



Cultivating teacher resilience: The impact of transformational leadership and collaborative school culture amidst curriculum innovation

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Abstract. Indonesia's Merdeka Curriculum introduces significant challenges for educators, making their professional well-being vital to successful educational reform. This study examines how principal leadership style and organizational culture impact primary school teachers' job satisfaction during this transition. This study employed a quantitative explanatory survey design. From a population of 123 certified civil-servant primary school teachers in Kudus Regency, a sample of 93 respondents was determined using the Slovin formula (5% margin of error) and selected through proportional stratified sampling. Data were collected via a closed-ended, five-point Likert-scale questionnaire (58 items) administered online, and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. Findings reveal both variables positively and significantly influence job satisfaction ($R^2 = 0.541$). Notably, organizational culture emerged as a stronger predictor ($f^2 = 0.224$) than leadership style ($f^2 = 0.156$), suggesting that shared collective values and peer

collaboration foster critical emotional resilience among teachers. Ultimately, these results indicate that educational authorities must cultivate inclusive organizational cultures and humanistic leadership to mitigate occupational stress and sustain educators' psychological well-being. It is therefore recommended that education authorities prioritize culture-strengthening programs alongside transformational leadership training for principals, while future research should adopt longitudinal designs and examine factors beyond this model, such as compensation, workload, and intrinsic motivation.

Introduction

The success of educational systems in the Fourth Industrial Revolution depends on the effectiveness of their supporting components. Teachers are central to the learning process. They make a very important contribution to the quality of learning globally. As a result, their professional well-being and job satisfaction have become benchmarks of educational quality today. In the era of Education 4.0, teaching demands not only the knowledge and skills required for instruction, but also the psychological resilience to withstand rapid and far-reaching changes in curriculum and technology (Khupe et al., 2026). According to Kasalak & Dağyar (2020), teacher job satisfaction is an important predictor of self-efficacy and retention (Xiaohui & Tresirichod, 2025). Moreover, it is said to affect student long-term achievement (Hoque et al., 2023). Nevertheless, education systems worldwide continue to face teacher burnout driven by continual curricular adaptation in

an increasingly competitive global landscape. In this context, instructional leadership and organizational climate serve as important tools for maintaining teacher emotional stability.

Indonesia has addressed these global challenges by implementing Kurikulum Merdeka. This concept denotes a significant paradigm shift from the behaviorist learning model towards social constructivism and connectivism (Thaariq, 2026). This policy is expected to empower future generations by enabling teachers and students to innovate and improve the quality of learning. Certified teachers have been positioned as changemakers and are believed to be critical in creating innovative learning environments (Robingatin et al., 2025). Nevertheless, empirical evidence from schools in Kudus Regency does not support these claims; in practice, the transition has imposed an excessive burden on teachers. Preliminary field observations indicate that the high level of strain required to adapt to new teaching concepts as well as the intensity of mandatory online training has resulted in high stress, physical fatigue, and a noticeable drop in job satisfaction.

This issue is further exacerbated by the emergence of 'technostress,' stemming from the requirement to integrate sophisticated technologies such as Augmented Reality (AR) without adequate infrastructural readiness or technical support. The phenomenon of escalating work pressure and deteriorating mental well-being among educators amidst this digital transformation mirrors global concerns documented in recent occupational psychology studies (Puri et al., 2026). Without systemic support, technological tools risk becoming mere 'digital garnish' aesthetic additions that fail to achieve the essence of meaningful learning.

The Merdeka Curriculum also challenges the one-way, teacher-centered pedagogical traditions that remain entrenched in the education system, creating tension between established classroom practice and the participatory learning the reform demands. When this tension is left unmanaged, it can undermine the effectiveness of transformational leadership. For example, Marin-Rodriguez et al. (2025) suggest that transformational leadership will be less effective if the organization's culture is fragmented. On the other hand, international empirical evidence underlines that collaborative school culture Datnow (2018) and continued emotional support by leadership Wu et al. (2024) are the most significant predictors of teacher stress relief. As educational organizations become digitized, systematic organizational support is increasingly critical to sustaining educator well-being, often through the implementation of distributed leadership frameworks (Jarkawi et al., 2025). In the era of the Merdeka Curriculum, the principal's role as both an administrative manager and an instructional leader is important. As suggested by Damanik et al. (2025), leaders are expected to use democratic and transformative styles to spark innovation through the school culture. A good leader does not always tell others what to do, but builds the school's capacity to adapt with transparency and inclusiveness. When leaders fail to offer a clear vision during periods of change, it can negatively impact teacher job satisfaction.

