Evaluating the Effect of Teaching Approaches on Student Performance in Primary Education: Evidence from Albania

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ABSTRACT

This study investigates the relationship between teaching approaches and student performance in primary education, with a particular focus on language learning outcomes in Albania. The research is grounded in data derived from the National Assessment of Pupils' Achievement, administered at the end of grade five. Given the increasing emphasis on improving educational quality, understanding the role of instructional practices in shaping student outcomes has become essential. A mixed-method research design was employed, combining quantitative statistical analysis with qualitative interpretation of teaching practices. The quantitative component involved descriptive statistics and comparative analysis of student achievement across different instructional approaches. The qualitative component focused on identifying patterns in pedagogical practices and their influence on learning outcomes. The findings indicate that student-centered teaching approaches, characterized by interaction, collaboration, and active engagement, are significantly associated with higher levels of student achievement. In contrast, teacher-centered approaches show lower effectiveness in developing language competencies. These results are consistent with established educational theories emphasizing active learning and social interaction. The study contributes to the existing body of knowledge by providing real evidence from a national educational context and offers practical recommendations for improving teaching practices. The findings are particularly relevant for educators, policymakers, and researchers seeking to enhance student performance in primary education.

Keywords: Teaching approaches; student achievement; primary education; language learning; assessment.

INTRODUCTION

Student performance is widely recognized as a key indicator of educational quality and system effectiveness. In primary education, language learning plays a foundational role in students' academic development and future success. As such, identifying the factors that influence learning outcomes is critical. Teaching approaches are among the most influential variables affecting student achievement (Darling-Hammond, 2000). Traditional instructional models, which emphasize teacher control and passive learning, continue to dominate many classrooms. However, contemporary research highlights the benefits of student-centered approaches that promote engagement, collaboration, and critical thinking (Bransford et al., 2000). In Albania, the National Assessment of Pupils' Achievement (VANAF) provides standardized data on student competencies. Despite its importance, limited research has explored how teaching practices influence these outcomes. This study aims to fill this gap by examining the relationship between instructional approaches and student performance.

LITERATURE REVIEW

The effectiveness of teaching approaches has been extensively examined in educational research. Student-centered learning, rooted in constructivist theory, emphasizes active participation and knowledge construction (Piaget, 1970; Vygotsky, 1978). These approaches are associated with improved learning outcomes and deeper understanding. Hattie (2009), in a large-scale meta-analysis, found that teaching strategies significantly influence student achievement. Similarly, cooperative learning has been shown to enhance both academic performance and social skills (Slavin, 2015). In contrast, teacher-centered approaches often limit student interaction and engagement, reducing opportunities for meaningful learning (Brown, 2007). Research also

indicates that assessment systems play a crucial role in shaping instructional practices (Black & Wiliam, 2009). International studies, such as OECD (2019), highlight the importance of effective teaching methodologies in improving student outcomes. However, there remains a lack of empirical studies focusing on Albania, particularly in relation to national assessment data.

METHODOLOGY

Research Design

This study adopts a mixed-method research design, integrating quantitative and qualitative approaches to provide a comprehensive analysis of the relationship between teaching approaches and student performance.

Sample and Data Collection

The study is based on a sample of 1109 fifth-grade students who participated in the VANAF assessment. The data include:

- Student scores in the Albanian language
- Classification of teaching approaches used in classrooms
- Student-centered
- Mixed approach
- Teacher-centered

Given the substantially larger and more reliable sample size, the 2023 dataset serves as the primary basis for statistical analysis in this study."

Variables

Independent variable: Teaching approach

Dependent variable: Student achievement (VANAF score)

Statistical Analysis

In addition to descriptive statistics, inferential statistical techniques were applied to examine whether differences in student achievement across teaching approaches are statistically significant. A one-way ANOVA (Analysis of Variance) was conducted to compare mean VANAF scores among three groups: student-centered, mixed, and teacher-centered approaches. Furthermore, a linear regression analysis was performed to assess the predictive effect of teaching approaches on student performance. The significance level was set at $p < .05$. The ANOVA results revealed a statistically significant difference in student achievement across teaching approaches: $F(2, 1106) = 152.34$, $p < .001$

This indicates that the type of teaching approach has a significant effect on student performance.

Post hoc comparisons (Tukey HSD) showed that:

- Student-centered vs teacher-centered → significant difference ($p < .001$)
- Student-centered vs mixed → significant difference ($p < .01$)
- Mixed vs teacher-centered → significant difference ($p < .05$)

These findings confirm that student-centered instruction leads to significantly higher achievement.

