumption that human creativity is associated with two sides of creative thinking – with synthetic thinking (analysis, synthesis, comparison, generalization, etc.) and with an insert, guess, insight, that is, unexpectedly arising in consciousness human idea of solving the problem [8].

Learning becomes effective only with self-learning, it is the most durable and lasts for a long time, and self-assessment serves as a support for it. Many authors define critical thinking as an assessment that is based on criteria, this assessment “can be directed by a person to the outside world, to other people's thoughts and to himself, to his own thoughts. This is the content of criticality and self-criticism of thinking” [12]. In the study of M. Veksler, the concept of “critical thinking” is considered as “the process of solving a problem, including a different discussion of the process and results of labor, their assessment. This assessment can be expressed in the detection of an error, or in the establishment of a positive, valuable in objects and phenomena, or in the establishment of the truth of the discussed fact, idea” [4].

“Critical thinking is a way of thinking aimed at identifying the structural features of reasoning, checking the correlation between reasonably put forward theses and their corresponding arguments, evaluating the theses put forward, characterizing the contexts of reasoning, taking into account the peculiarities author and reader, opponent and proponent” [10].

“Critical thinking presupposes: the skill of reflection on one's own mental activity, the development of analytical skills, the ability to work with concepts, judgments, inferences, questions, the ability to evaluate the same skills in others. Critical thinking is formed as a practical logic located within and depending on the context of reasoning and the reasoning subject” [10].

From the point of view of the objectives of our research, consideration of the characteristics of critical thinking is of particular interest. A number of theoretical and experimental works have shown the most important characteristics of critical thinking. These include:

- independence of thinking;
- curiosity;
- formulating the problem and finding a way out of the current situation;
- making deliberate decisions;
- expressing your point of view.

To activate the student's mental activity, it is necessary to solve three problems at the same time:

Choose a form of work in the lesson that can interest a student of any level of training, involve the whole class in a joint learning process.

Determine for everyone a part of the general problem that is feasible for him, implementing a differentiated approach to learning.

To remove from a weak student the fear of a bad grade in case of an incorrect answer, to “liberate” the process of his thinking.

One of the effective ways to solve these problems is the widespread introduction of the technology of critical thinking into the practice of the lesson.

The modern world is a dynamically developing system. To become successful and achieve the desired result, we need to constantly develop and improve. As noted by scientists, the achievement of this goal is impossible if a person does not have the skills and abilities of critical thinking. While those who have well-developed critical thinking, cope with complex and seemingly overwhelming problems. Such people are able to clearly and clearly formulate the essence of the issue, collect and select information, make informed conclusions, and then check them.

Let us single out two groups of conditions that are necessary to create learning that promotes the development of thinking – these are pedagogical and didactic [6]. The pedagogical conditions for the formation of high-level thinking skills include:

- inclusion in educational standards and programs of goals aimed at the formation of thinking; content for the development of criticality of mind, analysis, introspection, synthesis, logic and creativity of the student;
- the allocation of professional competencies and a system of skills and abilities to think logically and critically;
- training of teaching staff with professional competencies in the field of high-level thinking;
- knowledge about the methods and ways of its formation;
- coordination of research in the field of thinking development and the exchange of experience of researchers and teachers in the field of innovations in thinking formation technologies through publications, conferences, seminars, master classes and special projects.

Didactic conditions include:

- development of a special course and the inclusion in the content of assignments, problems, exercises, cases, projects aimed at practicing mental skills associated with complex mental operations, such as analysis, synthesis, critical assessment, generation of ideas;
- availability of diagnostic methods for determining the level of thinking, taking into account age characteristics, abilities and life experience of students;
- the elaboration of interdisciplinary technology for the formation of thinking.

