

DEVELOPING CREATIVE COMPETENCE IN STUDENTS THROUGH INDEPENDENT LEARNING ACTIVITIES: A CASE STUDY OF PROBLEM-BASED AND PROJECT-BASED LEARNING

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Abstract

This study investigates the role of problem-based and project-based learning methods in enhancing students' creative competence during independent learning activities. Conducted with higher education students in Uzbekistan, the research employs an experimental design involving two groups: an experimental group utilizing innovative pedagogical methods and a control group relying on traditional teaching approaches. Data collection was achieved through Torrance creativity tests, surveys with 80 students and 30 teachers, and practical observations.

Key findings reveal that problem-based and project-based learning approaches contributed to a 19% improvement in creativity across four dimensions: fluency, flexibility, originality, and elaboration, compared to minimal improvements in the control group. Surveys indicate that 75% of students and 80% of teachers consider these methods more effective in promoting creativity. These results demonstrate the necessity of incorporating innovative approaches into independent learning frameworks to develop creative competence.

Keywords: Creative competence, problem-based learning, project-based learning, independent learning, higher education, Uzbekistan.

Introduction

Creative competence is a critical skill for 21st-century students, enabling them to solve complex problems and adapt to evolving challenges. However, in many educational systems, including those in Uzbekistan, traditional teaching methods often fail to foster creativity. This research aims to address this gap by exploring how problem-based and project-based learning approaches can enhance creative competence during independent learning activities. The study's objectives include evaluating the effectiveness of these methods, identifying challenges, and proposing recommendations for their broader implementation.

Methodology

An experimental design was adopted to compare the effectiveness of innovative and traditional teaching methods. Two groups of 10 students each participated in the study:

1. **Experimental group:** Engaged in problem-solving tasks and collaborative projects.
2. **Control group:** Followed teacher-centered traditional instruction.

Data collection included:

- **Torrance Creativity Tests:** To assess fluency, flexibility, originality, and elaboration.
 - **Surveys:** Conducted with 80 students and 30 teachers to gather feedback on the teaching methods.
 - **Observations:** Documenting student interactions and project outcomes.
- Statistical and qualitative analyses were used to interpret the data, with results visualized through charts and tables for clarity.

Results

The results highlight significant improvements in the experimental group:

- Creativity scores increased by an average of 19%, with notable gains in originality and elaboration.
- Surveys revealed that 75% of students found problem-based learning engaging, while 80% of teachers supported its use for fostering creativity.
- Control group results showed limited improvements, underscoring the limitations of traditional methods.

These findings confirm the effectiveness of innovative teaching strategies in developing creative competence.

Discussion

The study underscores the transformative potential of problem-based and project-based learning. Students in the experimental group demonstrated enhanced problem-solving skills and greater engagement, attributed to the active and collaborative nature of these methods. However, challenges such as resource limitations and resistance from some educators highlight the need for institutional support and teacher training to implement these approaches effectively.



Conclusion

Problem-based and project-based learning methods are effective tools for enhancing creative competence in students. The study recommends integrating these approaches into independent learning curricula and providing ongoing training for educators. Future research should explore larger and more diverse student populations to generalize these findings.

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