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Exploring the Impact of Teachers' Self-Efficacy on Student Engagement: A Meta-Analytic Synthesis

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A R T I C L E I N F O

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A B S T R A C T

The meta-analytic study explored the relationship between teacher self-efficacy and student engagement in elementary and secondary education contexts. Based on Bandura's Social Cognitive Theory, teacher self-efficacy refers to teachers' beliefs in their ability to manage classroom challenges, deliver learning effectively, and promote positive student learning outcomes. A systematic literature search was conducted using the Scopus database for publications from 2014 to 2024, yielding 20 studies that met the criteria with analysable correlational data. The meta-analysis results showed a significant and moderate positive relationship (r = 0.48; 95% CI: 0.33–0.63), indicating that the higher the teacher self-efficacy, the higher the cognitive, emotional, and behavioural engagement of students. Heterogeneity analysis showed significant variation across studies (Q = 1014.661, p < .001), indicating that contextual factors such as educational level, type of measurement instrument, and geographic location may moderate the relationship. Subgroup analysis and publication bias tests (funnel plot and Egger test) showed consistent and reliable results. These findings indicate that teachers with high self-efficacy tend to create supportive learning environments, implement adaptive learning strategies, and provide individual support to students. This study emphasizes the importance of professional training that focuses on improving teacher efficacy, especially in the context of digital and hybrid learning. These results also encourage longitudinal and cross-cultural research to enrich understanding and support evidence-based education policies.

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INTRODUCTION

Self-efficacy or self-confidence is a concept introduced by Albert Bandura (1997) within the framework of social-cognitive theory, which emphasizes that human behaviour is influenced by the interaction between personal factors, the environment, and individual actions. In the context of education, teacher self-efficacy is defined as an individual teacher's belief in his or her ability to plan, organize, and implement teaching activities needed to achieve desired learning goals, even in challenging situations. (Lau & Qian, 2024)This concept has been a major focus in educational studies because it has been shown to have a significant influence on teaching quality, classroom management, student motivation, and the achievement of optimal learning outcomes (An et al., 2022; Tadesse et al., 2023).

Teachers with high levels of self-efficacy tend to be more reflective and innovative in developing learning strategies, more confident in managing student behaviour, and more persistent in facing challenges in the classroom. They tend to create a safe, supportive, and open learning environment, allowing students to be more actively involved in the learning process emotionally, cognitively, and behaviourally (Kulakow, 2020). In contrast, teachers with low self-efficacy often experience doubts in making pedagogical decisions, tend to avoid challenges, and have difficulty in building positive relationships with students, which leads to low student engagement in learning activities (Ng et al., 2025). Previous studies have identified a positive and significant correlation between teacher self-efficacy and student engagement. Student engagement in learning not only reflects their active participation but is also an indicator of success in creating a meaningful learning process. Teachers who believe in their capacity to manage the classroom and motivate students are more likely to use a variety of instructional approaches, build positive relationships, and provide effective feedback, all of which contribute to increased student enthusiasm and engagement in the classroom (Lestari et al., 2022).

However, the relationship between teacher self-efficacy and student engagement is not linear and simple. Teachers' self-confidence in supporting students emotionally has an impact on students' perceptions of social support, which in turn increases students' interest and engagement in mathematics learning (Johnson, 2022). This finding highlights the importance of intervening variables, such as students' perceptions of teachers, instructional strategies used, and the classroom climate created by teachers. Furthermore, a design study by Žerovnik (2024) proved that training that focuses on developing teacher self-efficacy can increase student engagement, although its implementation in an environment with limited infrastructure and institutional support requires contextual adaptation. Meanwhile, (Jang et al., 2023) through an experimental approach showed that increasing self-efficacy through training does not necessarily always result in a significant increase in student engagement, depending on social, cultural factors, and student characteristics. Therefore, the local context is an important dimension that cannot be ignored when evaluating the effectiveness of teacher self-efficacy improvement interventions.

