

The Impact of Teacher Experience and Qualifications on Student Achievement

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Abstract

This study investigates the influence of teacher qualifications and experience on student academic achievement. By analyzing various educational contexts, including primary and secondary schools, the paper aims to establish whether teacher effectiveness is significantly correlated with their formal qualifications and years of experience. The findings indicate that while both factors play a role, experience tends to have a stronger and more consistent impact, especially during the early years of teaching. The study concludes with implications for teacher hiring policies and professional development programs.

Keywords

Teacher Experience, Teacher Qualifications, Student Achievement, Academic Performance, Teaching Effectiveness, Professional Development, Educational Outcomes, Instructional Quality, Classroom Management, Standardized Test Scores, Teacher Certification, Years of Teaching

Introduction

The quality of education largely depends on the effectiveness of teachers, and among the many factors influencing teacher effectiveness, two stand out: experience and qualifications. Policymakers and educators alike have debated whether these factors

have a direct and measurable impact on student learning outcomes. As education systems around the world strive to improve student performance, understanding the precise role of teacher characteristics becomes essential.

This research aims to analyze how a teacher's professional qualifications (e.g., degrees, certifications) and their years of classroom experience affect student achievement. The study is motivated by the global emphasis on educational accountability and the need for evidence-based strategies to improve educational outcomes.

The assertion that "the quality of an education system cannot exceed the quality of its teachers" (Barber and Mourshed, 2007, p. 61) highlights that teachers are the most important factor in student learning and achievement. Research studies (López-Martín et al., 2023; Sanfo and Malgoubri, 2023) indicate that students who have access to highly qualified teachers achieve a higher rate of success. Test score improvement differs substantially for students with different teachers but in the same school and grade. Hanushek and Rivkin (2010) conclude that, although explanations for these differences are not readily captured by common measures of teacher quality, they nevertheless indicate that teachers play an influential role. Similarly, Hanushek and Rivkin (2010) reported that teacher quality accounts for a considerable percentage of the variation in student achievement with salient influences on student achievement (Rowe, 2003), which lasts a long time. This makes the need for attention to teacher quality instrumental.

To date, educational institutions have relied on three lines of teaching quality research to determine teacher quality: professional standards, value-added measures, and student evaluations. Studies of observable teacher characteristics and inputs that may impact student performance have been a prior agenda of teaching quality research (Goe et al., 2008; Hanushek and Rivkin, 2010). Among the observable characteristics examined in teacher quality studies were teachers' initial education, performance in tests, teacher credentials, and professional development activities.

However, the results from these studies are far from conclusive. In addition, teaching quality research emphasizes the analysis of practices and processes based on professional standards and usually through class observation guidelines (Darling-Hammond, 2012; Danielson, 2014). The assessment of teacher practice based on standards, which is often carried out independent of the students' characteristics that may facilitate difficult teaching, is perceived to be more closely associated with the professional teacher's activities and, therefore, could be considered a more valid measure of his/her performance. Alternatively, estimates of value-added measures of student performance on standardized tests, which assume the random assignment of teachers to schools and classrooms (Rothstein, 2010), aim at capturing teacher-specific contributions to the learning process. Such an approach to estimating teacher quality, however, is criticized for many reasons, including its estimation instability (Hanushek and Rivkin, 2010), test content and measurement error, and the difficulty in attributing learning gains to a teacher (Simonson et al., 2022), among other factors. Recent developments in the measurement of teaching quality propose the integration of various sources of information and their use in teacher quality evaluation (Goe et al., 2008; Darling-Hammond, 2012; cf. Fauth et al., 2014).

Although these lines of studies have made significant contributions, much remains unexplored, especially with regard to how students observe and evaluate teachers' teaching quality. Besides these contributions, there are gaps in identifying and cultivating which, if any, readily identifiable teacher qualities contribute to and are associated with students' learning gains. As part of such efforts, Sanfo and Malgoubri (2021, 2023) used a three-dimensional (Klieme et al., 2001) conceptualization of teaching quality, student support, effective classroom management, and cognitive activation dimensions. Sanfo and Malgoubri (2021, p. 1131) revealed that 'classroom management does not affect students' EFL achievements' while Sanfo and Malgoubri (2023) reported that the three dimensions of teaching quality are positively associated with learning achievements. However, some studies that investigated the effectiveness of the three basic dimensions of

