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Transforming Classroom Practice Through Effective Teaching Methods: Evidence from Educational Research

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Abstract

This study investigates how effective teaching methods transform classroom practices by integrating evidence from both quantitative and qualitative data. Employing a mixed-methods research design, the study involved 120 students and 10 English as a Foreign Language (EFL) teachers selected through cluster random and purposive sampling techniques. Data were collected using questionnaires, classroom observations, semi-structured interviews, and document analysis to provide a comprehensive understanding of instructional practices and learning outcomes. The quantitative findings revealed that students demonstrated highly positive perceptions of the implemented teaching methods, with an overall mean score of 4.14 (83%), categorized as very good. Among the measured variables, contextual learning (86%) and collaborative engagement (84%) showed the highest levels of effectiveness, followed by student-centered learning (82%) and learner autonomy (79%). Inferential statistical analysis further indicated significant differences ($p < 0.05$) in learning outcomes between students taught using innovative approaches such as Problem-Based Learning (PBL) and Project-Based Learning (PjBL) and those taught using conventional methods, with PjBL showing the strongest impact. Qualitative findings supported these results, revealing increased student engagement, improved collaboration, and more meaningful learning experiences. Students were observed to be more active, confident, and motivated when participating in interactive and context-based learning activities. However, several challenges were identified, including time constraints, diverse student abilities, and the need for greater teacher readiness in implementing innovative pedagogies. Therefore, the study concludes that effective teaching methods significantly enhance classroom practices by promoting active learning, collaboration, and improved academic performance. These findings suggest that adopting student-centered approaches is essential for creating dynamic and meaningful learning environments, while also highlighting the importance of addressing implementation challenges to ensure sustainable educational transformation.

Keywords: *Effective Teaching Methods, Classroom Transformation, Contextual Learning, Learner Autonomy*

1. Introduction

The rapid transformation of education in the 21st century has fundamentally reshaped expectations regarding how teaching and learning should occur in classrooms. In an era characterized by globalization, digitalization, and increasing learner diversity, traditional teacher-centered approaches where knowledge is transmitted passively from teacher to student are no longer adequate to meet contemporary educational demands. Instead, there is a growing emphasis on transforming classroom practice through effective teaching methods that promote active engagement, critical thinking, collaboration, and learner autonomy. This paradigm shift reflects a broader movement toward meaningful learning, where students are not merely recipients of information but active constructors of knowledge.

A substantial body of educational research has highlighted the importance of student-centered pedagogies in achieving these goals. Barron and Darling-Hammond (2008) argue that inquiry-based and cooperative learning approaches significantly enhance students' conceptual understanding by engaging them in authentic problem-solving activities. Similarly, Biggs and Tang (2011) introduce the concept of constructive alignment, emphasizing that effective teaching requires the alignment of learning objectives, instructional strategies, and assessment practices to facilitate deep learning. Within this framework, teaching methods are not isolated techniques but integral components of a coherent system that shapes students' learning experiences.

In recent years, specific instructional models such as Project-Based Learning (PjBL) and Problem-Based Learning (PBL) have gained considerable attention for their effectiveness in transforming classroom environments. Research indicates that PjBL enables students to explore real-world problems through sustained inquiry, thereby enhancing engagement, collaboration, and knowledge retention. Likewise, PBL encourages learners to develop critical thinking and problem-solving skills by confronting complex, authentic issues. In the context of English as a Foreign Language (EFL) education, Fang et al. (2022) found that interactive and strategy-based instruction significantly improves reading comprehension and learner motivation. Supporting this, Kim (2015) demonstrated that active learning approaches contribute to the development of fluency and higher-order cognitive skills, which are essential for effective language acquisition.

