


# A Meta-Analysis of Organizational Culture and Transformational Leadership Effects on Teacher Performance

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<p><b>Revised:</b> 2025-10-14</p> <p><b>Published:</b> 2025-11-17</p> <p><b>Keywords:</b> Educational Management, Meta-Analysis, Organizational Culture, Transformational Leadership, Teacher Performance</p> <p><b>Copyright holder:</b> © Author/s (2025)</p> <p><b>This article is under:</b> </p> <p><b>How to cite:</b> Surwiti, S., Widodo, W., Sumaryoto, S., &amp; Prasetyono, H. (2025). A Meta-Analysis of Organizational Culture and Transformational Leadership Effects on Teacher Performance. <i>Bulletin of Counseling and Psychotherapy</i>, 7(3). <a href="https://doi.org/10.51214/002025071638000">https://doi.org/10.51214/002025071638000</a></p> <p><b>Published by:</b> Kuras Institute</p> <p><b>E-ISSN:</b> 2656-1050</p>	<p><b>ABSTRACT:</b> Despite extensive research on factors influencing teacher performance, empirical findings on the relative and combined effects of organizational culture and transformational leadership remain fragmented and inconclusive across educational contexts. This study conducts a meta-analysis to examine the effects of organizational culture and transformational leadership on teacher performance across multiple educational contexts. A systematic search was performed through ScienceDirect, Eric, Taylor &amp; Francis, and Google Scholar databases, applying rigorous inclusion criteria for quantitative studies published between 2015 and 2025. From 1250 identified articles, 22 met the eligibility requirements, consisting of 11 studies on organizational culture and 11 on transformational leadership. The random-effects model for organizational culture revealed a significant positive effect on teacher performance (<math>r = 0.448</math>, <math>p &lt; .001</math>), categorized as moderate, though high heterogeneity (<math>I^2 = 80.18\%</math>) indicated contextual variation across studies. In contrast, transformational leadership showed a consistent and significant positive effect (<math>r = 0.441</math>, <math>p &lt; .001</math>) under the fixed-effects model, with low heterogeneity (<math>I^2 = 4.05\%</math>), reflecting stable results across different educational settings. These findings affirm that both organizational culture and transformational leadership are critical determinants of teacher performance, but the influence of organizational culture is more context-dependent.</p>
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## INTRODUCTION

Teacher performance is one of the main factors that determine the quality of education in schools. Improving teacher performance has a direct impact on learning effectiveness, student motivation, and learning outcomes. In line with the transformation of 21st century education, contextual factors such as organizational culture and transformational leadership are increasingly recognized as important determinants that drive improved teacher performance. Effective teaching depends on several interconnected factors such as work motivation, teacher competence, and organizational culture, which together play a crucial role in enhancing teacher performance (Robbins & Judge, 2019). Various contemporary studies confirm that schools with a healthy organizational culture and visionary leadership tend to show better teaching quality (Fitri et al., 2024; Nkwatsibwe & Balimuttajjo, 2024).

The organizational culture in schools reflects the collective values, norms, and practices that influence teacher behavior. A culture that supports collaboration, innovation, and trust is believed to increase teachers' intrinsic motivation and attachment to their work (Arachchi, 2023). In the

context of primary and secondary education, a strong organizational culture is related to increasing work discipline, productivity, and sustainability of pedagogical innovation (Kartiko et al., 2024; Odutayo & Adewuyi, 2024). Schools that maintain a robust organizational culture tend to foster innovation, support open communication, and create environments where teachers can excel (Deal & Peterson, 2016). Nevertheless, the impact of work culture on teacher performance can vary depending on the leadership approach implemented by school leaders (Biabi et al., 2025). Hayati & Susatya (2020) describe school culture as the underlying set of values, beliefs, and traditions that have evolved throughout a school's history. Similarly, Lambert et al. (2024) view culture as the shared assumptions developed within a group or organization through collective experiences. Building on this, Tan (2024) emphasizes that school culture is gradually shaped through the collaboration of teachers, leaders, parents, and students, influencing staff development and professional growth. Hence, school culture and the broader educational community play vital roles in promoting stakeholders' well-being and professional advancement. Moreover, Yli-Panula et al. (2022) define school culture as a comprehensive concept encompassing the values, norms, behaviors, atmosphere, and attitudes of school members principals, teachers, and students in teaching and learning. Gore et al. (2022) further extend this definition to include the assumptions and relationships within the school community, while Schipper et al. (2020) highlight school culture as a distinctive factor that shapes the school's behavior and interactions. Thus, organizational culture is not only a structural background, but also a driving factor for teacher performance.

On the other hand, transformational leadership has proven to be an effective leadership style in creating positive change in schools. Principals who implement transformational leadership are able to inspire, motivate, and build collective commitment among teachers. These impacts have implications for increasing teaching effectiveness, innovating learning methods, and adapting to global challenges (Bosco & Harerimana, 2022; Waheed et al., 2023). In other words, transformational leadership serves as a catalyst for improving teacher performance. Although a number of studies have documented a positive relationship between organizational culture and transformational leadership with teacher performance empirical findings show significant variation in effects. Some studies found a strong effect, while other studies reported weak or insignificant effects, even in relatively homogeneous educational contexts (Hepni et al., 2022; Yusuf et al., 2025). This inconsistency can be caused by differences in methodology, sample size, measurement instruments, and mediating variables such as motivation and school climate.