On the other hand, the phenomenon of educational transformation due to technological developments and the impact of the COVID-19 pandemic has encouraged teachers to adapt to digital and hybrid learning methods (Azid et al., 2022). Teacher self-efficacy in utilizing learning technologies such as Learning Management Systems (LMS), interactive applications, and digital media is the main determinant of the success of distance learning implementation. In this situation, student engagement is highly dependent on the teacher's ability to continue to build personal connections, create engaging learning experiences, and deliver materials adaptively through digital platforms (Asri et al., 2024). Although there are various studies that have explored the relationship between teacher self-efficacy and student engagement, most of these studies have limitations in terms of geographic coverage, educational level, and population diversity.

Most studies are still regional, focusing on one particular level of education (for example, only elementary or junior high school), and have not integrated the results comprehensively. There are few meta-analytic studies that systematically measure the strength of these relationships across educational systems and identify moderating variables that may strengthen or weaken these relationships, such as teaching experience, field of study, student background, and school culture (Dogan et al., 2021). This lack of integration across studies creates an important knowledge gap to bridge. Without a comprehensive mapping of existing research findings, it is difficult for education stakeholders whether policymakers, curriculum developers, or teacher trainers to design evidence-based and contextually appropriate interventions. In other words, a scientific synthesis approach through meta-analysis is needed to obtain a broader, more accurate, and more generalizable picture of the extent to which teacher self-efficacy impacts student engagement in learning (Schneider et al., 2023).

Based on this background, this study aims to conduct a meta-analytic synthesis of various studies exploring the relationship between teacher self-efficacy and student engagement at the primary and secondary education levels during the period 2014 to 2024. Specifically, the objectives of this study are formulated as follows:

RO1: To measure the magnitude of the influence of teacher self-efficacy on student engagement in general at the primary and secondary education levels based on the findings of relevant quantitative studies.

RO2: To explore the role of moderating factor such as educational level, sample characteristics, geographic location, and measurement instruments that can strengthen or weaken the relationship between teacher self-efficacy and student engagement.

RO3: To formulate strategic recommendations for teacher professional development and education policies that focus on improving the quality of learning through strengthening teacher self-efficacy, including in the context of digital and hybrid learning.

LITERATURE REVIEW

Theory and Conceptual Foundation

The theory of self-efficacy developed by Albert Bandura (1997) is an important basis for understanding how individual beliefs in their abilities can influence motivation, behaviour, and performance outcomes. In the context of education, this concept is very relevant because teachers who believe in their own abilities to manage the classroom, deliver material, and build positive relationships with students tend to show more effective teaching performance (Kensicki et al., 2022). Teacher self-efficacy is reflected in the belief that they can influence student learning even when faced with difficult conditions, such as limited facilities or diverse student characters. Teachers who have high levels of self-efficacy demonstrate reflective, innovative behaviour, and are willing to take pedagogical risks for student success (Kreis et al., 2024).

In addition, teacher self-efficacy does not just appear, but is formed through meaningful teaching experiences, social reinforcement from colleagues, and positive student learning outcomes. A study by Cong et al., (2024) showed that teachers with high efficacy are more likely to use collaborative, technology-based learning strategies that emphasize student exploration of concepts. They are also more open to curriculum changes and instructional adaptations. Guo et al., (2025) added that teachers with high self-efficacy have better emotional control and can facilitate a conducive and psychologically safe learning environment. In this context, structural support from school leaders, a supportive organizational culture, and ongoing professional training are important elements that support the growth of teacher efficacy (Prifti, 2022).

Empirical Evidence on the Relationship between Self-Efficacy and Engagement

The relationship between teacher self-efficacy and student engagement has been studied in various studies, both quantitatively and qualitatively. Research conducted by Chiu (2022) showed that teacher self-efficacy explains almost 20% of the variation in student engagement levels. This is a significant enough number to explain that teachers' perceptions of their abilities have a direct impact on how students interact, participate, and focus on the learning process. Teachers who are confident in their competence tend to create active, inclusive, and life-relevant learning, so that students feel valued and more involved (Feng et al., 2023).