Moreover, the role of motivation and learner engagement has been widely recognized as a key factor in successful learning. Sinatra (2011) emphasizes that students are more likely to achieve meaningful learning outcomes when they are intrinsically motivated and actively involved in the learning process. This perspective is further reinforced by UNESCO (2021), which highlights the importance of culturally responsive and contextually relevant pedagogy in fostering inclusive and sustainable education. These approaches not only enhance academic achievement but also support the development of learners' identities, values, and social competencies.

Another important dimension of effective teaching methods is their capacity to create collaborative and interactive learning environments. Research consistently shows that collaborative learning promotes deeper understanding by allowing students to exchange ideas, negotiate meaning, and construct knowledge collectively. Additionally, contextual learning—where instructional content is linked to real-life situations has been found to improve students' ability to apply knowledge in practical contexts. These elements are essential in preparing learners to navigate complex real-world challenges and to become independent, lifelong learners.

Despite the extensive research supporting the effectiveness of innovative teaching methods, several critical gaps remain. First, much of the existing literature tends to examine individual teaching approaches such as PjBL, PBL, or cooperative learning in isolation. This fragmented perspective limits a comprehensive understanding of how multiple teaching methods interact to produce holistic transformations in classroom practice. Second, there is a lack of integrative empirical studies that simultaneously investigate multiple dimensions of classroom transformation, including student-centered learning, collaborative engagement, contextual understanding, and learner autonomy. Most studies focus on single outcomes, such as academic achievement or motivation, without capturing the complexity of classroom dynamics.

Third, while theoretical frameworks for effective teaching are well established, there is insufficient empirical evidence demonstrating how these frameworks are implemented in actual classroom settings and how they influence both teaching practices and student experiences. In particular, the transformation of teachers' roles—from knowledge transmitters to facilitators of learning—remains underexplored in relation to its impact on student outcomes. Furthermore, limited attention has been given to the contextual factors that shape the effectiveness of teaching methods, such as classroom environment, learner characteristics, and cultural background.

Addressing these gaps, the present study aims to provide a comprehensive investigation into how effective teaching methods transform classroom practice based on empirical evidence. Unlike previous studies that focus on isolated variables, this research adopts an integrative approach by examining multiple dimensions of learning, including student participation, collaborative engagement, contextual learning, and learner autonomy. By combining quantitative and qualitative data, the study seeks to offer a more nuanced understanding of how teaching methods influence both the process and outcomes of learning.

Ultimately, this study contributes to the field of educational research by bridging the gap between theory and practice. It provides empirical evidence that supports the adoption of innovative, student-centered teaching methods and offers practical insights for educators, policymakers, and curriculum developers. In doing so, it underscores the importance of transforming classroom practices to create more effective, engaging, and meaningful learning environments that are aligned with the demands of modern education.

2. Method

2.1 Participants

This study involved participants drawn from secondary-level educational settings, consisting of both teachers and students to provide a comprehensive perspective on classroom transformation. A total of 120 students and 10 English as a Foreign Language (EFL) teachers from selected schools participated in the study. The students were selected using cluster random sampling, ensuring representation across different classes, while the teachers were chosen through purposive sampling based on their experience in implementing innovative teaching methods such as Problem-Based Learning (PBL) and Project-Based Learning (PjBL).

The student participants varied in terms of academic achievement and learning characteristics, enabling the study to examine how different teaching methods impact diverse learners. Meanwhile, the teachers had a minimum of three years of teaching experience and were familiar with student-centered pedagogies, ensuring the reliability of the instructional practices observed in this research

2.2 Data Collection

2.2.1 Instrument of Collecting Data

This study employed a mixed-methods approach, utilizing both quantitative and qualitative instruments to obtain comprehensive data. A structured questionnaire was administered to students to measure their perceptions of teaching methods, engagement, and learning outcomes. The questionnaire used a 5-point Likert scale ranging from strongly disagree to strongly agree and covered four main constructs: student-centered learning, collaborative engagement, contextual learning, and learner autonomy. In addition, classroom observations were conducted using a structured checklist to assess the implementation of teaching methods, including aspects such as teacher facilitation, student participation, and instructional strategies. To gain deeper insights, semi-structured interviews were carried out with teachers to explore their experiences, challenges, and perspectives on transforming classroom practices through effective teaching methods. Furthermore, document analysis was conducted on teaching materials, lesson plans, and student work to support and triangulate the findings obtained from questionnaires, observations, and interviews.