In such a situation, meta-analysis becomes the right methodological approach to systematically summarize and synthesize empirical evidence. By combining various research results, meta-analyses can produce more reliable estimates of combined effects and are able to identify moderator factors that explain heterogeneity between studies (Hunter & Schmidt, 2004; Borenstein et al., 2011). Thus, this study aims to provide a comprehensive understanding of the role of organizational culture and transformational leadership in improving teacher performance. The leader provides coaching, guidance, and opportunities that promote followers' personal and professional growth (Wanza, 2024). In addition, individual consideration involves the leader's attention to employees' needs and support in achieving work-related goals. Accordingly, the leader offers direction and advice based on those needs to facilitate task accomplishment (Zhang et al., 2024).

More specifically, this meta-analysis will calculate the aggregate effects of organizational culture on teacher performance and transformational leadership on teacher performance. In addition, this study will also examine the possibility of organizational culture and transformational leadership on teacher performance. Some recent literature states that a healthy organizational culture can strengthen the effectiveness of transformational leadership, while strong leadership is able to form a positive organizational culture (Sulistyaniningsih et al., 2022; Fitri et al., 2024).

Based on the issues and gaps identified in previous studies, this research aims to systematically synthesize empirical evidence on the influence of organizational culture and transformational leadership on teacher performance through a meta-analysis approach. Specifically, this study seeks to determine the overall effect size of organizational culture and transformational leadership on teacher performance, as well as to explore potential moderator factors that may explain variations across studies. With these criteria, this study analysed a number of relevant articles. The following table presents a summary of the articles included in the meta-analysis based on the variables X1: Organizational Culture, X2: Transformational Leadership, and Y: Teacher Performance. Therefore, this meta-analysis will test both the direct effect organizational culture and transformational leadership on teacher performance. This research is expected to make an empirical and practical contribution. Theoretically, this meta-analysis enriches the education management literature by affirming the importance of organizational culture and transformational leadership as determinants of teacher performance. Practically, the results can be used as a policy basis in designing programs to increase the capacity of school principals and strengthen the school organizational culture. Thus, the findings of this study will help strengthen education quality improvement strategies through school management improvements oriented to organizational culture and transformational leadership.

## **METHODS**

### **Design**

This study uses a meta-analysis approach to combine empirical findings regarding the influence of organizational culture and transformational leadership on teacher performance. The selection of this method is based on the consideration that meta-analysis is able to provide a more accurate estimate of effect sizes as well as improve the generalization of research results derived from various educational contexts ([Borenstein et al., 2021](#); [Valentine et al., 2019](#)). In addition, this method allows the identification of moderator factors that have the potential to affect the strength of relationships between variables.

### **Procedure**

The article search process is carried out systematically through the ScienceDirect, Eric, Taylor & Francis, and Google Scholar databases. The keywords used include "organizational culture AND teacher performance", "transformational leadership AND teacher performance", and their equivalents in Indonesian. In addition to digital search, the snowball strategy is carried out by browsing through a bibliography of relevant articles. All search results are then exported in a reference manager (Mendeley) format to facilitate selection and filtering. The article selection stage is carried out in three steps. First, the screening of titles and abstracts to ensure the suitability of the topic with the research variables. Second, a full-text review to verify the fulfilment of inclusion and exclusion criteria. Third, the elimination of redundant articles or lack quantitative data. This process follows the PRISMA selection transparency standard, although the presentation of the PRISMA graph will be provided in the search results section.

This study employs a meta-analysis approach to synthesize empirical findings on the effects of organizational culture and transformational leadership on teacher performance. A meta-analysis is considered appropriate because it enables a more accurate estimate of effect sizes and allows the generalization of findings across diverse educational settings ([Borenstein et al., 2021](#); [Valentine et al., 2019](#)). In addition, this method identifies possible moderator factors that could influence the strength of relationships between variables. The eligibility criteria for this meta-analysis were carefully established to ensure the inclusion of high-quality empirical evidence. Studies were selected only if they directly examined the influence of organizational culture or transformational leadership on teacher performance, and if they reported statistical measures that could be

converted into correlation coefficients ( $r$ ). As emphasized by [Petticrew & Roberts \(2006\)](#), “clear inclusion and exclusion criteria are essential to minimize bias and improve the validity of systematic reviews.” Therefore, the scope was limited to research populations involving teachers at primary, secondary, or higher education levels, published between 2015 and 2025 in reputable and accredited journals indexed in Sinta or Scopus. In contrast, conceptual papers, literature reviews, studies with non-teacher participants, or those without reportable effect sizes were excluded to maintain methodological rigor ([Cooper, 2017](#)).

The data collection process employed multiple databases, including ScienceDirect, Eric, Taylor & Francis, and Google Scholar, with predefined search strings such as “organizational culture AND teacher performance” and “transformational leadership AND teacher performance.” According to [Booth et al. \(2016\)](#), “the comprehensiveness of database searching is crucial in systematic reviews to capture all potentially relevant studies.” Additionally, Indonesian equivalents of the keywords were used to identify local publications, and a snowballing technique was applied to track references from relevant articles. A total of 1250 articles were initially identified across databases: ScienceDirect (210 articles), Eric (220 articles), Taylor & Francis (130 articles), and Google Scholar (690 articles). After removing duplicates and conducting title and abstract screening, 312 articles were retained for full-text review. Following the exclusion of studies that did not meet the inclusion criteria such as conceptual papers, non-teacher populations, or insufficient statistical data 22 empirical studies met the final criteria for analysis, consisting of 11 studies on organizational culture and 11 studies on transformational leadership in relation to teacher performance.

