

THE ROLE OF TEACHERS IN STUDENTS' SUCCESS

Ergashova Iroda

Termez economics and service university Master's student

Abstract: *This study investigates the multifaceted role of teachers in determining students' academic success. Using a mixed-methods approach combining quantitative analysis of student performance data from 450 students across 15 schools and qualitative interviews with 30 educators, we examined how teacher quality, pedagogical strategies, and student-teacher relationships influence learning outcomes. Results indicate that teacher effectiveness accounts for approximately 30% of variance in student achievement scores, surpassing the impact of class size and available resources. Specifically, teachers who employ differentiated instruction, maintain high expectations, and establish positive rapport with students demonstrate significantly better student outcomes ($p < 0.001$). The study highlights that professional development focused on evidence-based teaching methods correlates strongly with improved student performance. These findings underscore the critical importance of investing in teacher quality and ongoing professional growth to enhance educational outcomes.*

Keywords: *Teacher effectiveness, Student achievement, Academic success, Pedagogical strategies, Differentiated instruction, Student-teacher relationship, Formative assessment, Professional development, Classroom management, Instructional support, Educational outcomes, Mixed-methods research, Hierarchical linear modeling (HLM), Teaching quality, Learning outcomes, Educational policy, Evidence-based teaching, Classroom climate, Student motivation, Reflective practice.*

Annotatsiya: *Ushbu tadqiqot o'qituvchilarning o'quvchilarning akademik muvaffaqiyatini belgilashdagi ko'p qirrali rolini o'rganadi. 15 ta maktabda tahsil olayotgan 450 nafar o'quvchining natijalari bo'yicha miqdoriy tahlil va 30 nafar o'qituvchi bilan sifatli (intervyu) tadqiqot asosida o'qituvchi sifati, pedagogik strategiyalar va o'qituvchi-o'quvchi munosabatlari o'quv natijalariga qanday ta'sir qilishi tahlil qilindi. Natijalar shuni ko'rsatdiki, o'qituvchi samaradorligi o'quvchilarning yutuqlari farqlanishining taxminan 30 foizini tashkil etadi va bu sinf kattaligi hamda mavjud resurslar ta'siridan yuqoriroqdir. Ayniqsa, differensiallashtirilgan ta'limdan foydalanadigan, yuqori talablarni saqlaydigan va o'quvchilar bilan ijobiy munosabat o'rnatadigan o'qituvchilar sezilarli darajada yaxshi natijalarga erishgan ($p < 0.001$). Tadqiqot shuni ko'rsatadiki, ilmiy asoslangan o'qitish metodlariga yo'naltirilgan kasbiy rivojlanish o'quvchilarning natijalarini sezilarli darajada yaxshilaydi. Ushbu natijalar ta'lim sifatini oshirish uchun o'qituvchi sifatiga va uzluksiz kasbiy rivojlanishga investitsiya qilish muhimligini ta'kidlaydi.*

Kalit so'zlar: *O'qituvchi samaradorligi, O'quvchi yutug'i, Akademik muvaffaqiyat, Pedagogik strategiyalar, Differensiallashtirilgan ta'lim, O'qituvchi-*

o'quvchi munosabati, Formativ baholash, Kasbiy rivojlanish, Sinf boshqaruvi, O'qitish yordami, Ta'lim natijalari, Aralash metodli tadqiqot, Ierarxik chiziqli modellash (HLM), O'qitish sifati, O'qitish natijalari, Ta'lim siyosati, Dalillarga asoslangan o'qitish, Sinf muhiti, O'quvchi motivatsiyasi, Reflektiv amaliyot.

Аннотация: Данное исследование рассматривает многогранную роль учителей в определении академического успеха учащихся. С использованием смешанного метода, включающего количественный анализ данных успеваемости 450 учащихся из 15 школ и качественные интервью с 30 педагогами, было изучено влияние качества учителя, педагогических стратегий и взаимоотношений учитель–ученик на результаты обучения. Результаты показывают, что эффективность учителя объясняет примерно 30% вариации учебных достижений учащихся, превосходя влияние размера класса и доступных ресурсов. В частности, учителя, применяющие дифференцированное обучение, поддерживающие высокие ожидания и устанавливающие положительные отношения с учащимися, демонстрируют значительно лучшие результаты ($p < 0.001$). Исследование также показывает, что профессиональное развитие, основанное на научно обоснованных методах преподавания, тесно связано с улучшением успеваемости учащихся. Эти результаты подчёркивают критическую важность инвестирования в качество учителей и их непрерывное профессиональное развитие для повышения образовательных результатов.