Gan & Peng (2024) in their study on online learning also emphasized that teacher self-efficacy remains an important predictor of student engagement even in distance learning conditions. In a pandemic situation, teachers with high efficacy can still maintain students' enthusiasm for learning through empathetic digital interactions and customized learning strategies. Karaduman (2025) showed that teachers with high efficacy are able to provide individual attention, use differentiation techniques in teaching, and adopt methods that address various student learning styles. In addition, these studies emphasize that the success of implementing pedagogy that supports engagement is also influenced by environmental factors, such as a collaborative school climate, the principal's leadership style, and support between colleagues (An et al., 2022).

The Role of Teacher Emotional Support

Emotional support is an important dimension of the interpersonal relationship between teachers and students that directly contributes to student engagement. Teachers who have high levels of self-efficacy generally have sharper emotional awareness and are able to create empathetic relationships with students. A study by Guo et al. (2025) showed that emotional support provided by teachers can increase student engagement both directly and through the mediation of variables such as academic self-efficacy and learning resilience. In online and hybrid learning, the role of teachers as providers of emotional support becomes increasingly important because social interactions are limited (De La Varre et al., 2010).

Gan & Peng (2024) also emphasized that teachers who have high self-efficacy tend to be more positive in their interactions, more patient in dealing with student difficulties, and provide reinforcement that encourages students to stay engaged despite learning obstacles. They are also more consistent in conveying realistic high expectations, so that students feel challenged but remain motivated. On other hand, the emotional approach applied by teachers also functions as a deterrent to stress and academic pressure, and increases students' perceptions of school as a place that supports personal and academic growth. This collaborative and emotionally safe classroom culture ultimately creates a positive cycle between teacher self-efficacy and student engagement (Irwin et al., 2023).

Methodological Gaps and Future Research Directions

Although many studies have confirmed the positive relationship between teacher self-efficacy and student engagement, there are a number of methodological gaps that need to be addressed in future research. Most studies are still cross-sectional, making it difficult to identify the direction of causality conclusively. A positive relationship was detected, the dynamics of teacher efficacy change over time are still poorly explained. Therefore, longitudinal studies are needed to explore how experience, training, and social interactions influence the development of teacher self-efficacy over time (Guo et al., 2025; Liu et al., 2025).

Lauermann & Berger (2021) added that a mixed-method approach would be very useful to explore not only how strong the relationship between the two variables is, but also how and why the relationship occurs. The use of qualitative methods such as in-depth interviews, case studies, and classroom observations can enrich the existing quantitative data. In addition (Cong et al., (2024) suggested that social and technological contexts, such as the role of digital media, changes in student learning styles, and the complexity of challenges in the post-pandemic era, be taken into account in the theoretical model developed. Future research should also consider the role of mediators and moderators such as job satisfaction, teacher professional identity, and managerial support in explaining the relationship between self-efficacy and student engagement (Qi et al., 2024).

The development of cross-culturally valid measurement instruments is also a priority to enable the generalization of research results globally. Finally, a context-based evaluation model is needed that not only measures student learning outcomes but also links them to teacher efficacy and systemic support

provided by schools and national education policies. Thus, the contribution of research is not only academic, but also applicable in designing real interventions that support the success of the teaching and learning process (Fallon et al., 2023; Paula et al., 2021)

METHOD

Literature Search Strategy

A systematic literature search was conducted using the Scopus database as the primary source due to its comprehensiveness and reputation in covering reputable international publications. The keywords used in the search process were "teacher self-efficacy", "student engagement", and "correlation analysis". Variations of keywords such as "teaching effectiveness", "learning motivation", and "academic engagement" were also used to expand the scope of the search. Boolean operators such as AND and OR were used to combine keywords logically. The search was limited to journal articles published in the period 2014–2024, with English language limitations and the type of document in the form of scientific articles (research articles) available in PDF format and fully accessible. In addition, to ensure the diversity of studies, a further search was also conducted by checking the bibliography of relevant primary articles (snowballing technique).