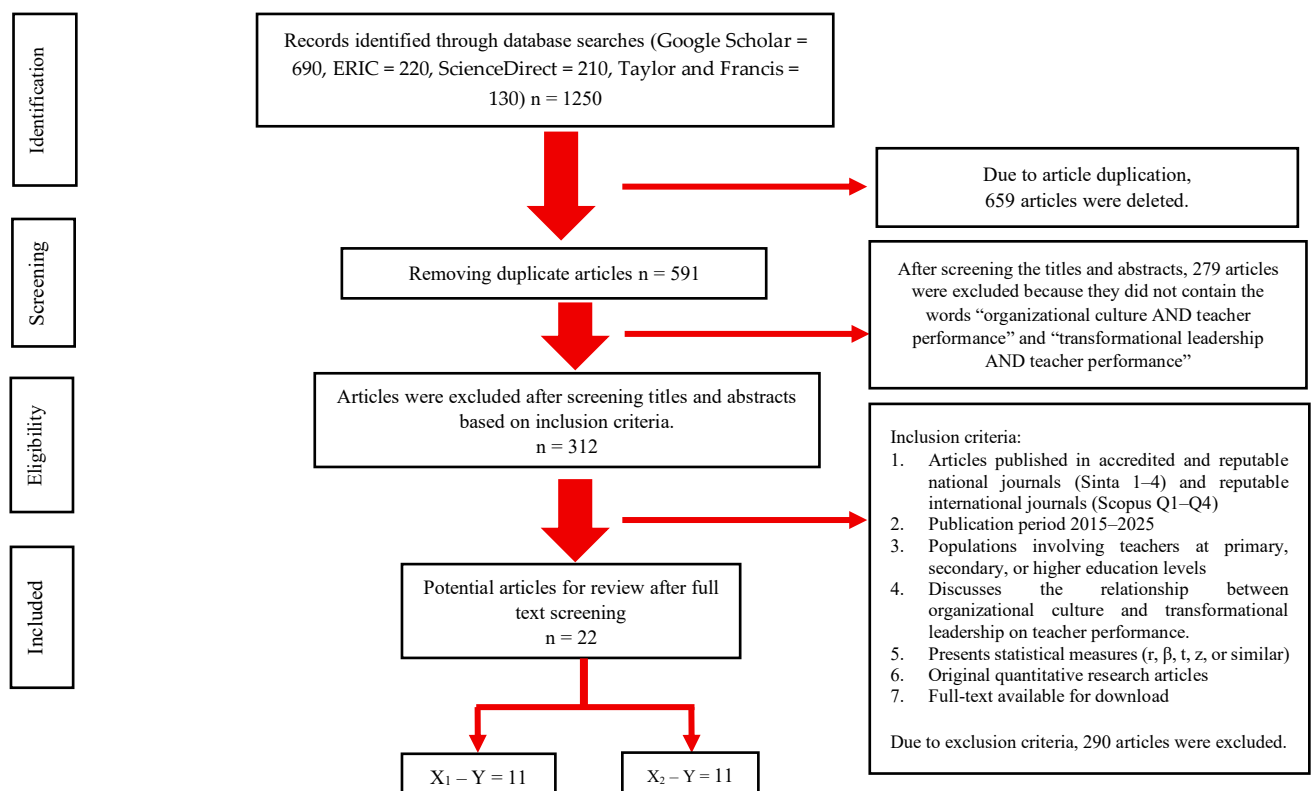


Figure 1. Prisma Flowchart  
X1-Y (Organizational Culture on Teacher Performance); X2-Y (Transformational Leadership on Teacher Performance)

The initial screening results from Figure 1 above show:

1. From 246 articles → 22 final articles were included in the meta-analysis.
2. Consists of 11 for X1 → Y studies and 11 for X2 → Y studies. X1-Y (Organizational Culture on Teacher Performance); X2-Y (Transformational Leadership on Teacher Performance).

Table 1. The list of articles of X1 to Y, X2 to Y

Author & Year	Relations
Sulistyaniningsih, Astuti, & Hidayat (2022)	X1 to Y
Kartiko, Rokhman, Priyono, & Susanto (2024)	X1 to Y
Odutayo & Adewuyi (2024)	X1 to Y
Ghanney, Antwi, & Ali (2017)	X1 to Y
Harmonika & Supiarmo (2025)	X1 to Y
Yurinas & Sarinah (2019)	X1 to Y
Sari, Effendi, & Kartawinata (2018)	X1 to Y
Omenyi & Emengini (2019/2020)	X1 to Y
Arachchi (2023)	X1 to Y
Nkwatsibwe & Balimuttajjo (2024)	X1 to Y
Al Tanzim (2022)	X1 to Y
Andriani, S., Kesumawati, N., & Kristiawan, M. (2018)	X2 to Y
Bosco, C., & Harerimana, A. (2022)	X2 to Y
Esia-Donkoh, K. (2022)	X2 to Y
Fitri, F., Gunawan, G., & Annas, A. (2024)	X2 to Y
Hepni, A., Aslamiah, & Rizalie, A. M. (2022)	X2 to Y
Igwe, C. N., Nwachukwu, C., & Okonkwo, J. (2019)	X2 to Y
Kweku, F. (2022)	X2 to Y
Lede, Y. U., Agung, A. A. G., Wisna, I. P., & Dantes, K. R. (2024)	X2 to Y
Sirait, D., Suriansyah, Ngadimun, & Suhaimi. (2021)	X2 to Y
Waheed, A., Naz, S., & Arshad, M. (2023)	X2 to Y
Yusuf, A. A., Ahmed, H., & Musa, S. (2025)	X2 to Y

