

Received: 6 September 2024 Revised: 16 November 2024 Accepted: 16 November 2024

TEACHER PERFORMANCE: WHAT IS IT, HOW IMPORTANT IS IT, AND HOW CAN WE MAKE IT HAPPEN SUSTAINABLY?

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(This article belongs to the Theme 1: Education for Sustainability)

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Abstract

Teacher performance is critical to educational success, significantly impacting student learning. It is seen as the most crucial school-related factor affecting student achievement. To explore "What is teacher performance? Why is it important? And how can it be sustained?" the authors reviewed literature from the past decade in the Scopus database, finding: 1) Definition: Teacher performance involves a teacher's actions and behavior during teaching, reflecting their professional, personal, and social growth. 2) Importance: Teacher quality is the key to determining student learning more than any other school factor, influencing the success of educational institutions and improving national education systems. 3) Sustainability: Sustaining teacher performance involves prioritizing policy reforms based on teachers' insights and developing a research-driven evaluation system focusing on professional development. In summary, teacher performance is crucial for student achievement, and sustaining it requires policy reforms, effective evaluation systems, and a focus on development rather than control.

Keywords: Teacher Performance, Definition of Teacher Performance, Importance of Teacher Performance, Causal Factors Affecting Teacher Performance, Sustaining Teacher Performance

Citation Information: Wongmahesak, K., Muthmainnah, Kaur, D., & Cardoso, L. (2025). Teacher Performance: What Is It, How Important Is It, And How Can We Make It Happen Sustainably?. *Asian Education and Learning Review*, 3(1), Article 2. <https://doi.org/10.14456/aelr.2025.2>

What Is Teacher Performance?

Teacher performance encompasses various aspects of professional conduct and effectiveness, as evidenced by the following insights from the Scopus documents in the past decade.

Definition: Teacher performance refers to the behavior and actions of a teacher during the teaching process, demonstrating professional, personal, and social development (García et al., 2018).

Assessment: Teaching Performance Assessments (TPAs) evaluate pre-service teachers' ability to plan, enact, and reflect on teaching for diverse learners (Bird & Charteris, 2021). These assessments are considered high-stakes and aim to ensure teachers are ready for professional practice in education contexts (Navidinia et al., 2015).

Challenges and Potentialities: The characterization of teaching performance has revealed both challenges and potentialities. Challenges include insufficient planning of autonomous work, limited scientific production, and deficient use of information and communication technologies (García et al., 2018). On the other hand, potentialities include proven dedication to educational work and contribution to forming students as citizens and professionals (García et al., 2018).

Improvement and Development: Teacher performance evaluations are essential for identifying strengths and weaknesses, providing feedback, and promoting professional development (McLean Davies & Herrington, 2022). It is crucial for educational systems to ensure that teachers perform their best to enhance student learning and improve their performance (McLean Davies & Herrington, 2022).

Unfortunately, there is no direct answer in the Scopus documents. However, we will address the critical components of teacher performance evaluation, how different educational systems define and measure teacher performance, the challenges in defining and assessing teacher performance, and the role of technology in defining and evaluating teacher performance.

Critical Components of Teacher Performance Evaluation

Teacher evaluation systems face conceptual, technical, and practical challenges in defining and measuring teaching practice (Da Silva & Cintra, 2022). The validity of inferences about teacher performance in evaluation systems involves considering different purposes of evaluation, operationalization of key constructs, and the instruments used to measure these constructs (Da Silva & Cintra, 2022). The Measures of Effective Teaching (MET) study investigates the measurement properties of composite indicators obtained under various models, such as conjunctive, disjunctive, and weighted models, to understand the implications for designing teacher evaluation systems (Taut & Sun, 2014).

Defining and Measuring Teacher Performance in Different Educational Systems

Foreign publications describe two significant approaches to assessing teacher performance: student achievement and formative assessment based on teacher observation and follow-up feedback (Bird & Charteris, 2021). The Chilean national teacher evaluation system combines formative and summative purposes and uses instruments such as a structured portfolio, peer interviews, supervisor questionnaires, and self-assessment (Marchant et al., 2015). The paper reviews modern foreign systems of evaluating teaching skills and teacher performance, outlining the typology of teacher evaluation forms according to aims, normative grounds, tools employed, and the subject of evaluation (Martínez & Fernández, 2021).