2.2.2 Techniques for Collecting Data

The data collection process was carried out in several stages to ensure systematic and reliable results. In the preparation stage, the researcher developed and validated the research instruments through expert judgment to ensure content validity. In the implementation stage, questionnaires

were distributed to students after the application of teaching methods, while classroom observations were conducted during teaching and learning activities to capture real-time instructional practices. Additionally, interviews with teachers were conducted after classroom implementation to gain deeper insights into their experiences and perspectives. In the documentation stage, relevant materials such as lesson plans and student assignments were collected to provide further evidence of classroom transformation. To ensure data validity, triangulation techniques were applied by comparing findings from multiple data sources, including questionnaires, observations, interviews, and documents.

2.3 Data Analysis

The data were analyzed using both quantitative and qualitative techniques to provide a comprehensive understanding of the findings. Quantitative data from the questionnaires were analyzed using descriptive and inferential statistics with the assistance of SPSS, including percentage and mean scores to determine students' perceptions of teaching methods, as well as independent sample t-tests and ANOVA to examine differences in learning outcomes based on teaching methods and student characteristics. Meanwhile, qualitative data obtained from observations, interviews, and document analysis were analyzed using thematic analysis, which involved data reduction through coding and categorization, data display by organizing emerging themes, and conclusion drawing along with verification. Finally, the results from both quantitative and qualitative analyses were integrated to generate a holistic interpretation of how effective teaching methods contribute to transforming classroom practices.

3. Results

This section presents the findings of the study by integrating **quantitative** and **qualitative** data to provide a comprehensive understanding of how effective teaching methods transform classroom practices.

3.1 Quantitative Findings

The quantitative data were obtained from students' questionnaire responses, focusing on four key constructs: student-centered learning, collaborative engagement, contextual learning, and learner autonomy.

Table 1. Students' Perceptions of Teaching Methods

No	Variable	Mean Score	Percentage (%)	Interpretation
1	Student-Centered Learning	4.12	82%	Very Good
2	Collaborative Engagement	4.20	84%	Very Good
3	Contextual Learning	4.28	86%	Excellent
4	Learner Autonomy	3.95	79%	Good
	Average	4.14	83%	Very Good

Table 1 shows that students had highly positive perceptions of the implementation of effective teaching methods, with an overall mean score of 4.14 (83%). Contextual learning achieved the highest score (86%), indicating that students strongly benefited from learning activities connected to real-life contexts. Collaborative engagement (84%) and student-centered learning (82%) also demonstrated strong effectiveness, suggesting that interactive and participatory approaches significantly enhanced learning experiences. Learner autonomy, although slightly lower (79%), still indicated a positive outcome, showing that students were gradually developing independent learning skills.

Table 2. Inferential Analysis of Learning Outcomes

Comparison Group	Mean Difference	Sig. (p-value)	Interpretation
PBL vs Conventional Method	12.45	0.001	Significant Difference
PjBL vs Conventional Method	14.78	0.000	Significant Difference
Comparison Group	Mean Difference	Sig. (p-value)	Interpretation

The inferential analysis indicates statistically significant differences ($p < 0.05$) in learning outcomes between students exposed to innovative teaching methods (PBL and PjBL) and those taught using conventional approaches. Project-Based Learning (PjBL) showed the highest mean difference (14.78), suggesting it had the strongest impact on student achievement. Additionally,

students with higher learner autonomy performed significantly better than those with lower autonomy, highlighting the importance of fostering independent learning skills. Below is a visual representation of students' perceptions:



