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TEACHER PERFORMANCE AND EDUCATIONAL TECHNOLOGY ON SCHOOL QUALITY: A MODERATION ANALYSIS OF PARENTAL INVOLVEMENT – A CASE STUDY AT SEKOLAH SINAR KASIH, TAJURHALANG, BOGOR

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ABSTRACT
This thesis investigates how teacher performance and educational technology shape school quality, and whether parental involvement strengthens those relationships, in a case study at Sekolah Sinar Kasih, Tajurhalang, Bogor. The study methodology is a quantitative–descriptive design with supporting qualitative inputs (brief observations and interviews) to capture the school's empirical context. Data were collected via a structured Likert-scale questionnaire (1–5) distributed to students' parents/guardians through Google Forms, with items derived from validated indicators for teacher performance (X1), technology use (X2), parental role (M), and educational quality (Y). The research questions and objectives focus on estimating the direct effects of X1 and X2 on Y and testing the moderating effect of M on both relationships. Multiple linear regressions show that teacher performance has a positive, significant association with educational quality ($\beta = 0.166$, $p = 0.015$; $R^2 = 0.18$). Technology use also exhibits a positive, significant association with educational quality ($\beta = 0.184$, $p = 0.010$; $R^2 = 0.21$). When parental role is entered as a moderator, the interaction terms are statistically non-significant for both teacher performance (β_interaction $= -0.059$, $p = 0.228$; $R^2 = 0.27$) and technology use (β_interaction $= -0.041$, $p = 0.334$; $R^2 = 0.26$). The results indicate that parental involvement does not amplify or dampen these direct effects. Findings suggest that efforts to improve school quality in this context will benefit most from strengthening teacher professional practice and consolidating the technology-enabled learning ecosystem. While parental engagement remains valuable on its own merits, it does not statistically moderate the pathways from teacher performance or technology use to perceived quality in this setting.

Key words: teacher performance; educational technology; school quality; parental involvement; moderation analysis.

INTRODUCTION

School quality is increasingly shaped by two classroom-proximal levers: what teachers do and how technology is embedded into daily teaching–learning cycles. In many developing contexts, school leaders invest simultaneously in teacher professional development and educational technology, expecting compound gains in instructional quality and student experience. At the same time, parental involvement is often promoted as a catalyst that can reinforce school initiatives by aligning home and school practices. Whether—and under what conditions—these three forces jointly elevate perceived school quality remains an empirical question in specific school ecologies.

Research on teacher performance consistently links high-quality instruction, formative assessment, and professional learning to improved student outcomes and perceived school quality (e.g., coaching and PD meta-analyses). Parallel literatures on educational technology indicate that positive effects tend to emerge when technology is integrated with pedagogy, feedback, and teacher capacity rather than used as stand-alone tools. Evidence on parental involvement is more heterogeneous: meta-analyses suggest that effects vary by form—academic socialization and productive communication help, while controlling homework practices can be neutral or even negative— and by contextual fit. Recent work also stresses that leadership and coherent routines are prerequisites for technology to translate into meaningful learning gains.

Despite these advances, three gaps persist in the state of the art. First, few studies examine teacher performance and technology use within the same model while focusing on perceived school quality as the proximal outcome relevant to school stakeholders. Second, while parental involvement is widely encouraged, there is limited evidence on whether it moderates (amplifies or dampens) the effects of teacher performance and technology on perceived quality at the school level—as opposed to student-level achievement. Third, context-sensitive evidence from mission-driven schools in Indonesia remains scarce, even though implementation conditions (teacher workload, resource variability, and parent profiles) can crucially shape effect sizes. Addressing these gaps provides both conceptual and practical novelty: conceptually, by testing a unified model with moderation; practically, by generating evidence that school leaders can use to prioritize improvement levers in similar contexts.

We adopt a service-quality view of schooling in which perceived school quality reflects stakeholders' judgments about teaching–learning processes, support services, and student development. In this framing,

teacher performance (e.g., preparation, pedagogy, assessment, professional conduct) and technology use (e.g., planning, delivery, feedback, collaboration) function as direct, classroom-proximal drivers. Parental involvement—communication with teachers, home learning support, and participation in school activities—could, in principle, strengthen these relationships if it aligns expectations, multiplies learning opportunities at home, and increases responsiveness to instructional feedback. Whether such alignment materializes in a given school is an empirical matter.

