

## ENHANCING CRITICAL THINKING SKILLS AMONG MEDICAL STUDENTS: STRATEGIES AND OUTCOMES

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**Abstract:** *This scientific article explores various methods for fostering critical thinking skills among medical students, recognizing the importance of this cognitive ability in the complex and dynamic field of healthcare.*

**Keywords:** *Critical thinking, Medical education, Cognitive skills, Problem-solving, Active learning, Case-based learning, Reflective practice, Simulation, Inquiry-based learning, Curriculum design.*

Crisis of the system of professional and general education indicates a gap between sharply changed living conditions and educational system, its goals, types, content and teaching technologies. Necessity and inevitability the relationship between innovation and tradition in the development of pedagogical science and practice does not cause anyone doubts. These circumstances lead to the conclusion that in modern conditions building an education strategy on the assimilation of ready-made knowledge is already not enough. Fundamental change is important pedagogical and methodological approaches to the process training, in which knowledge can be complete only if the mechanisms of personality development are included in the process of assimilation. Necessary creation and use of such teaching methods and technologies that would contribute to the development informational and cognitive independence students, activation of their subjectivity. Information-cognitive independence is associated with changes in students' ideas about the process learning and one's place in it, with the transition from information consumption to its independent active comprehension. The

study investigates the effectiveness of different educational approaches and interventions, aiming to provide evidence-based recommendations for educators and institutions seeking to enhance critical thinking in their medical curricula. The research methods involve a comprehensive review of existing literature, including experimental studies, observational analyses, and case studies, to identify successful strategies and their impact on students' critical thinking abilities.

Based on these characteristics of the critical thinking, follow the principles of constructing a technology for the development of critical thinking:

- information richness of educational and practical material for the use of arguments, evidence or refutations based on specific facts, sources, data;
- communication skills in the process of understanding the problem and discussing it, taking into account the fact that:
  - this thinking is individual and independent, at the same time it is social, because it manifests itself in disputes, discussions, discussions and public speeches;
  - motivation and need for knowledge - based on the fact that the starting point of thinking activities in general and the manifestation of a critical mind in particular, is reflection, which is possible provided that a person is motivated to learn, understand, comprehend, establish the truth or get a positive result;
  - scientific nature, reliability and accessibility of information - the ability and skills to determine the value of information necessary for the formation critical thinking.

Properties of critical thinking that allow us to recognize it as a personal achievement of the individual, are:

- reflexivity - the ability to work not only with ready-made knowledge, but also with one's own ways of obtaining knowledge;
- pragmatism - the ability to apply acquired knowledge in practice;
- subjectivity - "personality" of the acquired knowledge, its appropriation by a person, embeddedness in the system of experience.

**Research Methods:** Conducted a thorough review of academic literature on critical thinking in medical education. Analyzed studies focusing on diverse educational strategies and their impact on critical thinking development. **Observational Analysis:** Observed and documented teaching methodologies in selected medical education programs. Evaluated the integration of critical thinking components in lectures, case discussions, and practical sessions.

**Experimental Studies:** Designed and implemented controlled experiments to assess the effectiveness of specific critical thinking interventions.

Collected quantitative and qualitative data to measure changes in students' critical thinking skills.

**Research Results:** **Active Learning Strategies:** Integration of problem-based learning and case discussions significantly improved students' critical thinking skills. Small group activities and debates enhanced collaborative thinking and analytical abilities.

**Simulation and Practical Application:** Hands-on experiences, such as medical simulations and clinical rotations, positively correlated with heightened critical thinking capabilities. Real-world application of knowledge facilitated the transfer of theoretical concepts to practical problem-solving.

**Reflective Practice:** Incorporating reflective journals and portfolios promoted metacognition and self-awareness, contributing to improved critical thinking.

**Inquiry-Based Learning:** Introduction of inquiry-based projects and research assignments stimulated curiosity and analytical thinking among medical students.

We conducted a diagnostic interview among students of the Tashkent Medical Academy (TMA). The study took participation of 150 first-year students. They were asked to answer questions regarding the main difficulties in educational activities, their causes and options for overcoming difficulties. During the diagnostics, the following results were obtained. The main difficulties of educational activities are related to with

a lack of time (45%), in second place - a large amount of information (30%), complexity of the material indicated by 13% of respondents. Among other options (12%) there was an inconvenient schedule, a long adaptation process, etc. It should be noted that only 1/3 of respondents can observe a clear subject position. Namely, 37% of diagnosed students indicated that the problems arising in the process of educational activities, are connected and covered directly in themselves. The following answer options were offered: “I don’t know how to properly organize my time”, “my own laziness is the cause of many difficulties”, “I often underlearn and launch the material”...

**Conclusions:** The findings of this study underscore the significance of employing a multifaceted approach to develop critical thinking skills in medical students. Integrating active learning strategies, simulation exercises, reflective practices, and inquiry-based learning into medical curricula proves beneficial. Educators should consider a balanced combination of these methods to cultivate a holistic approach to critical thinking, preparing students for the complex decision-making demands of the medical profession. Student with developed critical thinking thinking, is a self-organizing subject of the educational process, capable of its own educational activities, which are characterized by:

- freedom to choose educational trajectories and ways to solve problems of professional development;
- productive interaction between teacher and student, their mutual enrichment;
- reflection, awareness and development of its goals and meanings;
- actualization of the problem of personal achievements based on awareness of one’s uniqueness and self-worth;
- creative forecasting, focused on the student developing conscious plans, scenarios for their future professional life.

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