Figure 1. A visual representation of students' perceptions:

The figure illustrates students' perceptions of teacher feedback practices across five key aspects, categorized into three performance levels: high (Level 5 or 6), medium (Levels 2–4), and low (Below Level 2). Overall, the data indicate that a considerable proportion of students fall into the low-performance category across all feedback dimensions, suggesting that teacher feedback is not yet optimally effective in supporting student learning. The highest percentages are consistently observed in the “Below Level 2” category, reaching up to 50% in areas such as advising students on how to reach learning goals and identifying areas for improvement. Similarly, other aspects such as providing feedback on strengths and guiding performance improvement also show relatively high percentages in the lower category (46–47%). In contrast, the proportion of students experiencing high-quality feedback (Level 5 or 6) is comparatively lower, ranging from 34% to 43%. The strongest aspect appears to be teachers informing students about areas for improvement (43%), while the weakest is providing clear information about overall course performance (34%). These findings suggest that although some students benefit from effective feedback, many still lack clear and consistent guidance, highlighting the need for more structured, continuous, and student-centered feedback practices to enhance learning outcomes.

3.3 Qualitative Findings

The qualitative data from observations, interviews, and document analysis revealed several key themes:

1. Increased Student Engagement

Classroom observations showed that students were more active and participative during PBL and PjBL sessions. Teachers reported that students asked more questions, engaged in discussions, and demonstrated higher motivation.

“Students are more enthusiastic and confident when they work on projects and solve real-life problems compared to traditional lessons.” (Teacher Interview)

2. Development of Collaborative Skills

Students demonstrated improved teamwork and communication skills. Group activities encouraged peer learning and knowledge sharing.

“Working in groups helps us understand the material better because we can discuss and share ideas.” (Student Response)

3. Contextual and Meaningful Learning

Document analysis and classroom observation indicated that students better understood the material when it was connected to real-life contexts.

“Learning becomes more meaningful when students relate the lesson to their daily experiences.” (Teacher Interview)

4. Challenges in Implementation

Despite the benefits, some challenges were identified, including limited time, varying student abilities, and the need for teacher readiness.

“It takes more time to prepare and implement these methods, especially in large classes.” (Teacher Interview)

3.4 Integration of Findings

The integration of quantitative and qualitative findings confirms that effective teaching methods significantly transform classroom practices. Quantitatively, students showed high levels of engagement and improved learning outcomes, while qualitatively, the data revealed enhanced participation, collaboration, and meaningful learning experiences. However, both data sources also highlight the importance of addressing implementation challenges to maximize the effectiveness of these teaching methods.

The findings demonstrate that the adoption of student-centered teaching methods such as PBL and PjBL leads to significant improvements in student engagement, learning outcomes, and classroom interaction. The combination of statistical evidence and real classroom experiences provides strong support for the role of effective teaching methods in transforming modern educational practices.

4. Discussion

The findings of this study demonstrate that the implementation of effective teaching methods, particularly Problem-Based Learning (PBL) and Project-Based Learning (PjBL), significantly contributes to transforming classroom practices. These results are strongly supported by both quantitative and qualitative data, and they align with a wide range of previous studies in educational research.

First, the quantitative findings revealed that students' perceptions of student-centered learning (82%), collaborative engagement (84%), and contextual learning (86%) were categorized as very good to excellent. These results are consistent with the study by Linda Darling-Hammond and Brigid Barron, who found that student-centered and inquiry-based learning significantly enhance meaningful learning by engaging students actively in knowledge construction. Similarly, the high percentage in contextual learning supports the findings of John Dewey, who emphasized that learning becomes more effective when it is connected to real-life experiences. This indicates that integrating real-world contexts into classroom instruction plays a crucial role in improving students' understanding and retention.