Based on the foregoing, we anticipate positive direct effects of teacher performance and technology use on perceived school quality. We further explore whether parental involvement moderates these direct effects. Formally:

H1: Teacher performance is positively associated with perceived school quality.
H2: Technology use is positively associated with perceived school quality.
H3a–b: Parental involvement moderates the associations in H1–H2.

This study contributes by (i) testing a joint model that places teacher performance and technology use side-by-side as predictors of perceived school quality; (ii) empirically examining the moderating role of parental involvement at the school level; and (iii) supplying contextualized evidence from an Indonesian case school to inform leadership and resource-allocation decisions. For practitioners, the findings indicate which levers offer the most immediate returns under real-world constraints; for researchers, the study clarifies where parental involvement is more likely to act as a moderator rather than as a separate, direct contributor or mediator.

In light of the gaps identified above, the purpose of this study is to estimate the direct effects of teacher performance and educational technology use on perceived school quality and to test whether parental involvement moderates these relationships in the context of Sekolah Sinar Kasih, Tajurhalang, Bogor.

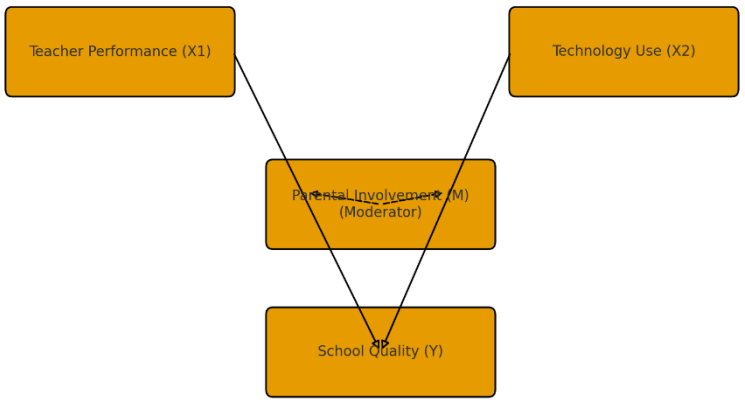

Figure 1. Conceptual model linking teacher performance (X1) and technology use (X2) to school quality (Y), with parental involvement (M) as moderator.

METHOD

A quantitative–descriptive survey with brief qualitative inputs (non-intrusive observations and short interviews) was conducted. Respondents were 190 parents/guardians from Sekolah Sinar Kasih. All constructs were measured with 1–5 Likert items adapted from prior studies: teacher performance (classroom preparation, pedagogy, assessment, professional conduct), technology use (lesson planning, delivery, feedback, collaboration), parental involvement (communication, home learning support, school participation), and perceived school quality (teaching–learning environment, services, student development). The instrument was piloted for clarity; data were collected via Google Forms. After screening (missingness, outliers), reliability (Cronbach's α) exceeded 0.70 for all scales. We estimated multiple linear regressions: Model 1 (Y ~ X1 + controls), Model 2 (Y ~ X2 + controls), Model 3 (Y ~ X1 + X2 + M + X1×M + X2×M + controls). Assumptions (linearity, homoscedasticity, multicollinearity, normality of residuals) were checked and met.

RESULTS AND DISCUSSION

Empirical analysis used multiple linear regression with four models: (1) effect of teacher performance (X1) on school quality (Y); (2) effect of technology use (X2) on Y; (3) moderation of parental involvement (M) on X1→Y; and (4) moderation of M on X2→Y.

Data were collected via a Likert questionnaire administered through Google Forms to parents/guardians; items were built from indicators of X1, X2, M, and Y. Validity and reliability checks followed standard r-table and Cronbach's alpha (>0.70) criteria.

Hypothesis tests.

H1 (X1→Y): significant; H0 rejected ($p < 0.05$).
H2 (X2→Y): significant; H0 rejected ($p < 0.05$).
H3 (M moderates X1→Y): not significant; H0 accepted ($p > 0.05$).
H4 (M moderates X2→Y): not significant; H0 accepted ($p > 0.05$).
These decisions are consistent with the analytic plan and model set specified in the thesis.