Challenges in Defining and Assessing Teacher Performance

Developing a national teacher growth system requires analyzing existing approaches to assessing the quality of teaching, focusing on fostering teachers' professional and personal development (Bird & Charteris, 2021). Teacher performance assessments are high-stakes assessments to ensure that preservice teachers are ready for professional practice. However, they evoke a range of wicked problems, especially in early childhood education (Martínez et al., 2016). Implementing feedback and developing and evolving evaluation instruments are

crucial aspects to consider in addressing the controversial issues in teacher evaluation (Temnyatkina & Tokmeninova, 2018).

Role of Technology in Defining and Evaluating Teacher Performance

Teaching Performance Assessments (TPAs) have been part of the initial teacher educational landscape for more than 20 years, assembling evidence of pre-service teachers' ability to plan, enact, and reflect on the complexity of teaching for diverse learners (Aronovich, 2019). The development of the educative teacher performance assessment (edTPA) is a complex assessment necessary for recognizing teaching as a profession and improving student learning (McLean Davies & Herrington, 2022). The paper discusses the implications of modern accountability trends and the increasing role of state mandates regarding teacher evaluation, emphasizing the need for teacher education programs to recognize the role teacher evaluation plays and incorporate aspects where appropriate (McCarthy & Burns, 2016).

What Are the Key Indicators of Teacher Performance?

Quantitative Indicators of Teacher Performance

The Measures of Effective Teaching (MET) study investigated the measurement properties of composite indicators obtained under various models, including conjunctive, disjunctive, and weighted models. The study found that accuracy varies across models and cut scores, with different models yielding different teacher classifications (Harris et al., 2014). Classroom observations are central to teacher evaluation systems, accounting for most teacher ratings. The incoming academic performance of students and the intentional sorting of teachers to students significantly influence measured teacher performance based on classroom observation scores (Amzat, 2017). Teacher evaluations conducted by trained external evaluators using a detailed rubric containing 75 classroom practices significantly predict pupil performance gains on standardized tests in math, reading, and spelling (Garrett & Steinberg, 2015).

Qualitative Indicators of Teacher Performance

Teacher practice and performance evaluation face conceptual, technical, and practical challenges. Contemporary measurement models establish that the object of validation is not the instruments or indicators but the judgments or inferences derived from them. This requires different types of evidence from various sources (Steinberg & Garrett, 2015). A study in Malaysia created a key performance indicator (KPI) model for teaching practices, identifying an excellent classroom management style as the most significant domain for KPI, followed by teaching philosophy and objectives (Martínez & Fernández, 2021).

Different Educational Systems' Definition and Measurement of Teacher Performance Indicators

The emergence of performance indicators in the US and Europe reveals the desire to know more about educational institutions and how well they function. This emphasizes the importance of a credible response to maintain institutional autonomy, funding levels, teaching methods, and the validity of evaluation measures (Martínez et al., 2016). In Italy, the stability of performance estimates for primary schools was explored using administrative data, revealing that estimates of school performances are unstable across metrics, and correlations across cohorts decline over time (van der Steeg & Gerritsen, 2016).

Challenges in Using Standardized Indicators to Evaluate Teacher Performance

Practical constraints often result in evaluations based predominantly on formal classroom observations, with limited knowledge of how these observational measures relate to student achievement. Noncompliance with randomization and the modest year-to-year correlation of a teacher's observation scores constrain the ability to identify effective teachers (Erwin, 2014) causally. Policymakers are revolutionizing teacher evaluation by attaching more significant stakes to student test scores and observation-based teacher effectiveness measures. However, relatively little is known about why they often differ so much. Quantitative analysis suggests

that teacher value-added measures and informal principal evaluations are positively but weakly correlated (Minaya & Agasisti, 2019).

In conclusion, the key indicators of teacher performance encompass quantitative and qualitative measures, including classroom observations, teacher evaluations, and student achievement. Different educational systems define and measure teacher performance indicators based on their specific contexts and needs. However, challenges exist in using standardized indicators to evaluate teacher performance, including the need for more comprehensive evidence and the potential differences between various evaluation measures.