A robust organizational culture characterized by collaboration, transparency, and ethical integrity provides the psychological safety teachers need to experiment with innovative pedagogical methods (Resendiz et al., 2026; Citrawan et al., 2024). In environments defined by a strong culture of innovation, educators show greater resilience to shifts in public policy. Indeed, integrating educational policy, digital pedagogy, and organizational readiness is paramount to navigating curricular uncertainty. Conversely, without a supportive culture, the broad autonomy granted by the curriculum risks devolving into an administrative burden that systematically erodes educator motivation.

Within the global transition toward Education 4.0, teachers' professional well-being is a primary determinant of student academic success. Job satisfaction extends beyond extrinsic compensation; it encompasses the nature of the work itself, the professional environment, quality of supervision,

and work-life balance (Ortan et al., 2021; Widana & Ratnaya, 2021). Consequently, the synergy between a principal's transformational leadership style and the cultivation of a healthy organizational culture is fundamental to mitigating transitional pressures and enhancing teacher job satisfaction.

Taken together, however, the existing research has three notable limitations. *First*, transformational leadership and organizational culture have predominantly been examined as separate predictors of teacher job satisfaction: Marin-Rodriguez et al. (2025) highlight the conditional effectiveness of transformational leadership without quantifying the relative contribution of organizational culture, while Datnow (2018); Wu et al. (2024); Angela et al. (2025) examine collaborative culture and leadership support largely in isolation. Studies that model both constructs simultaneously and compare their relative predictive power within a single structural model remain scarce. *Second*, the available empirical evidence is concentrated in secondary and higher education settings and in non-Indonesian contexts, so certified primary school teachers who bear the heaviest implementation burden of the Merdeka Curriculum remain underrepresented, particularly at the regency level. *Third*, most prior studies were conducted under relatively stable policy conditions; consequently, little is known about whether, and to what extent, leadership and organizational culture function as a psychological buffer during an active, mandated curriculum transition, precisely when their protective role is theoretically most consequential. In addition, few Indonesian studies report effect sizes (f^2) that allow researchers to rank the relative strength of these predictors rather than merely confirm statistical significance.

To address these gaps, the present study examines the simultaneous influence of principals' transformational leadership style and organizational culture on the job satisfaction of certified primary school teachers during the implementation of the Merdeka Curriculum, and compares the relative predictive strength of the two constructs. This is particularly relevant at the primary education level in Kudus Regency, a region characterized by a unique cultural emphasis on student character development. Employing Structural Equation Modeling (SEM) via SmartPLS 4, this research quantitatively evaluates the significance of inter-variable relationships and assesses the model's predictive power through R^2 and Effect Size (f^2) values. The novelty of this study therefore lies in modeling both constructs jointly and comparing their effect sizes (f^2), thereby clarifying which organizational lever offers greater protective value for teacher well-being amid curricular reform an empirical question left unanswered by previous studies that examined these variables separately or outside active reform contexts. The findings are expected to offer substantial practical contributions for educational authorities, underscoring the need for humanistic-oriented managerial capacities to safeguard educators' psychological well-being amid ongoing digital transformation.

Based on the data above, the research questions are: (1) Does the principal's transformational leadership style significantly influence the job satisfaction of certified primary school teachers during the implementation of the Merdeka Curriculum? (2) Does organizational culture significantly influence teacher job satisfaction in the same context? (3) Which of the two constructs exerts the stronger effect on teacher job satisfaction? Hypothesis: (1) the principal's leadership style has a positive and significant effect on teacher job satisfaction; (2) organizational culture has a positive and significant effect on teacher job satisfaction; (3).

Method

Research Design

This study adopted a quantitative research approach operationalized through an explanatory survey design. This approach was selected to test theoretically derived hypotheses about the causal

influence of the principal's leadership style and organizational culture on teacher job satisfaction. The explanatory design was chosen because it goes beyond description to clarify directional relationships among variables, establishing not only whether associations exist but also the magnitude and significance of their effects. The investigation was deductively structured around two established theoretical frameworks, namely Transformational Leadership Theory [Bass & Riggio \(2005\)](#) and Organizational Culture Theory ([Schein & Schein, 2017](#)). These frameworks provided the conceptual foundation for formulating the hypotheses and operationalising the indicators of each construct. By integrating a robust theoretical grounding with variance-based structural modelling, the design facilitated the identification of objective patterns underlying teacher well-being amidst the implementation of the Merdeka Curriculum.