Inclusion and Exclusion Criteria

Inclusion criteria included studies that: (1) discussed the relationship between teacher self-efficacy and student engagement, (2) presented quantitative data in the form of correlation measures (e.g. r, F, T, or P-value), (3) involved relevant respondents (teachers and students from elementary to college levels), and (4) were published in indexed journals. Articles were also considered if they included data that allowed transformation to common effect sizes such as Cohen's d or Fisher's z. Conversely, articles that were excluded were: (1) articles that did not present statistical data that could be processed in meta-analysis, (2) articles in the form of systematic reviews or narrative reviews without primary quantitative data, (3) articles in languages other than English, and (4) articles that were only available in abstract form or were not fully accessible. To minimize selection bias, two researchers independently assessed the eligibility of articles based on the title and abstract, then through full-text review.

Data Extraction and Coding

The data extraction process was carried out manually and systematically. Information collected from each study included: author name, year of publication, sample size (N), correlation value (r), F and T values (if available), P-value, respondent education level, participant characteristics (age, gender), and geographical location of the study. In addition, measurement instruments used to measure self-efficacy (e.g., Teacher Sense of Efficacy Scale) and student engagement (e.g., Student Engagement Scale) were coded. Two independent researchers conducted the extraction process to ensure accuracy, and any discrepancies were resolved through discussion or consultation with a third researcher.

In addition to the primary data, each article was also analyzed based on the methodological design (experimental, correlational, or longitudinal) and the type of inferential statistics used. This is important to evaluate the internal quality of the studies.

Statistical Analysis Using JASP

Data analysis was performed using the latest version of JASP software that provides complete meta-analysis features. Correlation values (r), F, T, and P-values obtained from each study were entered into the JASP data matrix. To evaluate heterogeneity between studies, the Cochran's Q test and the I^2 statistic were used. If $p > 0.1$ and $I^2 \leq 50\%$, a fixed effects model was used; if $p < 0.1$ or $I^2 > 50\%$, a random effects model was used. Overall effect size estimates and 95% confidence intervals were calculated to measure the strength of the relationship between teacher self-efficacy and student engagement. Subgroup analyses were also performed based on geographic location, education level, and type of instrument. For visualization purposes, a forest plot diagram was also created complete with confidence limits and weights for each study.

Publication Bias Detection

To detect publication bias, a funnel plot and Egger's test were used. The funnel plot is used to see the symmetry of the distribution of study results; A marked asymmetry may indicate a possible publication bias. Egger's test complements the visualization by providing a formal statistical test to detect the presence of imbalanced results. In addition, Rosenthal's Fail-Safe N was calculated to measure how many non-significant studies are needed to nullify the significant results obtained. As an additional step, the trim-and-fill method was used to estimate the number of studies lost due to selective publication and adjust the overall effect size estimate.

Article Selection Procedure with PRISMA

The entire article selection process followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. A PRISMA flowchart was used to show the number of articles obtained from the initial search, articles screened, articles evaluated for eligibility, and the final number of studies included in the analysis. This procedure ensures transparency and replicability in the screening process, while minimizing the potential for selection bias. All stages of documentation were performed using a reference manager (such as Mendeley or Zotero) and a spreadsheet for systematic tracking. The final PRISMA diagram will be presented in the results section to provide a concise and informative visualization of the inclusion-exclusion process.