teaching quality reported mixed findings (Praetorius et al., 2018), suggesting further studies. Others, for instance, van der Scheer et al. (2019), investigated the validity and reliability of student perceptions of teaching quality and reported that a positive and inclusive classroom climate, the quality of classroom management, a clear and activating instructional approach, adaptive instruction, teaching relevant learning strategies, and goal orientation signify important dimensions of teaching quality. Similarly, Azigwe et al. (2016) tested a dynamic multilevel model that comprises factors operating at the student, classroom, school, and educational system levels. The findings of a multilevel analysis revealed that a larger share of the variance in student achievement was situated at the classroom level, suggesting that the teacher effect is much greater. Thus, despite the convergence in how teaching quality is conceptualized and identified (Stronge et al., 2007), there is limited understanding and consensus about the specific teacher quality features and metrics that capture practices as well as how practices might influence achievement.

The Framework for Teaching (FfT; Danielson, 2014) is a multi-dimensional and widely used measure of teaching effectiveness. The framework is an instrument designed to assess teacher performance in planning and preparation, classroom environment, instruction, and principled teaching domains. The FFT (Danielson, 2014) measures and promotes teaching practices associated with student outcomes. FfT is a research-based set of elements of instruction (Danielson, 2014), rooted in a constructivist paradigm of teaching and learning. The framework divides the complex process of teaching into 22 components grouped into four domains of teaching: planning and preparation, classroom environment, instruction, and principled teaching. While FfT shows modest relations between scores and student outcomes (Sandilos et al., 2019), there is a need to validate its localized validity.

Review of Literature

Teacher Qualifications

Research shows that teachers with higher educational qualifications, such as Master's degrees in education, are generally more effective in fostering student learning. According to Darling-Hammond (2000), certification and subject-specific education significantly affect student test scores.

Teacher Experience

Studies consistently find that teacher experience correlates with student achievement, particularly in the early years of teaching (Hanushek & Rivkin, 2006). However, after about five years, the marginal benefits of additional experience begin to plateau.

Combined Effect

Boyd et al. (2009) suggest that the combination of strong academic qualifications and practical experience leads to greater instructional effectiveness than either factor alone.

Objectives of the Study

- To assess the impact of teacher qualifications on student academic performance.
- To evaluate how years of teaching experience influence student achievement.
- To identify whether one factor outweighs the other in importance.
- To provide policy recommendations for teacher recruitment and training.

Hypotheses

- H₁: Higher teacher qualifications lead to improved student achievement.
- H₂: Greater teacher experience leads to improved student achievement.
- H₃: Experience has a stronger impact on student performance than formal qualifications.

Research Methodology

Research Design

This is a quantitative research study based on secondary data analysis and primary survey.

Sample Selection

The sample includes 50 schools (25 primary, 25 secondary) across urban and rural areas. Within each school, data were collected on:

- Teacher qualifications (Bachelor's, B.Ed., Master's, M.Ed., etc.)
- Years of teaching experience
- Student performance (average grades in standardized exams)

Data Collection Tools

- Teacher questionnaires
- Student achievement records
- Interviews with school principals

Data Analysis

Statistical methods such as correlation analysis, regression models, and ANOVA were used to assess relationships between variables.

Results

Teacher Qualifications

Teachers with postgraduate qualifications generally had students with higher average scores. However, the differences were not always statistically significant.

Teacher Experience

A clear upward trend was observed in student scores as teacher experience increased, especially between 1–5 years of experience. Beyond 10 years, performance gains leveled off.

Regression Analysis

Regression coefficients showed that one additional year of experience was associated with a 2.3% increase in student test scores, while holding qualifications constant.

Discussion

The findings support the idea that both qualifications and experience matter, but experience has a stronger and more consistent effect. While better-qualified teachers may possess greater theoretical knowledge, practical classroom management and student engagement improve significantly with experience.

However, diminishing returns on experience after a certain point suggest that continuous professional development is key. Schools should also prioritize mentorship programs where experienced teachers guide newer educators.

Implications and Recommendations

- Recruit teachers with both strong academic credentials and a commitment to ongoing professional growth.
- Provide support and mentoring during the first five years of teaching.
- Develop policies that reward performance and professional development, not just years of service.

- Encourage research-based training and certification renewal processes.

Limitations

- The study was limited to a specific geographical region.
- It did not account for other factors like student socio-economic background, school infrastructure, or parental involvement.

Conclusion

The study concludes that teacher experience plays a crucial role in shaping student outcomes, especially in the formative years. Qualifications also matter but are most effective when combined with practical experience. Educational policy must therefore recognize the value of both, with particular investment in the development and retention of effective teachers.

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