Participants and Sampling Technique

The target population comprised certified civil-servant (ASN) primary school teachers serving in Kudus Regency, Central Java, Indonesia. To ensure geographic representativeness across the regency, one teacher representative was identified from each constituent village, yielding a defined population of 123 educators who met the professional certification criteria. The sample size was determined using the Slovin formula at a 5% margin of error, resulting in a required sample size of 93 respondents. A proportional stratified sampling strategy was applied to preserve the population's geographic and institutional distribution, ensuring the resulting sample represented a cross-section of primary school teachers across the region. Eligibility was restricted to teachers holding formal professional certification and active civil-servant status. This criterion ensured each respondent possessed sufficient professional experience and direct exposure to the leadership dynamics, organizational culture, and curricular demands under investigation. This inclusion criterion strengthened the relevance and reliability of the perceptual data, as all participants had substantively engaged with the Merdeka Curriculum transition within their respective institutions.

Research Setting and Timeline

The study was conducted within the primary education sector of Kudus Regency, Central Java, Indonesia. The setting was selected because it represented a context where the pressures of curricular innovation, technological adaptation, and intensified teacher workload converged, making it particularly suitable for examining the determinants of educator job satisfaction. Data collection took place during the 2024/2025 academic year, across a structured period that included instrument preparation, survey distribution, and response consolidation.

Research Procedures

The research followed a sequential set of procedures designed to safeguard methodological rigor and data integrity. *First*, the research instrument was developed by operationalizing each construct's theoretical dimensions into measurable indicators drawn from established literature. *Second*, the instrument underwent content review to confirm each item's relevance and clarity before dissemination. *Third*, the reviewed questionnaire was administered electronically through a digital survey platform, with the access link distributed to the identified teacher representatives across the regency. *Fourth*, the collected responses were screened for completeness and consistency, and incomplete submissions were excluded to preserve data quality. *Fifth*, the cleaned dataset underwent descriptive statistical analysis to establish a baseline overview of field conditions. *Finally*, the data were analyzed using variance-based structural equation modeling to evaluate the measurement and structural models and to test the proposed hypotheses. This procedural sequence ensured that each analytical stage was built on verified, reliable input, thereby enhancing the validity of the resulting inferences.

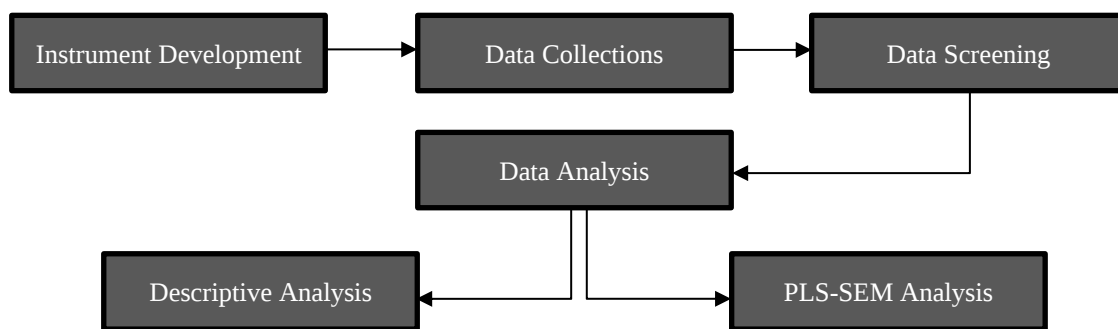


Image 1. Stages of the Research Procedure

As illustrated in Image 1, the research procedure follows these sequential stages. In the *first stage*, the theoretical dimensions of transformational leadership, organizational culture, and job satisfaction were translated into an initial pool of 58 indicator items, ensuring that every item was anchored in established literature. *The second stage* involved administering the reviewed questionnaire electronically, with the survey link distributed to one teacher representative per village to preserve the sample's geographic proportionality. In the *Third stage*, all returned responses were screened for completeness and internal consistency, and incomplete submissions were excluded to protect data quality. The fourth stage produced descriptive statistics for the three variables, establishing a baseline portrait of field conditions prior to inferential testing. Finally, the measurement (outer) model was evaluated for convergent validity, discriminant validity, and construct reliability, followed by evaluation of the structural (inner) model, in which path coefficients, R^2 , and f^2 were estimated, and hypotheses were tested through bootstrapping in SmartPLS 4.