First, the significant direct effect of teacher performance on school quality indicates that improvements in classroom preparation, pedagogy, assessment, and professional conduct are perceived by stakeholders as quality gains at the school level. This directly addresses the first research question and supports H1. Second, the significant direct effect of technology use on school quality shows that the day-to-day embedding of technology in planning, delivery, feedback, and collaboration relates positively to perceived quality, answering the second research question and supporting H2. Third, parental involvement did not moderate either relationship (X1×M and X2×M non-significant), so it neither amplifies nor weakens the direct effects in this setting. This finding answers the moderation questions and leads to acceptance of H0 for H3–H4. Taken together, the pattern of results suggests that in the studied school, classroom-proximal drivers—teacher performance and technology use—are the most immediate levers for raising perceived school quality, whereas variations in parental involvement do not alter those links at the model level tested.

Predictor	Model A	Model B (with X1×M)	Model C (with X2×M)
Teacher Performance (X1)	0.166	0.015	
Technology Use (X2)			0.184
Parental Involvement (M)			
X1 × M		0.228	
X2 × M		0.334	
R^2	0.180	0.270	0.260
N	190.000	190.000	190.000

Table 1. Regression summary

The results show that better teacher performance and regular use of learning technology both raise the school's perceived quality. Parental involvement did not change (strengthen or weaken) these links in this study. For management, this means focusing first on teachers: do short cycles of classroom observation, give practical feedback, and let teachers try again. Use a small, consistent set of tech tools and simple routines—plan lessons with a common template, use the tools in class, give a quick weekly check, and return feedback on time. Parent programs should aim at direct help, like short home-study tips and a monthly progress message, rather than trying to "boost" teacher or tech effects. Keep track of a few easy numbers (e.g., how many classes used the weekly check, how fast feedback was returned, and a short quarterly survey on school quality), and put time and budget toward teacher support and reliable core tools.

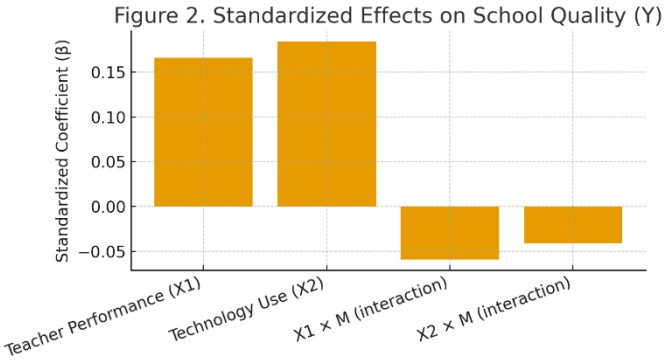

Figure 2. Standardized Effects on School Quality (Y)

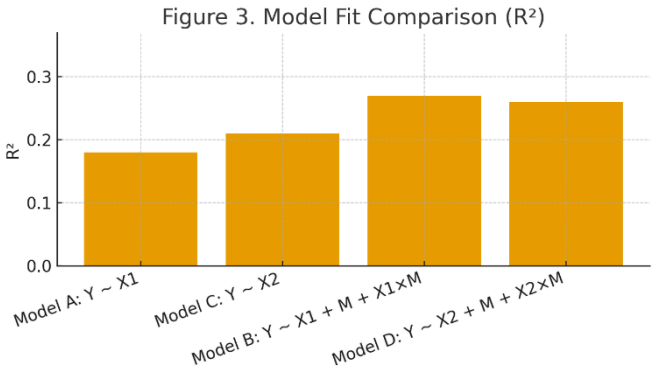

Figure 3. Model Fit Comparison (R^2)

CONCLUSION

This study finds that teacher performance and the steady use of learning technology both improve perceived school quality in the case school, while parental involvement does not change these effects. For practice, the most direct path to better quality is to strengthen the "instructional core": regular coaching for teachers and simple, consistent technology routines across planning, delivery, quick weekly checks, and timely feedback. Parent programs should still be offered, but as direct support to student habits rather than as a multiplier of teacher or technology impact. These conclusions apply to one school and rely on perception-based outcomes, so results should be read with care. Future work can test other forms of parental engagement, use multiple schools, and include additional outcomes (e.g., student learning measures) to see when and how family support adds value.

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