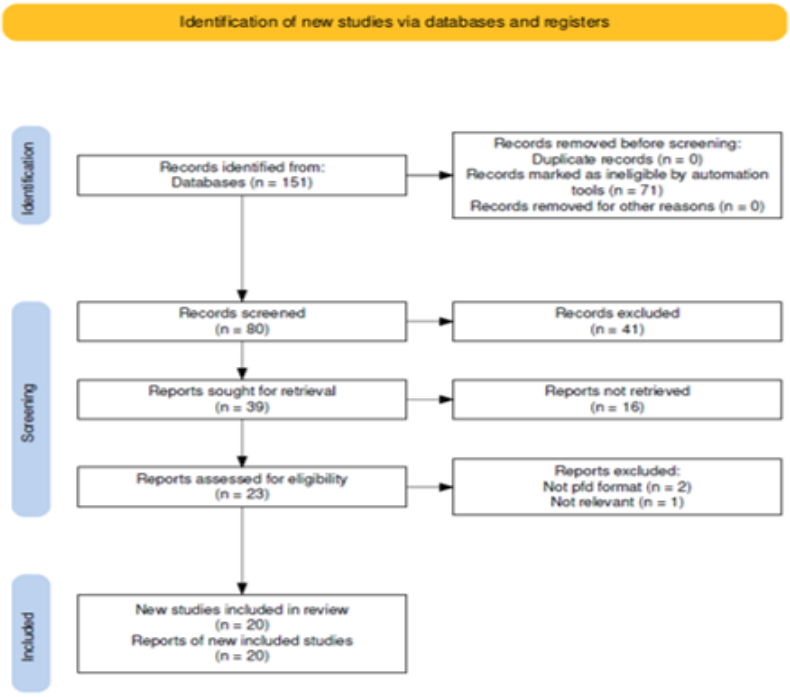

Figure 1: Searching and Screening Processes

RESEARCH RESULT

The results of the meta-analysis showed that the average effect size between teacher self-efficacy and student engagement was 0.48 with a 95% confidence interval between 0.33 and 0.63. This effect size indicates a positive and significant relationship, meaning that increasing teacher self-efficacy tends to increase student engagement in learning with a moderate effect strength.

Fixed and Random Effects ▼

	Q	df	p
Omnibus test of Model Coefficients	39.632	1	< .001
Test of Residual Heterogeneity	1014.661	19	< .001

Note. *p*-values are approximate.
Note. The model was estimated using Restricted ML method.

Table 1: Results of Fixed and Random Effects Model Analysis

In the fixed and random effects model analysis, the Omnibus test for the Model Coefficient produced a Q value of 39.632 (df = 1, p < .001). This indicates that the relationship between teacher self-efficacy and student engagement is significant overall. The Residual Heterogeneity test with a value of 1014.661 (df = 19, p < .001) indicates that despite variations between studies, the relationship between the two variables remains significant and can be generalized.

Coefficients

					95% Confidence Interval	
	Estimate	Standard Error	z	p	Lower	Upper
intercept	0.478	0.076	6.295	< .001	0.329	0.627

Note. Wald test.

Table 2: Coefficient Results and Z-Statistic Test

The coefficient table shows that the intercept has a value of 0.478 with p < .001, which means that the relationship between teacher self-efficacy and student engagement is positive and statistically significant. This estimate has a 95% confidence interval between 0.329 and 0.627, indicating that this result can be widely applied in different educational contexts.

Regression test for Funnel plot asymmetry ("Egger's test")

	z	p
sei	0.794	0.427

Table 3: Funnel Plot Asymmetry Test (Egger's Test)

The Funnel Plot Test (Egger's Test) to evaluate publication bias showed a z value = 0.794 (p = 0.427). This insignificant p value indicates that there is no publication bias affecting the results of this meta-analysis. In other words, the findings are reliable and not distorted by unpublished studies.

File Drawer Analysis

	Fail-safe N	Target Significance	Observed Significance
Rosenthal	22494.000	0.050	< .001

Table 4: File Drawer Analysis

File-Safe N analysis using Rosenthal's Fail-Safe N method yielded a value of 22494. This indicates that as many as 22,494 studies with null or insignificant results would be needed to eliminate the significance of the results obtained in this study. This indicates that the results of this study are very strong and are not affected by unpublished studies or those with insignificant results.