The main effect measure used in this meta-analysis is the Pearson correlation ( $r$ ). For articles that only report other statistics such as  $\beta$ ,  $t$ , or  $F$ , conversion to  $r$  is carried out according to the formula suggested by [Hunter & Schmidt \(2004\)](#). Next, the value of  $r$  is transformed to  $z$  Fisher so that the distribution is closer to normal. All calculations were performed using JASP 0.18.3 software and Review Manager 5.4 which supports quantitative meta-analysis. The analysis was carried out using a random-effect model because the studies studied came from various contexts, educational levels, and locations, so that there were significant variations between studies. Heterogeneity tests were performed with  $Q$ -statistics and  $I^2$  to identify the level of inconsistency between research results ([Higgins et al., 2003](#)). The higher the  $I^2$  value, the greater the indication of heterogeneity. In addition to calculating the size of the combined effect, this study also presents a forest plot to visualize the distribution of effects from each study as well as the combined value. The publication bias test is carried out with the funnel plot and Egger's regression test to detect possible publication imbalances. With this approach, the results of the meta-analysis are expected not only to provide an estimate of the influence of organizational culture and transformational leadership on teacher performance, but also to become an academic reference in developing policies to improve the quality of education.

## Data Analysis

Research inclusion criteria are set to maintain the validity of the analysis. The article under consideration is an empirical study that examines the direct relationship between organizational culture or transformational leadership and teacher performance. The study used must report effect measures such as correlation coefficient ( $r$ ), beta regression,  $t$ -value, or  $F$  that can be converted to  $r$ . In addition, the research population must consist of teachers at the primary, secondary, or higher

education level. The selected publications are limited to accredited national journals (Sinta 1–4) and reputable international journals (Scopus Q1–Q4) with a time span of 2015–2025. To maintain consistency, several exclusion criteria are also applied. Conceptual articles, reviews, or literature reviews that do not have empirical data are excluded. Research whose respondents were not teachers, such as students or non-teacher education personnel, were also excluded. In addition, articles that do not report effect sizes, do not provide convertible data, or come from non-peer-reviewed publications such as internal reports, opinions, theses, and these are also excluded from the analysis. Duplication of research using the same dataset is calculated only once to avoid bias.

## RESULTS AND DISCUSSION

### Results

#### *The Influence of Organizational Culture on Teacher Performance*

A meta-analysis was conducted to test the magnitude of the relationship between organizational culture (X1) and teacher performance (Y) using a random-effects model approach. This test was conducted with the aim of finding out if there was significant diversity between studies (heterogeneity) and estimating the overall pooled effect size.

Table 2. Residual Heterogeneity Test

$Q_e$	<i>Residual Heterogeneity Test</i>	
	df	p
85.090	10	< .001

Based on Table 2, the value of  $Q_e = 85.090$  with degrees of freedom (df) = 10 and the significance value of  $p < .001$  indicates that there is significant heterogeneity between studies. This means that the variation in the results of previous research on the relationship between organizational culture and teacher performance is not solely caused by sampling errors, but there are other factors that play a role, such as differences in school context, research location, and measurement instruments. Thus, the use of random-effects models in this analysis is considered appropriate (Lipsey & Wilson, 2001; Hunter & Schmidt, 2004; Higgins et al., 2003). Furthermore, the results of the Pooled Effect Size Test show the combined effect estimate of all the studies analyzed. Therefore, the random-effect model is appropriately used (Borenstein et al., 2021).

Table 3. Pooled Effect Size test

<i>Pooled Effect Size Test</i>				
Estimate	Standard Error	t	df	p
0.448	0.051	8.770	10.000	< .001

Based on Table 3, the estimated value of the pooled effect size of 0.448 with  $p < .001$  indicates that organizational culture has a positive and significant relationship with teacher performance. This value is in the medium to strong category based on the classification of Cohen (1988), which shows that the better the organizational culture that is applied in schools, the higher the performance of teachers produced. These findings are consistent with the results of previous research which confirms that a strong organizational culture is able to create a conducive work environment, increase commitment, and motivate teachers to provide the best performance (Sulistyaniningsih et al., 2022; Ghanney et al., 2017; Harmonica & Supiarmo, 2025; Sari et al., 2018). These findings are consistent with recent studies that a healthy organizational culture encourages teacher motivation, loyalty, and collaboration (Rahman et al., 2021; Yusuf et al., 2023).

In addition to the heterogeneity test and the calculation of the combined effects, the meta-analysis also resulted in additional parameter estimates that illustrate the distribution and consistency of effects between studies. These parameters include confidence interval (CI),



prediction interval (PI), variance between studies ( $\tau^2$ ), standard deviation of heterogeneity ( $\tau$ ), and consistency index ( $I^2$  and  $H^2$ ).