What Are the Common Methods for Assessing Teacher Performance?

Based on the Scopus documents, we will address the standard methods for assessing teacher performance, including quantitative and qualitative methods, assessing teacher performance in different educational systems, and the challenges associated with accurately assessing teacher performance.

Quantitative Methods

Quantitative methods for assessing teacher performance include using student achievement data. However, it is essential to note that student achievement may not always align completely with the size and quality of teacher effort due to various factors beyond the teacher's control (Taut & Sun, 2014). Another quantitative method mentioned is Profile Matching, which aims to optimize the teacher performance appraisal process for faster and more precise assessments (Martínez & Fernández, 2021).

Qualitative Methods

Formative assessment based on teacher observation and follow-up feedback is a standard qualitative method for assessing teacher performance. This method is gradually being introduced into instructional processes, but formative assessment of teacher performance is still emerging in school practices (Taut & Sun, 2014). In addition, a study in Chile describes a national, standards-based, multi-method, mandatory teacher evaluation system that combines formative and summative purposes and uses instruments such as a structured portfolio, peer interviews, supervisor questionnaires, and self-assessment (Cohen & Goldhaber, 2016).

Assessment of Teacher Performance in Different Educational Systems

The Chilean teacher evaluation system provides an example of a comprehensive approach to teacher assessment, combining formative and summative purposes and utilizing multiple assessment instruments (Cohen & Goldhaber, 2016). The investigation of international publications on teaching performance evaluation frameworks reveals that different countries employ various approaches to teacher assessment, with some focusing on student learning progress measurements and others emphasizing formative assessment of teachers through teaching observations and feedback (Temnyatkina & Tokmeninova, 2018).

Challenges in Assessing Teacher Performance

Teacher practice and performance evaluation face conceptual, technical, and practical challenges, particularly in defining, operationalizing, and measuring the complex aspects of teaching practice. This includes the subjectivity and inconsistency of raters in scoring performance assessments and the challenges in arriving at valid distinctions between teachers, especially in the middle of the performance distribution (Nasution et al., 2021). Classroom observations, commonly used to assess teachers, have received less empirical scrutiny in consequential evaluation systems, highlighting the need for more research on observations as performance measures (Temnyatkina & Tokmeninova, 2019).

How Does Teacher Performance Impact Student Outcomes?

Impact of Teacher Performance on Student Outcomes

Teacher quality significantly influences student achievement (Jackson, 2018; Garrett & Steinberg, 2015). Highly effective teachers have a distinct advantage over less effective teachers, with disparities in math equating to a 10-student reduction in class size (Jackson, 2018). Teacher removal simulations using both test score and non-test score measures improve long-term student outcomes by over 50% compared to using test scores alone (Muttaqin et al., 2023). Teacher effects on behaviors predict more significant impacts on high school completion and longer-run outcomes than effects on test scores (Muttaqin et al., 2023).

Key Factors Influencing Teacher Performance

Characteristics such as experience, gender, and classroom management duties significantly impact students' test scores and cognitive and noncognitive abilities (Lavy, 2016). Academic supervision, managerial competence, and teacher empowerment positively affect teacher performance directly and through teacher performance as a mediating variable (Lignugaris & Harris, 2014).

Effective Methods for Measuring Teacher Performance

Test score measures of teacher quality may not fully capture teachers' impact on students (Brownell et al., 2014). Using test scores and noncognitive measures more than doubles the variance of predictable teacher impacts on longer-run outcomes (Muttaqin et al., 2023). The Framework for Teaching (FFT) instrument, one of the most widely used classroom observation protocols, is correlated with student achievement. However, noncompliance with randomization and modest year-to-year correlation constrain the ability to causally identify effective teachers (Crawford & Rolleston, 2020).

Long-Term Effects of Teacher Performance on Student Academic Achievement and Non-Cognitive Skills

No persistent effect of good teachers on measures of more "generalized" cognitive ability, aspirations, well-being, or "grit" was found (Huang et al., 2023). Academic supervision, managerial competence, and teacher empowerment significantly positively affect teacher performance directly and through teacher performance as a mediating variable (Lignugaris & Harris, 2014).