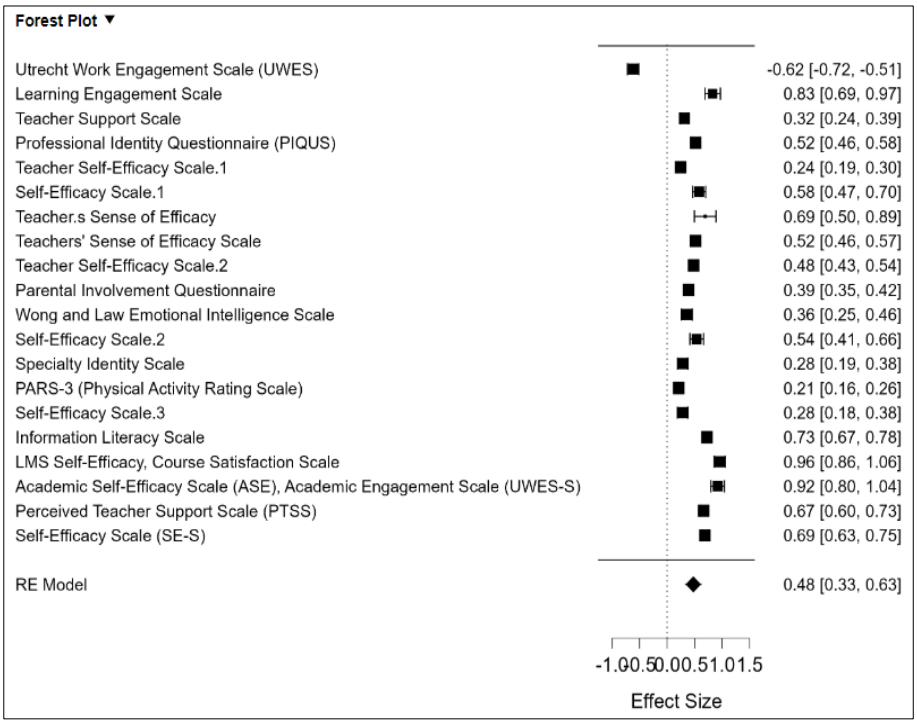

Figure 2: Forest Plot

The forest plot shows the distribution of effect sizes of the various scales used to measure teacher self-efficacy and student engagement. Most of the scales showed significant positive effect sizes. The Learning Engagement Scale showed the highest effect size (0.83), followed by the Teacher Self-Efficacy Scale (0.69). This shows that student learning engagement and teacher self-efficacy have a significant influence in increasing student engagement in learning.