Table 4. Meta-Analytic Estimates

Meta-Analytic Estimates					
	Estimate	95% CI		95% PI	
Effect Size		Lower	Upper	Lower	Upper
Effect Size	0.448	0.334	0.561	0.087	0.808
$\tau$	0.154	0.085	0.267		
$\tau^2$	0.024	0.007	0.071		
$I^2$	80.183	55.375	92.425		
$H^2$	5.046	2.241	13.201		

Based on Table 4, the effect size value of 0.448 shows that organizational culture has a positive influence with moderate strength on teacher performance. The 95% confidence interval (95% CI = 0.334–0.561) did not cross zero, which means the association was statistically significant. Meanwhile, the prediction interval (95% PI = 0.087–0.808) shows a range of predictive effects that might occur in the new study in different contexts, which remain positive, although they vary from weak to strong.

The values  $\tau = 0.154$  and  $\tau^2 = 0.024$  indicate that there is a fairly high variation in real effects between studies. The  $I^2$  index = 80.183% confirms that about 80% of the total variation is due to real differences between studies, not to random errors. Based on the criteria of Higgins et al. (2003), this figure falls into the category of high heterogeneity. The  $H^2$  value = 5.046 also showed that the variability between studies was about five times greater than if all studies had the same effect. These findings confirm that although the relationship between organizational culture and teacher performance is consistently significant, the magnitude varies substantially between contexts. This implies the importance of considering moderator factors such as school type, education level, local culture, and managerial policies when interpreting the results of the meta-analysis (Lipsey & Wilson, 2001; Hunter & Schmidt, 2004; Borenstein et al., 2011).

Forest Plot is a visualization used to display the effect size of each study and its confidence interval (CI) in one unified graph. This plot allows researchers to see firsthand the differences and consistency of effects between studies, as well as compare them with pooled effect size estimates.

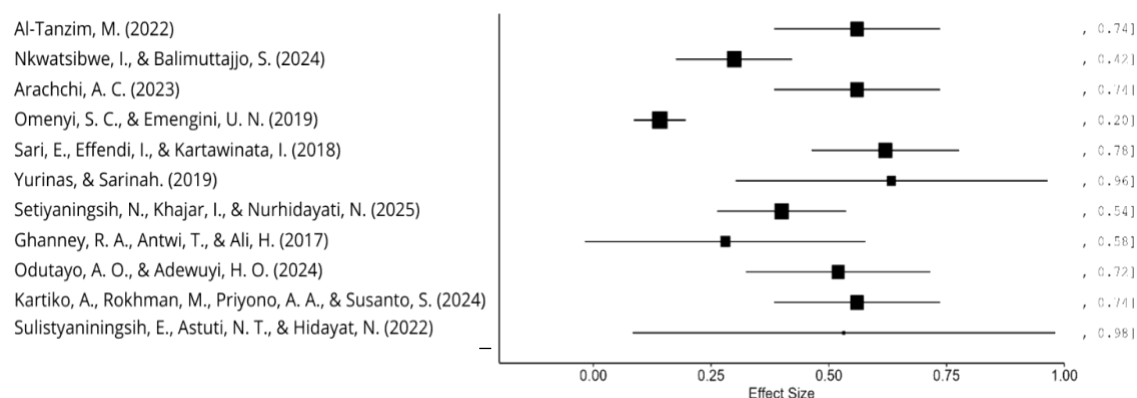


Figure 2. Meta-analysis Forest Plot (X1-Y; Organizational Culture on Teacher Performance)

In the Forest Plot of this study, each horizontal line represents a 95% confidence interval of one study, while the box in the middle of the line shows the effect size of each study. The size of the box reflects the relative weight of the study in the analysis, which is generally influenced by the number of samples and the level of precision of the research results. The larger the size of the box, the greater the contribution of the study to the combined estimates.

The vertical line at the value of zero (line of no effect) is used as a reference to determine significance. Studies whose CI lines do not cross the zero line are thought to show significant effects. In this Forest Plot, the majority of studies are on the positive side, showing that organizational culture tends to improve teacher performance. The consistency between studies in this plot is quite varied, which is in line with the results of the heterogeneity test ( $I^2 = 80,183\%$ ) in Table 3. This indicates the existence of contextual factors that moderate the strength of organizational cultural relations with teacher performance in various studies. Therefore, the interpretation of these results should consider the school background, work culture, and characteristics of the respondents in each study (Higgins et al., 2003; Lipsey & Wilson, 2001; Borenstein et al., 2011). Residual Funnel Plot is used to check the possibility of publication bias or imbalance in the distribution of research results after controlling for (residual) variables that have been modelled. This plot is essentially a scatter plot, where the horizontal axis indicates the residual effect size of each study, while the vertical axis indicates the precision of the study (generally standard error or vice versa). This shows the importance of moderators such as the type of school, education level, and local culture (Aydin et al., 2020).