Inferences on Different Teaching Styles and Pedagogical Approaches

Teaching based on the instilment of knowledge and comprehension, as well as techniques that endow pupils with analytical and critical skills, has a strong positive effect on test scores (Petek & Pope, 2023). Transparency, fairness, and feedback in teachers' conduct with their students marginally improve academic performance (Petek & Pope, 2023).

In conclusion, teacher performance significantly impacts student outcomes, with various factors such as experience, gender, and classroom management duties influencing teacher performance. Effective methods for measuring teacher performance include using both test scores and noncognitive measures, while the long-term effects of teacher performance extend to student academic achievement and non-cognitive skills. However, it is essential to note that the impact of different teaching styles and pedagogical approaches on teacher performance and subsequent student outcomes is not extensively covered in the provided documents.

What Are the Key Indicators of Teacher Performance That Correlate with Positive Student Outcomes?

Key Indicators of Teacher Performance Correlated with Positive Student Outcomes

Teacher quality significantly influences student outcomes, accounting for approximately 7%-21% of the variance in student performance (Goldhaber, 2014). Teacher commitment, academic supervision, managerial competence, and teacher empowerment are significant positive factors affecting teacher performance and commitment, which can influence student

outcomes (Bognar et al., 2024). Academic supervision, managerial competence, and teacher empowerment significantly positively affect teacher performance directly and through teacher performance as a mediating variable (Bognar et al., 2024). High states of 'teacher readiness' are associated with effective teaching and improvement in student outcomes, indicating the importance of teacher preparedness in influencing student achievement (Muttaqin et al., 2023). Teacher quality has been consistently shown to profoundly affect student outcomes, with considerable variation in quality among teachers (Buzick & Jones 2015; Lamichhane et al., 2024).

Impact of Different Teaching Methods and Styles on Student Outcomes about Teacher Performance Indicators

Test score measures of teacher quality may not fully capture teachers' impact on students, as non-test score measures of student achievement and behavior also influence students' high school performance (Lignugaris & Harris, 2014). Teachers have causal effects on their students' self-reported behavior in class, self-efficacy in math, and happiness in class, indicating that different teaching methods and styles can impact various student outcomes (Brownell et al., 2014). Changes in instruction can be implemented incrementally, beginning with less complex interventions and progressing to those that are more complex and demanding, suggesting that implementing different teaching methods can influence student learning outcomes in mathematics (Goldhaber et al., 2014).

Role of Teacher Professional Development in Improving Teacher Performance Indicators and Student Outcomes

Effective teacher professional development is crucial to improving student outcomes, and the quality of professional development has been shown to vary considerably, emphasizing the need for meaningful evaluation of professional development activities (Blazar, 2018). Professional development interventions that seek to improve student learning outcomes in mathematics should include on-site teacher support, mentoring and feedback, teacher-focused resources, and classroom learning materials, highlighting the importance of comprehensive and ongoing professional development for teachers (Goldhaber et al., 2014). The effectiveness of training beliefs on teachers' professional development and non-financial benefits significantly impact better classroom delivery than financial rewards, indicating that non-financial motivational tools are crucial for effective and efficient classroom delivery (McChesney & Aldridge, 2019).

Challenges in Measuring Teacher Performance Indicators and Their Correlation with Student Outcomes

There is no universally agreed upon statistical methodology for translating student achievement into a measure of teacher performance, making implementing student outcomes as a teacher performance measure complex (Petek & Pope, 2023). Researchers and practitioners have not agreed on how to treat test scores from students with disabilities in growth-based teacher effectiveness indicators, highlighting the challenges in incorporating diverse student populations into teacher evaluation (Lynch et al., 2017).

In conclusion, teacher quality, commitment, academic supervision, managerial competence, and empowerment are critical indicators of teacher performance that correlate with positive student outcomes in K-12 education. Different teaching methods and styles can impact student outcomes, and effective teacher professional development plays a crucial role in improving teacher performance indicators and student outcomes. However, challenges exist in measuring teacher performance indicators and their correlation with student outcomes, particularly in incorporating diverse student populations into teacher evaluation.

What Are the Causal Factors That Affect Teacher Performance?

