

**PROJECT-BASED LEARNING IN THE DEVELOPMENT OF CRITICAL
THINKING SKILLS AMONG STUDENTS**

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Abstract

Project-based learning is an active pedagogical approach that develops students critical thinking, problem-solving ability and collaboration skills. The aim of this article was to analyze the role of project-based learning in the development of critical thinking. The findings show that research tasks, real-life problems, teamwork and presentation activities improve analysis, evaluation, creativity and independent decision-making.

Keywords: project-based learning, critical thinking, problem solving, student activity, educational innovation

Introduction

Critical thinking is one of the most important skills required in contemporary education. Students should be able to analyze information, compare viewpoints, justify decisions and solve complex problems. Traditional lecture-based instruction often provides limited opportunities for active thinking. Project-based learning offers a practical alternative by engaging students in meaningful tasks that require inquiry, planning, cooperation and reflection. Through projects, learners connect theoretical knowledge with real situations and produce tangible outcomes. This makes project-based learning relevant for developing critical thinking in schools and universities.

Materials and Methods

The study was based on analysis of pedagogical literature and project implementation practices. Project stages such as problem selection, planning, information search, data analysis, product creation and presentation were examined. Critical thinking indicators included ability to formulate questions, evaluate sources, justify conclusions and reflect on results.

Results

The analysis showed that project-based learning increases students critical thinking. Learners became more active in searching for information and evaluating its reliability. Team discussions helped students compare ideas and defend arguments. Project presentations improved logical organization and evidence-based explanation. Reflection after project completion developed awareness of strengths and weaknesses. Students also showed increased motivation because projects were connected with practical problems.

Discussion

Project-based learning supports critical thinking because it requires students to work with open-ended problems rather than memorize ready-made answers. It integrates cognitive, social and practical learning. The teacher acts as a facilitator who guides inquiry without removing student responsibility. Effective projects require clear objectives, assessment criteria and sufficient time. Challenges may include uneven participation and difficulty in evaluating individual contribution. These issues can be addressed through rubrics and peer assessment.

Conclusion

Project-based learning is an effective method for developing critical thinking skills. It promotes analysis, problem solving, collaboration and reflective learning. Its wider use can improve educational quality and prepare students for professional and social challenges.



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