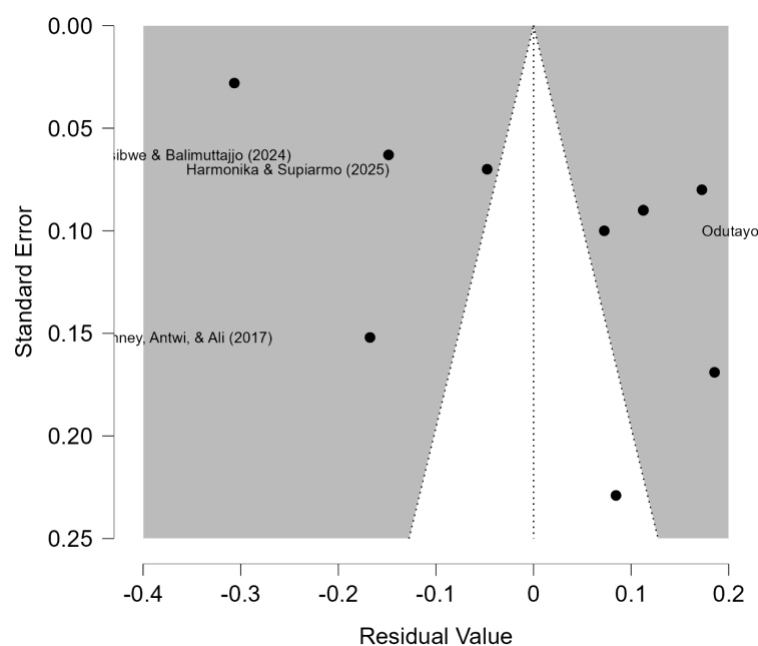


Figure 3. Funnel Plot After Trim-Fill Diagnosis (X1-Y; Organizational Culture on Teacher Performance)

The ideal shape of the Residual Funnel Plot is to resemble a symmetrical funnel (inverted funnel) that curves upwards. This symmetry indicates that studies with small sample sizes (low precision) are evenly distributed on both sides of the combined effect, while studies with large sample sizes (high precision) are concentrated at the peak near the combined estimates. In this study, the Residual Funnel Plot showed that the data points (studies) were mostly distributed around the vertical line of the combined effect (mean effect size), but with a slight asymmetry on the right side of the plot. This condition indicates a possible tendency to publish results that show a positive effect of organizational culture on teacher performance, or a small-study effect, where small-scale studies more often report larger effects.

However, this visual interpretation needs to be complemented by statistical tests such as Egger's regression test or trim-and-fill method (Borenstein et al., 2011; Lipsey & Wilson, 2001). If the test shows insignificant results, then the apparent asymmetry in the plot may be due to natural variation between studies, not due to publication bias. Overall, this Residual Funnel Plot underscores the importance of caution in interpreting the results of the meta-analysis, especially



given the high heterogeneity value ( $I^2 = 80.183\%$ ) in this study, which can also influence the shape of the plot (Higgins et al., 2003).

### ***The Transformational Leadership on Teacher Performance***

This meta-analysis was conducted to test the relationship between transformational leadership and teacher performance improvement using the classical meta-analysis approach. This test includes three main stages, namely the Residual Heterogeneity Test to measure variation between studies, the Pooled Effect Size Test to calculate the size of the combined effect, and the Meta-Analytic Estimates to see the confidence interval and the accuracy of the estimate.

Table 5. Residual Heterogeneity Test

<i>Residual Heterogeneity Test</i>		
$Q_e$	df	p
9.112	10	0.522

Table 5 shows the results of the Residual Heterogeneity Test. The value of  $Q_e = 9.112$  with degrees of freedom (df) = 10 and the value of  $p = 0.522$  ( $> 0.05$ ) showed that there was no significant heterogeneity between the studies analyzed. This indicates that the differences in results between studies are most likely due to random sampling errors and not to different methodological or contextual factors (Higgins et al., 2003). Thus, the fixed-effect model can be used more appropriately in the interpretation of the results.

Table 6. Pooled Effect Size Test

<i>Pooled Effect Size Test</i>				
Estimate	Standard Error	t	df	p
0.441	0.020	22.016	10.000	< .001

Table 6 contains the results of the Pooled Effect Size Test. The estimated combined effect size was 0.441 with a standard error of 0.020, t-value = 22.016, df = 10, and  $p < 0.001$ . These results suggest that transformational leadership has a significant positive relationship with teacher performance. An estimated value of 0.441 can be categorized as a moderate to high effect (Cohen, 1988), which means that an improvement in the quality of transformational leadership in schools is likely to be followed by a substantial improvement in teacher performance. These findings support that transformational leadership contributes to motivation, innovation, as well as improved teacher performance (Leithwood & Sun, 2020; Nugroho et al., 2023).

Table 7. Pooled Effect Size Test

<i>Meta-Analytic Estimates</i>					
	Estimate	95% CI		95% PI	
Effect Size		Lower	Upper	Lower	Upper
$\tau$	0.014	0.000	0.089	0.386	0.496
$\tau^2$	$2.063 \times 10^{-4}$	0.000	0.008		
$I^2$	4.049	0.000	61.644		
$H^2$	1.042	1.000	2.607		

Table 7 presents the Meta-Analytic Estimates which show that the confidence interval (95% CI) for the effect size is in the range of 0.396 to 0.485, while the prediction interval (95% PI) is in the range of 0.386 to 0.496. A very low  $I^2$  value (4.049%) suggests that almost all variation in outcomes between studies is due to random error, rather than actual heterogeneity. In addition, a very small  $\tau^2$  value ( $2.063 \times 10^{-4}$ ) strengthens the evidence of consistency of results across studies (Borenstein

et al., 2011; Hunter & Schmidt, 2004). These findings indicate that the effects of transformational leadership on teacher performance are stable and reliable in the various research contexts analysed.