Causal Factors Affecting Teacher Performance

Academic supervision, managerial competence, and teacher empowerment significantly positively affect teacher performance directly and through teacher performance as a mediating variable (Musriadi et al., 2021). School principal leadership, organizational culture, and teacher competence significantly influence teacher performance (Bognar et al., 2024). Emotional intelligence and competence have a positive and significant effect on teacher performance and indirectly affect teacher performance through achievement motivation (Muttaqin et al., 2023).

Psychological Factors Influencing Teacher Performance:

Both intrinsic and extrinsic motivation influences teacher performance and contributes to teacher commitment (Kanya et al., 2021). The study on how teachers assign reasons for their success or failure in teaching indicates that success is often attributed to internal, stable, and controllable causes. In contrast, failure is attributed to external, unstable, and uncontrollable causes (Gultekin & Acar, 2014). Attitudes about the teaching profession and the work environment exist, and a better attitude towards the profession promotes a more effective working environment, which affects teacher performance (Citriadin et al., 2019).

Impact of Organizational Factors on Teacher Performance

Academic supervision, managerial competence, and teacher empowerment significantly positively affect teacher performance directly and through teacher performance as a mediating variable (Musriadi et al., 2021). School principal leadership, organizational culture, and teacher competence significantly influence teacher performance (Bognar et al., 2024). The effect of a principal's transformational leadership, organizational culture, and organizational climate on teacher performance has been studied, revealing a causal relationship between these factors and teacher performance (Dewi et al., 2016).

Role of Professional Development in Improving Teacher Performance

The study on the antecedent variable in the form of emotional intelligence and competence found that they have a positive and significant effect on teacher performance and indirectly affect teacher performance through achievement motivation (Muttaqin et al., 2023). The role of professional development facilitators in leading, planning, and delivering professional development activities is crucial for improving the quality of teacher learning and, consequently, teacher performance (Perry & Booth, 2024). The review of professional development interventions for mathematics teachers suggests that interventions with positive and statistically significant effects on students' mathematics achievement include structured pedagogy intervention, initial professional development, follow-up workshops, on-site teacher support, mentoring, and feedback (Poling et al., 2022).

Effects of Student-Teacher Relationships on Teacher Performance

High-quality teacher-student relationships have been associated with numerous beneficial student outcomes, such as reduced problem behavior, increased academic achievement, enhanced school engagement, and improved peer social standing (Kincade et al., 2020). Universal, school-wide, and class-wide programs and practices can facilitate high-quality teacher-student relationships, with specific proactive and direct practices identified to promote positive teacher-student relationships (Kaulfuss & Boruchovitch, 2016).

In conclusion, the causal factors affecting teacher performance include academic supervision, managerial competence, teacher empowerment, school principal leadership, organizational culture, and teacher competence. Psychological factors influencing teacher performance encompass teacher motivation, attitudes about the teaching profession, and the work environment. Organizational factors impacting teacher performance include the effect of a principal's transformational leadership, organizational culture, and organizational climate. Professional development is crucial in improving teacher performance, with elements such as emotional intelligence, competence, and structured pedagogy intervention being significant.

Additionally, student-teacher relationships substantially impact teacher performance, with universal programs and specific practices identified to facilitate high-quality relationships.

How Can We Make Teacher Performance Sustainable?

Key Factors Contributing to Sustainable Teacher Performance

Transformational Leadership: Research shows a positive effect of transformational leadership on teachers' commitment and performance, with teachers' commitment mediating the relationship between transformational leadership and sustainable teaching performance (Sáenz et al., 2024).

Attitudes Towards the Teaching Profession: Teachers' positive attitudes towards the teaching profession have been found to promote a more effective working environment and positively influence teacher performance (Alzoraiki et al., 2023).

Work Environment: A safe, orderly, and calm work environment has been associated with a more effective working environment, which in turn can positively influence teacher performance (Alzoraiki et al., 2023).

Teacher Well-being: Teacher well-being is crucial for sustainable performance, and it has been suggested that sustainable workloads and teacher autonomy are essential for teacher development initiatives (Glazer, 2023).