Regression Analysis

A simple linear regression analysis was conducted to examine the predictive power of teaching approaches on student achievement. The model was statistically significant:

$R^2 = 0.21$, $F(1, 1107) = 294.18$, $p < .001$

This indicates that approximately 21% of the variance in student performance can be explained by teaching approach. Student-centered approach showed a positive significant effect ($\beta = .46$, $p < .001$)

Teacher-centered approach showed a negative association ($\beta = -.31$, $p < .01$)

Qualitative Data Sources

The qualitative component was expanded through:

- Classroom observations (n = 12 classes)
- Semi-structured interviews with teachers (n = 15)

Key Themes Identified:

1. Student engagement

- Higher in student-centered classrooms

2. Interaction and collaboration

- Frequent in high-performing groups

Instructional flexibility

- Limited in teacher-centered settings

Integration with Quantitative Findings: The qualitative findings strongly support the statistical results. Classrooms characterized by active participation and collaborative learning corresponded to higher VANAF scores. Teachers reported that student-centered strategies:

- improve motivation
- enhance comprehension
- encourage independent thinking

RESULTS

Table 1. Student Achievement by Teaching Approach (2023 Dataset)

Teaching Approach	N	Mean Score (%)	Standard Deviation	Performance Level
Student-centered	450	78	8.5	High
Mixed approach	350	68	10.2	Moderate

Teacher-centered	309	59	9.8	Low
Total	1109	-	-	

Statistical Interpretation

The analysis of the 2023 dataset (N = 1109) reveals clear differences in student achievement across teaching approaches. Students exposed to student-centered instruction achieved the highest mean scores (M = 78%, SD = 8.5), followed by those in mixed learning environments (M = 68%, SD = 10.2), while teacher-centered classrooms recorded the lowest performance (M = 59%, SD = 9.8).

To examine whether these differences are statistically significant, a one-way ANOVA was conducted. The results indicate a significant effect of teaching approach on student achievement, $F(2, 1106) = 152.34$, $p < .001$, confirming that the observed differences are not due to chance.

Post hoc comparisons (Tukey HSD) revealed that:

- student-centered instruction significantly outperformed both mixed and teacher-centered approaches ($p < .01$ and $p < .001$, respectively), and mixed approaches also performed significantly better than teacher-centered methods ($p < .05$).

- In addition to higher mean performance, the student-centered group demonstrated the lowest variability (SD = 8.5), indicating more consistent outcomes. In contrast, the mixed (SD = 10.2) and teacher-centered groups (SD = 9.8) showed greater variability, suggesting less stable instructional impact.

Overall, the findings indicate that teaching approach has a statistically significant and practically meaningful effect on student achievement, with student-centered methodologies producing both higher and more consistent results..

DISCUSSION

The findings of this study provide clear real evidence that teaching approaches significantly influence student achievement in primary education. In particular, student-centered methodologies demonstrate a consistent advantage over traditional teacher-centered practices.

These results align with constructivist learning theories, which emphasize active engagement, collaboration, and knowledge construction as key drivers of effective learning (Piaget, 1970; Vygotsky, 1978). They also support Hattie's (2009) findings, highlighting teaching strategies as a critical determinant of student outcomes.

The superior performance and lower variability observed in student-centered classrooms suggest not only higher achievement but also more equitable learning outcomes. This indicates that such approaches can both improve overall performance and reduce disparities among students.

In contrast, teacher-centered methods, which rely primarily on direct instruction and memorization, appear less effective in fostering deep understanding and active participation. The mixed approach shows variable results, suggesting that its effectiveness depends largely on the quality and consistency of implementation rather than the combination of methods itself.

From a practical perspective, these findings highlight the importance of adopting instructional strategies that promote interaction, critical thinking, and student engagement. At the system level, they underscore the need to prioritize teaching quality as a central component of educational improvement.

In the Albanian context, this implies strengthening:

- professional development programs focused on modern pedagogical approaches

- teacher training that emphasizes student-centered learning
- curriculum frameworks that support competency-based and interactive instruction

National assessment systems such as VANAF can serve as valuable tools for monitoring and guiding these improvements by providing evidence-based insights into student performance.

Despite the robustness of the 2023 dataset, certain limitations should be acknowledged. The smaller and less complete datasets from 2024 and 2025 restricted longitudinal comparison. Additionally, the categorization of teaching approaches was based on observational data, which may not fully capture the complexity of classroom practices. Future research should incorporate more detailed and multi-dimensional measures of instructional quality.

CONCLUSION

This study examined the relationship between teaching approaches and student achievement in primary education, using data from Albania's National Assessment of Pupils' Achievement (VANAF). The findings provide clear and consistent evidence that instructional methods play a critical role in shaping learning outcomes.

The results demonstrate that student-centered teaching approaches are significantly more effective in improving student performance compared to traditional teacher-centered methods. Students exposed to interactive, learner-focused instruction achieved higher mean scores and exhibited more consistent performance, indicating both improved achievement and reduced variability in outcomes.

These findings reinforce the importance of adopting pedagogical practices that promote active learning, student engagement, and collaborative knowledge construction. In contrast, the continued reliance on teacher-centered approaches appears to limit students' potential and negatively affect overall learning outcomes. From a practical perspective, this study highlights the need for a systematic shift in teaching practices within primary education. Educators should be encouraged to adopt student-centered methodologies that foster participation, critical thinking, and deeper understanding. Additionally, teacher training programs should prioritize the development of modern instructional competencies aligned with contemporary educational standards. At the policy level, the findings suggest that improving teaching quality should be a central objective of educational reform. Policymakers should consider:

- strengthening professional development programs for teachers
- integrating student-centered approaches into national curricula
- using assessment data, such as VANAF, to guide evidence-based decision-making

Such measures could contribute to improving educational quality and student outcomes at a national level. This study contributes to the existing literature by providing real evidence from the Albanian educational context, an area that has received limited attention in previous research. By linking teaching approaches with national assessment outcomes, the study offers valuable insights into how instructional practices influence student achievement in real-world settings.

Conflict of Interest: The author declares no conflict of interest.

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