Furthermore, the inferential statistical analysis showed significant differences between students taught using innovative teaching methods and those taught using conventional approaches ($p < 0.05$). This finding is in line with research conducted by Hmelo-Silver, which demonstrated that PBL enhances students' problem-solving skills and cognitive development. In addition, the higher effectiveness of PjBL compared to conventional methods supports the findings of Musa Almula, who reported that project-based learning improves student engagement, academic performance, and collaboration skills. Therefore, this study reinforces the argument that active learning strategies are more effective than traditional teacher-centered approaches.

From the qualitative perspective, the findings revealed increased student engagement, improved collaboration, and more meaningful learning experiences. These results are consistent with the work of Lev Vygotsky, whose sociocultural theory highlights the importance of social interaction in cognitive development. The observed improvement in collaborative skills among students supports Vygotsky's concept of the Zone of Proximal Development (ZPD), where learners

construct knowledge through interaction with peers and teachers. Additionally, the finding that students became more active and confident aligns with Jean Piaget, who argued that learners actively construct knowledge through experience and interaction with their environment.

Moreover, the development of learner autonomy (79%) in this study is supported by Barry Zimmerman, who emphasized that self-regulated learning plays a critical role in academic success. Although learner autonomy showed slightly lower results compared to other variables, it still indicates a positive shift toward independent learning. This suggests that while effective teaching methods promote autonomy, continuous guidance and scaffolding are still necessary to fully develop students' self-regulated learning skills.

However, this study also identified several challenges, including time constraints, varying student abilities, and the need for teacher readiness. These findings are consistent with research by John Hattie, who noted that the effectiveness of teaching strategies depends heavily on how they are implemented and adapted to specific classroom contexts. Similarly, studies on instructional innovation have shown that without proper training and support, teachers may struggle to apply student-centered methods effectively.

Importantly, this study addresses a gap in previous research by integrating both quantitative and qualitative evidence to examine classroom transformation holistically. While many prior studies have focused on single teaching methods or specific outcomes, this research demonstrates how multiple approaches (PBL and PjBL) collectively contribute to improving engagement, collaboration, and learning outcomes. This comprehensive perspective provides stronger empirical support for the role of effective teaching methods in educational transformation.

In conclusion, the findings of this study confirm that effective teaching methods significantly enhance classroom practices by fostering active learning, collaboration, and meaningful engagement. Supported by previous research and theoretical frameworks, these results highlight the importance of adopting innovative, student-centered pedagogies while also addressing practical challenges in their implementation.

5. Conclusion

Based on the findings of this study, it can be concluded that the implementation of effective teaching methods, particularly Problem-Based Learning (PBL) and Project-Based Learning (PjBL), plays a significant role in transforming classroom practices. The quantitative results indicate that students demonstrated highly positive perceptions of student-centered learning, collaborative engagement, and contextual learning, with an overall average of 83%, categorized as very good. In addition, inferential statistical analysis revealed significant differences in learning outcomes

between students taught using innovative teaching methods and those taught using conventional approaches, confirming the effectiveness of these methods in enhancing academic achievement.

From the qualitative perspective, the findings further support these results by showing that students became more active, engaged, and collaborative during the learning process. Learning activities that were connected to real-life contexts helped students develop deeper understanding and meaningful learning experiences. Moreover, the implementation of these teaching methods contributed to the development of learner autonomy, although it still requires continuous support and guidance to be fully optimized.

Despite these positive outcomes, the study also identified several challenges, including time constraints, differences in student abilities, and the need for greater teacher preparedness in applying innovative teaching strategies. These findings suggest that the success of effective teaching methods depends not only on their design but also on proper implementation and contextual adaptation.

Overall, this study concludes that effective teaching methods have a significant impact on improving student engagement, learning outcomes, and classroom interaction. Therefore, educators are encouraged to adopt and adapt student-centered approaches to create more dynamic, interactive, and meaningful learning environments. Future research is recommended to explore long-term impacts and develop practical frameworks to support the sustainable implementation of these methods across diverse educational contexts.

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