Learning to think occurs with the help of the “language of thinking”, which is used by both the teacher and the student. Language allows you to focus on the process of meaningful learning and to trace the differences between shallow and deep thinking. Discussion helps people think and students learn to think. One of the most common language aids is teacher questions. There are different types of questions. Each type assumes a different type of response, because it actualizes, involves some side of thinking in the work. The work of B. Bloom and his colleagues “Taxonomy of educational tasks” was a useful tool for assessing the level of development of thinking. This taxonomy also allows us to distinguish among the questions we ask, questions of “lower” and “higher” order. So, at the “lower” level, there will be questions that require learning or retrieving facts from memory and understanding concepts or ideas. As you move to the top level, questions arise that require the application of ideas, the analysis of evidence, the synthesis of several ideas to obtain new solutions and the assessment of the entire line of reasoning.

The most common method of developing critical thinking is independent learning. There are many types of independent education. Each type involves a different type of response because it involves some aspect of thinking at work. The Taxonomy of Educational Tasks by B. Bloom and colleagues has been a useful tool in assessing the level of development of thinking. This taxonomy also allows us to differentiate between the tasks we give, the “bottom” and “top” order questions. Thus, at the “lower” level, tasks arise that require learning or retrieving facts from memory and understanding concepts or ideas. When you get to the next level, you will be given tasks that require you to apply ideas, analyze evidence, synthesize multiple ideas to come up with new solutions, and evaluate the entire line of thinking. There is a direct correlation between the teacher, i.e. the questions we ask, the tasks, and the levels of thinking that are achieved in answering them. Often forgotten is an important part of meaningful learning – the ability to think independently. In a traditional education system, students only answer questions, don’t ask them, don’t think independently. Over the years, students sit in classrooms, where teachers ask questions that they already know the answers to. The real problem, which is an integral part of any study, is rare. According to Methodists and psychologists, a meaningful educational culture should be built on complex issues that are really problematic for teachers and students. Any question is about risk, because by asking it, we acknowledge that we lack knowledge in this area. However, to develop thinking skills, it is important in principle to create an environment where students can freely ask questions on the topic being studied and address the teacher and each other.

It is known that various graphical methods of presenting information play an important role in the thinking processes of independent study, in particular:

- 1 – It is easier to see the problem being studied using graphical diagrams;
- 2 – Graphic diagrams help students visualize and understand the structure of the problem being solved;
- 3 – When information is presented graphically, it becomes easier to create new ideas;
- 4 – Motivation increases, ideas become easier to understand: the human brain is constantly in need of graphic images;
- 5 – Using graphic schemes, you can “shake” your mind, make it more flexible, mobile, get rid of stereotypes, turn dogmatic thinking into critical thinking;
- 6 – There are many time-tested methods of developing creativity, and many of them include graphic-based methods. Even a simple spatial image stimulates the brain to create new ideas more effectively than many words.

What is the student’s activity as an active, not passive, participant in such a learning process? First, he must be taught how to work with information, as well as teach him to use various forms of teaching, methods and techniques. Secondly, to teach introspection and self-assessment of the level of one’s own readiness for critical assimilation of the material and analysis of the critical potential of the problem, to use a combination of performing and partial-search teaching methods when performing educational tasks and various types of criticism (criticism – analogy, criticism – praise, criticism – concern etc.). Search methods of teaching are used when performing creative work, therefore, it is necessary to provide the student with such a type of activity as a creative project or case-study in full measure. In other words, in order to ensure the formation of high-level thinking skills in English lessons, the teacher should adhere to practical recommendations:

to provide an understanding of what thinking skills are needed; teach to ask questions; teach to identify the causes of the phenomena; to teach the art of argumentation, to teach how to evaluate the results of one's activities, to teach the transfer of methods and techniques of critical analysis to new situations, to apply thinking competencies when performing independent work (reviewing, resolving critical situations, analyzing data from Internet resources, books, public speaking).

So, the formation of high-level thinking is becoming a value-semantic landmark of modern education. The emerging urgent need not only to educate students, but also to develop their thinking, creativity, generating ideas and building logical connections requires the teacher to take a modern view of his studies, critical assessment and analysis of the effectiveness of his studies, more thorough and thoughtful preparation for several lessons ahead. We must be clearly aware of what we want to get from the student, what they should achieve and how to come to this result. Based on this, the teacher is able to optimize the learning process, increase its efficiency and the effectiveness of his work and observe positive dynamics in the group of his students.

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