JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
VOLUME 5, ISSUE 02
MOPNTHLY JOURNALS
ISSN NUMBER: 2751-4390
IMPACT FACTOR: 9,08

IMPROVING THE METHODOLOGY FOR DEVELOPING STUDENTS' CRITICAL THINKING THROUGH INTERACTIVE TEACHING METHODS

Islomova Mehriniso Mirzoyevna

Lecturer at Asia international university

Abstract. This article addresses the issues of developing students' independent and logical thinking skills within the modern higher education system. The primary objective of the research is to improve the methodology for fostering students' critical thinking through interactive methods such as problem-based learning, case study, and brainstorming. The article analyzes the pedagogical and psychological mechanisms of critical thinking development and proposes methodological recommendations for effective technologies that can be applied in the educational process to enhance information filtering, analysis, and objective decision-making skills.

Keywords: interactive methods, critical thinking, cognitive development, pedagogical innovations, problem-based learning, analytical skills, higher education, case study.

Аннотация. В статье рассматриваются вопросы развития у студентов навыков самостоятельного, логического и критического мышления в системе современного высшего образования. Основной целью исследования является совершенствование методики формирования критического мышления студентов посредством интерактивных методов обучения, таких как проблемное обучение, кейс-стади и мозговой штурм. В работе проанализированы психолого-педагогические механизмы развития критического мышления и разработаны методические рекомендации по их эффективному применению в образовательном процессе высшей школы.

Ключевые слова: интерактивные методы, критическое мышление, когнитивное развитие, педагогические инновации, проблемное обучение, аналитические навыки, высшее образование, кейс-стади.

In the modern higher education system, training competitive specialists who are capable of independent thinking and critical problem-solving is considered a priority task. In this context, the development of students' critical thinking has emerged as a significant scientific issue in both pedagogical theory and practice. In particular, the effective use of interactive teaching methods in the educational process is regarded as one of the key pedagogical factors in fostering critical thinking. Critical thinking encompasses students' abilities to analyze, evaluate, compare information, draw evidence-based conclusions, and make independent decisions. However, traditional monologic teaching methods are insufficient for adequately developing these skills. Therefore, organizing the educational process based on student-centered activities, dialogue, and interaction through interactive methods is methodologically essential. Interactive teaching methods ensure students' active participation as subjects of the learning process. Methods such as brainstorming, discussion, cluster, INSERT, KWL (Know–Want to know–Learned), case study, debate, and role-playing enable students to view problems from multiple perspectives, compare different viewpoints, and draw logically grounded conclusions. Through these methods, knowledge is not presented in a ready-made form but is acquired by students through exploration, analysis, and discussion. Improving the methodology for developing critical thinking primarily

requires the purposeful and systematic use of interactive methods. In this process, the didactic potential of each method, its alignment with lesson objectives, students' preparedness, and subject-specific characteristics must be taken into account. Methodological improvement demands that interactive methods be applied not randomly but within a pre-designed pedagogical technology framework. Additionally, the scientific structuring of questioning strategies plays a crucial role in fostering critical thinking. Open-ended, problem-based, and analytical questions activate students' thinking processes, encouraging reasoning and argumentation, thereby enhancing the effectiveness of interactive methods. Another important aspect of methodological improvement is aligning assessment processes with critical thinking criteria. Instead of traditional reproductive assessment, students' thinking processes, logically grounded responses, and approaches to problem-solving should be evaluated. This promotes responsibility for one's own opinions and the development of reflective skills. Improving methodologies aimed at developing students' critical thinking requires restructuring the educational process on a technological basis. The primary focus should be on the organizational mechanisms of pedagogical activity, the structure of learning tasks, and the functional interaction between teachers and students. This approach enables critical thinking to be developed not as an abstract goal but as a concrete pedagogical outcome. A central element of the improved methodology is the design of interactive tasks. These tasks are based on problem situations that require productive rather than reproductive student activity. The content of tasks is open-ended and includes situations that can be solved through multiple logical approaches, encouraging students to search for and justify alternative solutions. The sequence of applying interactive methods also plays a significant role in methodological improvement. Initially, students' prior knowledge and perceptions are identified; subsequently, problem situations are created to stimulate analytical activity; finally, generalization and reflection processes are organized to develop students' critical attitudes toward their own thinking. This phased approach ensures the internal logical coherence of the methodology. In interactive lessons, the role of the teacher undergoes a fundamental transformation. The teacher functions not as a source of knowledge but as a facilitator, guide, and coordinator of the learning process. Methodological guidance provided by the teacher should not restrict students' independent analysis but rather deepen their thinking activities.

