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FACTORS IN DEVELOPING CRITICAL THINKING SKILLS IN PRIMARY SCHOOL STUDENTS WITHIN THE EDUCATIONAL PROCESS

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Abstract

The development of critical thinking skills in primary school students has become one of the most important objectives of modern education. In an era characterized by rapid technological advancement, information overload, and global interconnectedness, the ability to analyze, evaluate, and synthesize information is essential. This article explores the key factors influencing the formation of critical thinking skills among primary school learners within the educational process. It examines psychological, pedagogical, methodological, social, and technological dimensions that contribute to effective critical thinking development. Special attention is given to teacher competence, learning environment, curriculum design, instructional strategies, assessment approaches, and family involvement. The article also discusses the role of active learning methods such as problem-based learning, collaborative learning, questioning techniques, and reflective practices. Based on contemporary educational research and theoretical perspectives, this study highlights practical recommendations for fostering critical thinking in early education settings. The findings suggest that a systematic, learner-centered, and supportive educational environment



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critical thinking. Piaget's theory of cognitive development suggests that children in primary school (concrete operational stage) begin to develop logical thinking skills³. At this stage, they can classify objects, understand cause-and-effect relationships, and consider different perspectives. Therefore, primary education offers a strategic opportunity to cultivate critical thinking through structured guidance. Vygotsky's concept of the Zone of Proximal Development (ZPD) emphasizes the importance of social interaction and scaffolding in cognitive growth⁴. Through collaboration with teachers and peers, children gradually acquire higher-level thinking skills. Thus, theoretical frameworks confirm that critical thinking is not an innate ability but a skill developed through guided practice and social interaction.

One of the most significant factors in developing critical thinking is the teacher's professional competence. Teachers who understand the principles of critical pedagogy and cognitive development are better equipped to design activities that stimulate inquiry and reflection.

Teachers play several essential roles:

- Facilitator of discussion
- Designer of problem-solving tasks
- Provider of constructive feedback
- Model of reflective thinking

Research shows that when teachers use open-ended questions instead of factual recall questions, students demonstrate higher engagement and analytical thinking⁵. For example, instead of asking, "What is the main character's name?" a teacher may ask, "Why do you think the main character made that decision?" Professional development programs that train teachers in interactive methodologies significantly enhance classroom practices.



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Curriculum structure strongly influences the formation of critical thinking skills. A curriculum that emphasizes memorization limits students' cognitive growth, while one that integrates inquiry-based tasks encourages deeper understanding. Effective curriculum design includes:

- Problem-based activities
- Interdisciplinary connections
- Real-life contexts
- Analytical exercises

For instance, mathematics lessons can include real-world problem scenarios, while language classes can involve text analysis and interpretation. Embedding critical thinking tasks across subjects ensures systematic development rather than isolated practice. Modern educational reforms worldwide increasingly incorporate competence-based approaches that prioritize skills over rote knowledge².

Active learning strategies are central to developing critical thinking. Traditional lecture-based instruction often results in passive reception of information. In contrast, active methodologies engage students in analysis and dialogue.

1 Problem-Based Learning

Problem-based learning (PBL) encourages students to explore complex questions and propose solutions⁷. In primary classrooms, simple real-life problems can be presented for group discussion.

2 Collaborative Learning

Group work promotes perspective-taking and reasoning. When students justify their opinions to peers, they practice argumentation and evaluation⁸.

² Bloom, B. S. (1956). *Taxonomy of Educational Objectives*. Longmans.



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3 Questioning Techniques

Effective questioning stimulates curiosity and reflection. Socratic questioning methods guide learners to examine assumptions and evidence⁹.

4 Reflection Activities

Reflection journals and self-assessment tasks help students analyze their thinking processes and identify areas for improvement.

Developing critical thinking skills in primary school students is a multifaceted process influenced by pedagogical, psychological, social, and technological factors. Teachers play a central role in designing meaningful learning experiences, while curriculum structure, classroom environment, assessment practices, and family involvement further shape students' cognitive growth.

Early cultivation of analytical and reflective thinking prepares children for academic success and responsible citizenship. Therefore, educational systems must prioritize critical thinking as a fundamental objective of primary education.

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