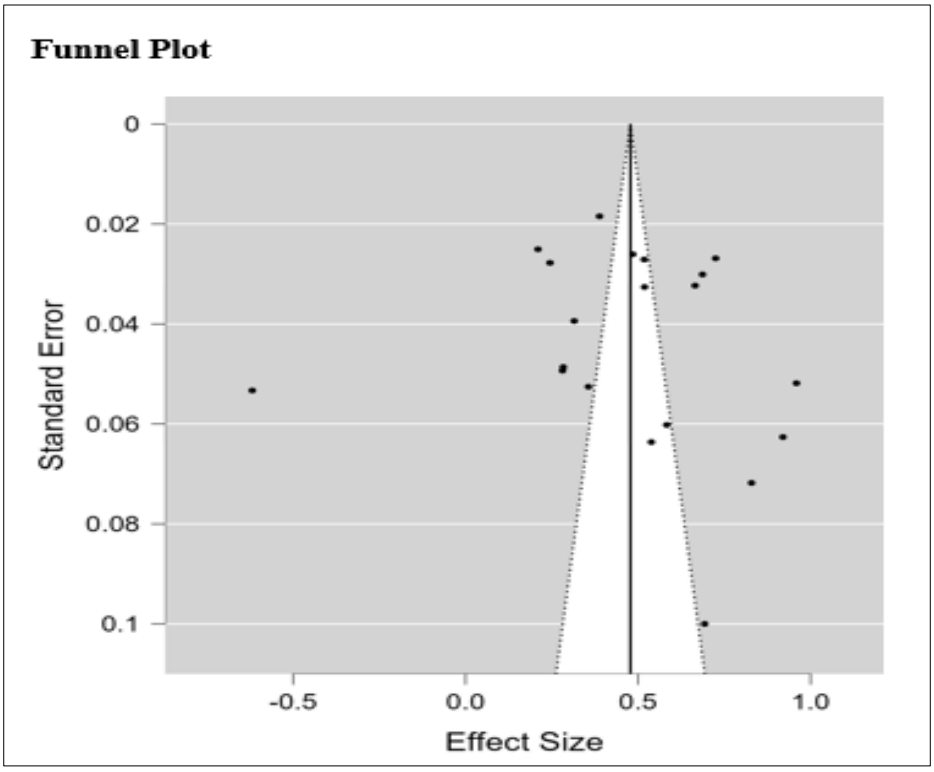

Figure 3: Funnel Plot

The funnel plot shows a symmetric distribution of effect sizes. The symmetry of the plot suggests that there is no publication bias affecting the results of this meta-analysis. The small asymmetry seen indicates that the findings encompass a representative range of effect sizes.

The results of this analysis confirm a significant positive relationship between the two variables, with an average effect size of 0.48 (95% confidence interval: [0.33, 0.63]). This finding suggests that increasing teacher self-efficacy tends to increase student engagement in learning, in line with the research questions raised in this study. These results support the view that teacher self-efficacy plays an important role in creating a learning atmosphere that supports student engagement, which is also reflected in the existing literature (Castañón et al., 2023; Liu et al., 2025). The synthesis of the studies included in this meta-analysis shows that teacher self-efficacy has a significant positive effect on student engagement in learning. This result is consistent with the literature stating that teachers with high self-efficacy are more likely to use teaching strategies that can increase student engagement (Hettinger et al., 2022; Chang & Chien, 2015).

DISCUSSION

In general, the findings of this meta-analysis provide strong empirical support for the proposed relationship between teacher self-efficacy and student engagement. The results of this meta-analysis support this statement and indicate that the relationship between teacher self-efficacy and student engagement is moderate to strong. The random effects model test yielded $Q = 39.632$ ($df = 1$, $p < .001$), while the residual heterogeneity test ($Q = 1014.661$, $df = 19$, $p < .001$) indicated significant variation between studies. The results of this study are in line with previous studies showing that teacher that teacher self-efficacy is positively related to student engagement in various educational contexts. A longitudinal study by Hußner et al. (2024) also showed that increased teacher self-efficacy correlated with increased emotional support and student engagement in the classroom. This study makes a new contribution by synthesizing findings from various studies in the past decade and covering a variety of educational contexts, thus strengthening the generalizability of the results. These findings also confirm the relevance of Bandura's Social Cognitive Theory (1997), which explains that self-efficacy influences a person's actions and performance in achieving goals (Bowen et al., 2022; Liu et al., 2025).

In the context of learning, teachers with high self-efficacy are more effective in implementing teaching strategies that can increase student participation (Liao et al., 2024). This also reinforces the importance of institutional support and professional training in improving teacher efficacy. One interesting finding is the significant heterogeneity between studies, as reflected by the high Q value (1014.661, $p < .001$) and moderate to large variations in effect sizes. This indicates that the relationship between teacher self-efficacy and student engagement is influenced by contextual factors such as differences in measurement instruments (Patte et al., 2024). Studies using the Teacher Self-Efficacy Scale may produce different results than those using a student engagement scale based on direct observation. However, the overall significance of the relationship remains intact. These findings have important implications both theoretically and practically. From a theoretical perspective, this study strengthens the role of self-efficacy in teacher motivation theory and provides empirical evidence of its relationship with student engagement. From an educational policy perspective, these results emphasize the importance of training programs that focus on strengthening teacher efficacy, especially in terms of classroom management and active learning strategies. Educational institutions and policymakers need to integrate efficacy-based training into ongoing professional development (Lestari et al., 2022).