The level of interactivity in the educational environment is also a key consideration in methodological improvement. Regular organization of discussion, debate, and argumentation among students promotes the development of logical coherence, argumentative culture, and analytical thinking. Furthermore, continuous monitoring and feedback are essential methodological conditions for developing critical thinking. Students' activities at each stage are analyzed to identify strengths and weaknesses in their thinking processes, allowing methodological interventions to be adjusted accordingly and ensuring flexibility in the educational process. In modern higher education, students' independent, logical, and critical thinking abilities are increasingly recognized as essential indicators of professional competence alongside knowledge acquisition. Developing students' skills in analyzing, evaluating information, comparing evidence, and drawing substantiated conclusions is a crucial pedagogical task. Interactive teaching methods serve as leading didactic tools in addressing this task, as they transform students from passive listeners into active participants in the learning process. Improving the methodology for developing critical thinking should be grounded in the theoretical and methodological foundations of contemporary pedagogical approaches. According to constructivist theory, knowledge is not received in a ready-made form but is constructed by students through problem situations, communication, and analytical activity. This process

enhances students' cognitive engagement, including their abilities to process information, identify logical relationships, and generalize findings. Critical thinking is also closely linked to affective and metacognitive dimensions, encompassing motivation, responsibility for one's opinions, and the ability to regulate one's own thinking processes. Interactive methods enable the comprehensive development of these components of critical thinking. In particular, problem-based learning, case studies, brainstorming, discussion, and debate foster students' abilities to analyze diverse perspectives, compare opposing viewpoints, and make evidence-based decisions. In case study methods, the analysis of real or simulated situations enhances students' abilities to identify cause-and-effect relationships and evaluate alternative solutions. The content and structure of learning tasks are of particular importance in improving critical thinking methodologies. Replacing reproductive tasks with open-ended, problem-based, and reflective tasks activates students' thinking activities. Such tasks promote not mechanical knowledge acquisition but the ability to analyze, reinterpret, and apply knowledge in practical contexts. Methodologically well-designed interactive tasks focus students' attention on the thinking process rather than solely on outcomes, contributing to effective critical thinking development. The phased application of interactive methods further ensures the internal coherence of the methodology. Initially, students' existing knowledge is assessed; subsequently, analytical thinking is stimulated through problem situations; finally, generalization and reflection are implemented. Aligning assessment with critical thinking criteria is also a vital component of methodological improvement. Instead of reproductive assessment, students' logical reasoning, thinking strategies, and problem-solving approaches should be evaluated. The use of formative and criterion-based assessment, self-assessment, and reflective analysis fosters responsibility and critical self-evaluation among students.

Conclusion

The analysis demonstrates that developing students' critical thinking in modern higher education is a key pedagogical factor influencing educational quality and professional training effectiveness. Given the limitations of traditional teaching methods, the systematic and purposeful application of interactive teaching methods ensures high effectiveness in developing students' independent thinking, analytical abilities, evaluative skills, and evidence-based reasoning. The research findings confirm that the improved methodology based on interactive methods contributes to the comprehensive development of cognitive, affective, and metacognitive components of critical thinking. Learning activities grounded in problem situations, open-ended tasks, and reflective practice activate students' productive rather than reproductive thinking, thereby strengthening their intellectual independence.

References.

1. Karimova, G.Q. (2021). Didactic foundations of using interactive methods in higher education. *Pedagogy and Psychology*, No. 4, pp. 45–50.
2. Muslimov, N.A., & Xodjayev, B.X. (2017). *Pedagogical Technologies*. Tashkent: Fan va texnologiya.
3. Yo'ldoshev, J.G., & Usmonov, S.A. (2018). *Modern Pedagogical Technologies*. Tashkent: O'qituvchi.
4. Saidahmedov, N. (2020). *Pedagogical Mastery and Innovative Education*. Tashkent: Fan.

5. Рахимова, Н., & Янгибоева, Ж. (2025). ВЛИЯНИЕ ПОСЛОВИЦ И ПОГОВОРОК НА ОБОГАЩЕНИЕ ЛЕКСИЧЕСКОГО ЗАПАСА И РАЗВИТИЕ РЕЧЕВЫХ НАВЫКОВ. *Modern Science and Research*, *4*(1), 416-427.

6. Рахимова, Н. (2024). СЕРГЕЙ АЛЕКСАНДРОВИЧ ЕСЕНИН–ПЕВЕЦ НАРОДНОЙ ДУШИ. *Medicine, pedagogy and technology: theory and practice*, *2*(10), 191-198.

7. Рахимова, Н. Ш. (2024). ПАТРИОТИЗМ КАК КУЛЬТУРНЫЙ И ИДЕЙНЫЙ ФЕНОМЕН В РУССКОЙ ЛИТЕРАТУРЕ. *MEDICINE, PEDAGOGY AND TECHNOLOGY: THEORY AND PRACTICE*, *2*(12), 95-104.

8. Рахимова, Н. (2025). ВЛИЯНИЕ СОВРЕМЕННОГО РУССКОГО ЯЗЫКА НА ЭФФЕКТИВНОСТЬ КОММУНИКАЦИИ СТУДЕНТОВ. *Modern Science and Research*, *4*(1), 54-66.