In addition to the table analysis, the results of the meta-analysis were also visualized through Forest Plot and Funnel Plot to facilitate the interpretation of the consistency and potential publication bias of the study set being analysed. This visualization helps to see the distribution of the effect size of each study, its relative contribution to the combined estimates, and the symmetry of the data that indicates the presence or absence of publication bias.

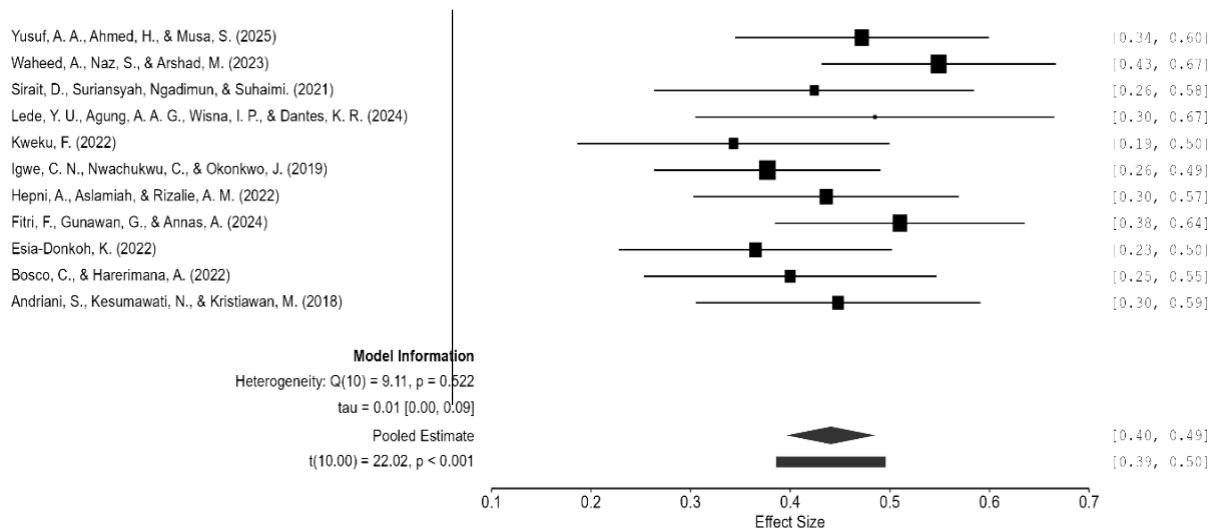


Figure 4. Meta-analysis Forest Plot (X2-Y; Transformational Leadership on Teacher Performance)

Figure 3 presents the Forest Plot of the relationship between transformational leadership and teacher performance. Each horizontal line represents a confidence interval (CI) of 95% of the effect size of each study, while the dot in the middle shows the estimated effect size of each study. The vertical line in the middle is the "no effect" line ( $r = 0$ ). Most studies had CI that was on the positive side of the zero line, which indicates consistency in the direction of positive relationships across studies. The size of the combined effect depicted by the diamond symbol is around  $r = 0.44$ , according to the results of the previous table, and does not touch the zero line, indicating a significant positive effect.

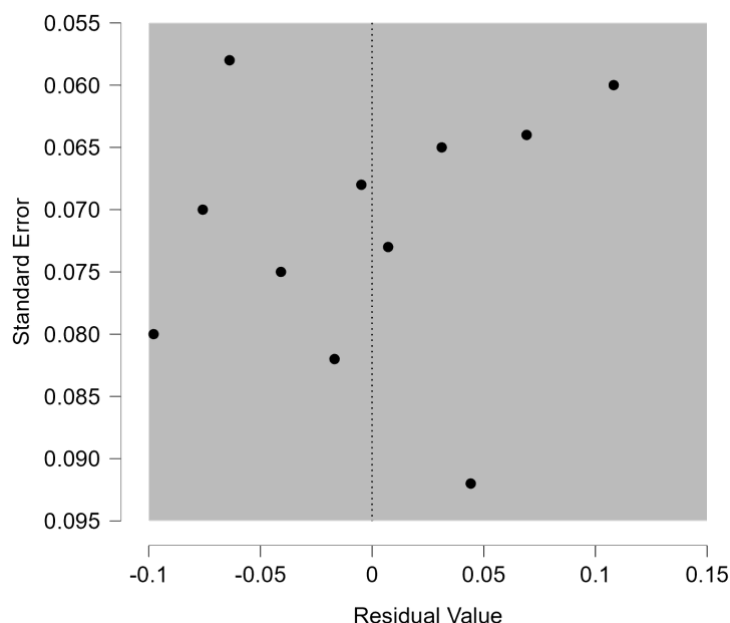


Figure 5. Funnel Plot After Trim-Fill Diagnosis  
(X2-Y; Transformational Leadership on Teacher Performance)

Figure 4 shows the residual Funnel Plot for variables  $X2 \rightarrow Y$ . This plot is used to detect potential publication bias by looking at the symmetry of the scattering of the points representing the study. The horizontal axis describes the size of the residual effect, while the vertical axis describes the precision (standard error). The results showed a relatively symmetrical distribution of points on both sides of the combined estimation, in the absence of an extreme inequality pattern. This indicates that the likelihood of publication bias in this study set is low, and supports the validity of the meta-analysis results that have been obtained.