These results provide a basis for developing teacher intervention evaluation models that emphasize increasing efficacy as a starting point. For example, schools can develop internal mentoring programs aimed at increasing novice teachers' confidence through classroom observations and reflective feedback. At the macro level, teacher performance appraisal systems should also include self-efficacy indicators as part of non-cognitive assessments that encourage continuous professional growth. These findings also suggest the

importance of adapting teacher training curricula to include strengthening intrapersonal capacities such as emotion regulation, professional resilience, and instructional flexibility (Hennrikus et al., 2020). In the context of digital and online learning, teachers with high self-efficacy have been shown to be more effective in maintaining student engagement, even amidst limited physical interactions. This means that developing digital competencies is not only technical, but also related to teachers' self-perceptions of their ability to manage digital classrooms. Therefore, digital training that fosters teachers' confidence in technology is a crucial strategy in the modern learning ecosystem (Ingram et al., 2024; Lestari et al., 2022).

Thus, the results of this meta-analysis provide significant theoretical and practical contributions to the world of education, not only strengthening the empirical basis of the importance of teacher self-efficacy, but also opening up space for policy interventions, training development, and more effective and resilient learning designs in facing the challenges of the times. The entire article selection process followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The PRISMA flowchart was used to show the number of articles obtained from the initial search, articles screened, articles evaluated for eligibility, and the final number of studies included in the analysis. This procedure ensures transparency and replicability in the screening process, while minimizing potential selection bias. All stages of documentation were carried out using a reference manager (such as Mendeley or Zotero) and a spreadsheet for systematic tracking. The final PRISMA diagram will be presented in the results section to show a concise and informative visualization of the inclusion-exclusion process.

CONCLUSIONS AND RECOMMENDATIONS

This study presents a meta-analytic synthesis of the influence of teacher self-efficacy on student engagement in primary and secondary education contexts. The results of the analysis showed a positive and significant relationship, with an average effect size of 0.48, indicating that increasing teacher self-efficacy consistently promotes student engagement emotionally, cognitively, and behaviourally. Teachers with high levels of self-efficacy tend to use more reflective, adaptive, and student-centered teaching approaches, creating a supportive and motivating classroom climate. The study also identified moderating factors such as teaching experience, educational level, field of study, and student background, which influence the strength of the relationship. These findings emphasize the importance of considering local context in designing teacher interventions and training. This study contributes to the development of educational policies and professional programs that focus on strengthening teacher self-efficacy and instructional effectiveness. However, variations in measurement instruments across studies are limitations that may affect the consistency of the results and the generalizability of the findings. Therefore, further research with longitudinal designs, cross-cultural approaches, and exploration of contextual factors such as institutional support and learning technology is needed to strengthen

understanding of the dynamics of the relationship between teacher self-efficacy and student engagement.

Based on these findings, several recommendations can be proposed. First, educational institutions should design and implement continuous professional development programs that explicitly aim to enhance teacher self-efficacy through reflective practice, mentoring, and collaborative learning communities. Second, policymakers are encouraged to integrate self-efficacy enhancement strategies into teacher training curricula, particularly by emphasizing practical teaching experiences and feedback mechanisms. Third, schools should provide supportive environments, including adequate resources, leadership support, and opportunities for innovation, to sustain teachers' confidence in their instructional abilities. Fourth, future researchers are recommended to employ standardized and validated measurement instruments to improve comparability across studies, as well as to explore the role of digital learning environments and institutional culture in shaping teacher self-efficacy and student engagement. Finally, cross-cultural and longitudinal studies are strongly encouraged to provide deeper insights into causal relationships and contextual variations.

ADVANCED RESEARCH

Building on the findings of this meta-analysis, advanced research should move beyond merely confirming the positive relationship between teacher self-efficacy and student engagement and instead focus on explaining the conditions, mechanisms, and contextual factors that shape this relationship. Although the present study found a significant moderate effect, the substantial heterogeneity across studies indicates that the strength of the relationship is influenced by differences in educational level, geographic setting, and measurement instruments. Therefore, future studies should prioritize longitudinal and cross-cultural designs to clarify causal direction, capture changes over time, and improve the generalizability of findings across different educational systems. Greater attention should also be given to the development and use of standardized and cross-culturally valid instruments so that comparisons across studies can be made more consistently and accurately.

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