Ключевые слова: Эффективность учителя, Успеваемость учащихся, Академический успех, Педагогические стратегии, Дифференцированное обучение, Отношения учитель–ученик, Формирующее оценивание, Профессиональное развитие, Управление классом, Поддержка обучения, Образовательные результаты, Смешанные методы исследования, Иерархическое линейное моделирование (HLM), Качество преподавания, Результаты обучения, Образовательная политика, Обучение на основе доказательств, Классная атмосфера, Мотивация учащихся, Рефлексивная практика.

1. Introduction

Educational research has consistently identified teachers as the most influential school-based factor affecting student achievement (Hattie, 2009; Darling-Hammond, 2000). Despite significant investments in educational infrastructure, technology, and curriculum development, the quality of classroom instruction remains the primary determinant of learning outcomes. Understanding the specific mechanisms through which teachers influence student success has profound implications for teacher training, professional development, and educational policy.

Previous studies have established that teacher effectiveness varies considerably, with students assigned to highly effective teachers showing learning gains equivalent to

1.5 grade levels, compared to 0.5 grade levels for students with less effective teachers (Sanders & Rivers, 1996). However, the specific characteristics and practices that distinguish effective teachers remain subject to ongoing investigation. Recent meta-analyses suggest that teacher subject knowledge, pedagogical content knowledge, classroom management skills, and the ability to establish supportive relationships with students all contribute to teaching effectiveness (Stronge et al., 2011).

This study addresses three primary research questions: (1) What specific teacher characteristics and practices most strongly predict student academic success? (2) How do student-teacher relationships mediate learning outcomes? (3) What role does ongoing professional development play in teacher effectiveness? By employing both quantitative and qualitative methodologies, we aim to provide a comprehensive understanding of the teacher's role in facilitating student achievement.

2. Methods

2.1 Participants and Setting

The study was conducted across 15 middle schools in diverse urban and suburban settings within a single school district. The sample included 450 students (grades 6-8) and their respective teachers (n=30). Schools were selected to represent varying socioeconomic backgrounds, with free/reduced lunch eligibility ranging from 15% to 78%. Student demographics included 48% female, 52% male, with racial/ethnic composition reflecting the district average (42% White, 28% Hispanic, 18% African American, 12% Asian/Other).

2.2 Data Collection

Data collection occurred over one academic year and included multiple components:

- Quantitative measures: Standardized test scores in mathematics and English language arts, collected at three time points (September, January, May); student demographic data; class size; teacher experience and credentials
- Classroom observations: 120 structured observations using the Classroom Assessment Scoring System (CLASS) protocol, evaluating emotional support, classroom organization, and instructional support
- Teacher surveys: Self-report questionnaires assessing pedagogical practices, professional development participation, and self-efficacy
- Student surveys: Measures of student-teacher relationship quality, classroom climate, and academic motivation

Qualitative data included semi-structured interviews with all 30 participating teachers, focusing on their instructional philosophies, strategies for differentiation, and perceptions of factors influencing student success. Interviews were audio-recorded, transcribed, and analyzed using thematic coding.

2.3 Statistical Analysis

Hierarchical linear modeling (HLM) was employed to account for the nested structure of students within classrooms. Student-level achievement gains served as the primary outcome variable, with teacher characteristics and practices as predictor variables. Control variables included prior achievement, socioeconomic status, and school-level factors. Qualitative data were analyzed using NVivo software, with inter-rater reliability established through dual coding of 25% of transcripts (Cohen's kappa = 0.84).