## Discussion

The results of the meta-analysis showed that the Organizational Culture variable (X1) had a positive and significant relationship with Teacher Performance (Y) with a combined effect size of 0.448 (CI 95% = 0.334–0.561), which was classified as a moderate effect according to the criteria of [Cohen \(1988\)](#). The high value of heterogeneity ( $I^2 = 80.18\%$ ) indicates substantial variation between studies, which may be due to differences in school context, organizational culture measurement methods, and respondent characteristics. These findings are in line with [Lipsey & Wilson \(2001\)](#) who emphasize that "organizational culture serves as a contextual glue that binds members to shared values and norms, thereby enhancing performance" (p. 55). This means that the stronger the conducive organizational culture, the higher the teacher performance produced.

For the Transformational Leadership variable (X2), meta-analysis resulted in a combined effect size of 0.441 (95% CI = 0.396–0.485), with a low degree of heterogeneity ( $I^2 = 4.04\%$ ), indicating consistency of results between studies. This effect is also moderate and stable, thus supporting the view of [Hunter & Schmidt \(2004\)](#) that "transformational leadership consistently predicts individual and organizational outcomes across settings" (p. 108). The low heterogeneity indicates that differences in geographical settings or educational levels do not have much effect on the magnitude of the relationship, so transformational leadership can be considered as a universal factor that affects the improvement of teacher performance. These findings reinforce the recent literature that the combination of conducive organizational culture and transformational leadership plays a strategic role in improving teacher performance ([Dharmawati et al., 2021](#); [Malik et al., 2022](#); [Nugroho et al., 2023](#); [Yusuf et al., 2023](#)). The internal drive of an individual is reflected through their willingness to strive and achieve excellence. The extent of a school principal's commitment to achieving superior results illustrates their leadership style in fulfilling duties and responsibilities ([Pfitzner et al., 2017](#)). A strong work ethic serves as a key factor in enhancing the performance of teachers and staff within the school environment. Transformational leadership, as noted by [Rasyid \(2019\)](#), possesses distinctive characteristics that differentiate it from other leadership styles, enabling it to stimulate institutional effectiveness. Central to effective leadership is the process of transformation, which requires principals to demonstrate strong persuasive communication skills ([Polatcan et al., 2021](#)). Principals who communicate persuasively with their school community can effectively support the transformation of their leadership, whereas those lacking this ability may impede such progress. Furthermore, the principal's communication and motivational strategies significantly influence teachers' performance within the school setting. According to [Hamzah & Faruq \(2020\)](#), transformational leadership in organizational development reflects the collective values and beliefs of the group. Consequently, the implementation of school programs that align with established guidelines and principal policies grounded in transformational values leads to more effective performance outcomes.

## Limitations

Despite its comprehensive approach, this meta-analysis has several limitations. First, the study included only quantitative research articles published between 2015 and 2025 and available in indexed databases such as ScienceDirect, ERIC, Taylor & Francis, and Google Scholar. This criterion may have excluded relevant unpublished or qualitative studies (e.g., theses, dissertations, or local journals), potentially introducing publication bias. Second, the analysis did not examine moderator variables such as teacher motivation, educational level, gender composition, or geographic region, which may influence the observed relationships. Third, the reliance on correlation coefficients ( $r$ ) as the primary effect size measure restricts causal interpretation, given the cross-sectional nature of most included studies.

## Implications

Overall, the results of this study confirm that both Organizational Culture and Transformational Leadership play an important role in improving teacher performance. A strong organizational culture creates a supportive work environment and encourages teachers to work in accordance with the school's vision-mission, while transformational leadership inspires, motivates, and empowers teachers to achieve optimal performance. Although organizational cultures showed high variation in outcomes between studies, both had consistent and significant positive effects. Therefore, education policy interventions should consider strengthening these two factors simultaneously to achieve sustainable improvement in the quality of education.

From a practical standpoint, the results suggest that improving teacher performance requires synergistic interventions that combine cultural strengthening and leadership transformation. First, schools need to institutionalize a positive organizational culture characterized by collaboration, innovation, trust, and open communication. Such a culture not only enhances motivation but also fosters a sense of belonging and professional growth among teachers. Second, the findings underscore the importance of transformational leadership training for principals and educational leaders. Programs focusing on inspirational motivation, individualized consideration, intellectual stimulation, and idealized influence can enhance leaders' ability to build strong school teams and drive pedagogical innovation. Third, education policymakers should integrate culture-based and leadership-based strategies into teacher performance improvement policies. Developing leadership competencies aligned with cultural reinforcement will support the creation of adaptive and high-performing schools capable of meeting future educational challenges.

## CONCLUSION

The results of this meta-analysis confirm that Organizational Culture and Transformational Leadership both have a positive and significant influence on teacher performance. A strong organizational culture is able to create a conducive work environment, form collective behaviour that is in harmony with the school's goals, and increase teachers' commitment in carrying out their duties. Meanwhile, transformational leadership consistently provides motivational encouragement, inspiration, and coaching that encourages teachers to achieve optimal performance. Although the influence of organizational culture tends to vary between contexts, the two have proven to be important factors that complement each other in shaping the quality of teacher performance. These findings have practical implications for education policy makers, school principals, and managers of educational institutions. First, strengthening organizational culture needs to be part of the school's development strategy, through instilling common values, creating a positive work climate, and transparent management. Second, training and developmental leadership for school principals and education leaders can be a strategic step to encourage teacher performance in a sustainable manner. Third, the synergy between a conducive organizational culture and inspirational leadership

can be a strong foundation to create a highly competitive school that is able to adapt to changing educational demands in the future.

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