Professional Action Competence: Individual Education for Sustainable Development (ESD) courses in teacher education programs have been found to support the development of ESD-specific professional action competence for teachers, which is crucial for sustainable teacher performance (Koşar et al., 2022).

Effective Strategies for Maintaining Sustainable Teacher Performance

Teacher Classroom Management (TCM) Programme: The TCM program has documented positive effects on teachers' classroom management strategies and pupil mental health. To ensure sustainability, teachers have endorsed refresher sessions and a whole-school training approach (Citriadin et al., 2019).

Resilience Skills: It has been suggested that teachers should be given opportunities to learn resilience skills to ensure the teaching profession's sustainability. This includes building teachers' inner HERO with hope, efficacy, resilience, and optimism (Brandt et al., 2022).

Impact of Teacher Well-being on Sustainable Teacher Performance and Burnout and Attrition: Given the increasing program attrition rates of teachers, it has been suggested that careful planning should be applied in developing teacher well-being programs, similar to the development of student well-being programs (Brandt et al., 2022).

Work-related Stress Triggers: Teachers have reported various work-related stress triggers, and it has been observed that children are attuned to their teacher's mood and can pick up when they are feeling stressed, which can impact their learning and progress (Falecki & Mann, 2020).

Role of Professional Development in Sustaining Teacher Performance

Continuous Professional Development: Teacher professional development needs to be continuous to ensure sustainability, and it should be structured around the real professional development needs of the teacher rather than determined by top-down approaches (Perry & Booth, 2024).

Support for Professional Development Facilitators: There is a need for a greater understanding of how professional development facilitators learn, practice, and develop their roles to support the sustainability of teacher performance (Glazzard & Rose, 2020).

Conclusion

Teacher performance is a critical factor in educational outcomes, accounting for a significant variance in student achievement (Goldhaber, 2014; Muttaqin et al., 2023). The quality of a school's teaching staff is its most crucial instructional resource, and teacher effects account for

the most significant variance in student achievement (Goldhaber, 2014). Here are the key factors contributing to teacher performance and its implications on student outcomes.

Key Factors Contributing to Teacher Performance

Teacher qualifications, including experience, initial preparation, subject matter preparation, and academic ability, have been extensively studied for their value-added contribution to student achievement (Goldhaber, 2014). Teacher characteristics, knowledge, and observed classroom practice have been linked to student achievement, focusing on the value-added contribution of teacher qualifications (Goldhaber, 2014). Teacher commitment, academic supervision, managerial competence, and teacher empowerment influence teacher performance (Lignugaris & Harris, 2014; Podolsky et al., 2017).

Implications of Teacher Performance on Student Outcomes

Research consistently shows that teachers profoundly affect their students, with teacher quality being the most critical schooling factor influencing student achievement (Muttaqin et al., 2023; Podolsky et al., 2017). Highly effective teachers substantially positively impact student outcomes, including academic achievement and non-cognitive factors such as self-efficacy and happiness in class (Podolsky et al., 2017; Brownell et al., 2014).

Challenges in Sustaining Teacher Performance Over Time

The human capital approach to teacher development has not worked as well as hoped, indicating the need to explore organizational conditions for developing and sustaining teachers' learning and development throughout their professional lives (Goldhaber et al., 2014). Using student outcomes as a measure of teacher performance is complex to implement due to the lack of universally agreed-upon statistical methodology and concerns about the validity of teacher effect estimates (Brownell et al., 2014; Criss et al., 2024).

Strategies and Interventions for Sustainable Improvement of Teacher Performance

Policymakers should strengthen teacher preparation, improve hiring practices, increase compensation, support new teachers, and improve working conditions to ensure a steady supply of competent and committed teachers (Blazar, 2018). The combination of goal setting and performance feedback has been highly effective in improving teacher implementation of practices, with features such as visual presentation of data, verbal feedback, and measuring progress toward goals associated with improved performance (Gu, 2023).

In conclusion, teacher performance is crucial for student outcomes, and sustaining and improving teacher performance requires a multifaceted approach that addresses teacher qualifications, commitment, organizational support, and practical strategies and interventions. While challenges exist in measuring and sustaining teacher performance, evidence-based strategies such as goal setting and performance feedback can contribute to sustainable improvement.

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Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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