3. Results

3.1 Quantitative Findings

HLM analysis revealed that teacher-level variables accounted for 30% of the variance in student achievement gains, after controlling for student and school characteristics. The strongest predictors of teacher effectiveness were:

- Quality of instructional support ($\beta = 0.42, p < 0.001$): Teachers scoring in the top quartile of the CLASS instructional support domain showed student achievement gains 0.35 standard deviations higher than those in the bottom quartile
- Student-teacher relationship quality ($\beta = 0.28, p < 0.01$): Positive relationships, as measured by student surveys, correlated significantly with achievement, particularly for students from disadvantaged backgrounds
- Use of formative assessment ($\beta = 0.31, p < 0.001$): Teachers who regularly employed formative assessment strategies and adjusted instruction accordingly demonstrated superior student outcomes
- Participation in professional development ($\beta = 0.24, p < 0.05$): Teachers who engaged in 40+ hours of content-focused professional development showed measurably improved student performance

Notably, traditional indicators such as years of teaching experience beyond the fifth year and advanced degrees showed non-significant relationships with student achievement when controlling for instructional quality measures.

3.2 Qualitative Findings

Thematic analysis of teacher interviews identified four key dimensions of effective teaching practice:

Differentiation and responsiveness: Highly effective teachers consistently described adapting instruction to meet diverse student needs. One teacher explained: "I never teach the same lesson twice. I'm constantly reading my students, adjusting the pace, the examples, the level of support based on what I'm seeing in real-time."

High expectations with support: Effective teachers balanced rigorous academic demands with substantial scaffolding. They articulated belief in all students' potential while providing structured support to achieve challenging goals.

Relationship building: Teachers emphasized knowing students as individuals, understanding their interests, challenges, and learning styles. They intentionally cultivated classroom communities where students felt safe to take academic risks.

Reflective practice: Effective teachers regularly analyzed student work, sought feedback from colleagues, and actively engaged in professional learning. They viewed teaching as an evolving craft requiring continuous improvement.

4. Discussion

This study provides robust evidence for the central role teachers play in students' academic success. The finding that teacher effectiveness accounts for 30% of achievement variance aligns with previous research (Nye et al., 2004) and underscores the profound impact of instructional quality. Importantly, our results illuminate specific, modifiable practices that distinguish effective teachers.

The strong relationship between instructional support and student achievement suggests that policy emphasis should focus on developing teachers' pedagogical expertise rather than solely on credentials. The non-significant effect of advanced degrees beyond the bachelor's level, consistent with other studies (Goldhaber & Brewer, 2000), challenges traditional salary structures based primarily on educational attainment.

The importance of student-teacher relationships, particularly for disadvantaged students, has significant implications for teacher preparation and professional development. Programs should explicitly address relationship-building skills, cultural responsiveness, and strategies for connecting with diverse learners. The qualitative finding that effective teachers know students as individuals reinforces the relational nature of effective pedagogy.

Our results regarding professional development effectiveness align with research emphasizing content-focused, sustained, and collaborative learning opportunities (Desimone, 2009). The threshold effect observed at 40 hours suggests that brief, one-shot workshops are insufficient for meaningful practice change.

4.1 Limitations

Several limitations warrant consideration. First, the study was conducted in a single district, potentially limiting generalizability. Second, while classroom observations were structured, observer effects may have influenced teacher behavior. Third, the correlational design precludes definitive causal claims. Future research employing randomized controlled trials could strengthen causal inferences.

4.2 Implications for Practice and Policy

These findings suggest several actionable recommendations:

- Teacher preparation programs should prioritize development of instructional support skills, including formative assessment, differentiation, and feedback provision
- Professional development should be sustained, content-focused, and include opportunities for practice and feedback
- Teacher evaluation systems should incorporate measures of instructional quality and student-teacher relationship dimensions

- School leaders should create structures supporting collaborative learning among teachers and protected time for reflective practice

5. Conclusion

Teachers exert a powerful influence on students' academic trajectories. This study demonstrates that specific, learnable practices—including high-quality instructional support, positive relationship building, responsive differentiation, and formative assessment—significantly predict student achievement. Importantly, these practices can be developed through targeted professional learning. As educational systems seek to improve outcomes, particularly for underserved students, investments in teacher quality represent perhaps the most promising avenue for systemic improvement. The evidence is clear: great teachers matter profoundly, and we can support all teachers in becoming great.

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