Data Collection Techniques and Research Instruments

Data were collected through a closed-ended questionnaire administered as a digital survey - an approach selected for its efficiency in reaching geographically dispersed respondents and its capacity to standardise data capture. The instrument employed a five-point Likert scale ranging from 1 - strongly disagree to 5 - strongly agree, enabling the quantification of teachers' perceptions across the three latent constructs: the principal's leadership style, organisational culture, and teacher job satisfaction. The items were operationalised from established theoretical frameworks - Transformational Leadership Theory Bass & Riggio (2005), Organisational Culture Theory Schein & Schein (2017), and contemporary conceptualisations of teacher job satisfaction (Kreitner & Kinicki, 2010). The composition of the instrument, comprising 58 initial items distributed across the three constructs, is presented in the instrument blueprint in Table 1.

Table 1. Research Instrument

Variable	Dimension / Indicator	Item Distribution	Number of Items
Principal's Leadership Style - Transformational Leadership Theory (Bass & Riggio, 2005)	Idealized Influence	GK1 - GK4	4
	Inspirational Motivation	GK5 - GK7	3
	Intellectual Stimulation	GK8 - GK11	4
	Individualized Consideration	GK12 - GK14	3

Variable	Dimension / Indicator	Item Distribution	Number of Items
Organisational Culture - Organisational Culture Theory (Schein, 2017)	Artifacts and Observable Practices	BO1 - BO9	9
	Espoused Values - collaboration, trust, transparency	BO10 - BO20	11
	Basic Underlying Assumptions	BO21 - BO28	8
Teacher Job Satisfaction - Kreitner & Kinicki (2010)	The Work Itself	KK1 - KK4	4
	Supervision and Leadership Support	KK5 - KK8	4
	Professional and Physical Environment	KK9 - KK12	4
	Recognition and Work-Life Balance	KK13 - KK16	4
Total			58

Instrument Validity and Reliability

The psychometric quality of the instrument was established through a two-fold evaluation conducted within the measurement model. Convergent validity was assessed through outer loading factors, with values exceeding 0.70 deemed acceptable, and through the Average Variance Extracted (AVE), where a value above 0.50 confirmed that each construct accounted for most of the variance in its indicators. Discriminant validity was verified through two complementary criteria: the cross-loading matrix, which required each indicator to load most strongly on its intended construct, and the Fornell-Larcker criterion, which required the square root of the AVE for each construct to exceed its correlation with all other constructs. Internal consistency reliability was examined using Cronbach's Alpha and Composite Reliability, with values above 0.70 indicating satisfactory reliability. Indicators that failed to satisfy the minimum loading threshold were removed during model purification, after which the retained items demonstrated robust validity and reliability across all three constructs.

Data Analysis Techniques

The collected data were analyzed through a combination of descriptive and inferential statistical techniques. Descriptive analysis first categorized respondent scores from very low to very high, providing an objective baseline portrait of field conditions before hypothesis testing. The principal inferential analysis used variance-based Structural Equation Modeling (SEM) in SmartPLS 4.0, selected for its suitability for complex models with latent constructs and its robustness with moderate sample sizes. The analysis proceeded in two sequential stages. The first stage evaluated the measurement model (outer model), verifying instrument quality through convergent validity (loadings above 0.70 and AVE above 0.50), discriminant validity, and reliability indices of Cronbach's Alpha above 0.60 and Composite Reliability above 0.70. The second stage evaluated the structural model (inner model) to quantify the strength and significance of the hypothesized causal relationships through bootstrapping, where a t-statistic exceeding 1.96 and a p-value below 0.05 indicated statistical significance. The overall predictive capacity of the model was assessed using the Coefficient of Determination (R^2), while the substantive contribution of each exogenous construct was evaluated using Effect Size (f^2), interpreted according to benchmarks of 0.02, 0.15, and 0.35 for small, medium, and large effects, respectively.

Results and Discussion

Descriptive Statistical Analysis

The descriptive analysis reveals that all three primary variables, Leadership Style, Organizational Culture, and Job Satisfaction, fall within the "High" category. This suggests a predominantly positive perception of leadership dynamics and the institutional environment among the surveyed educators. Table 2 summarizes the detailed descriptive metrics.

Table 2. Descriptive Statistics of Research Variables

Variable	Mean	Standard Deviation	Category
Leadership Style	61.11	7.007	High
Organisational Culture	119.98	11.852	Very Good
Job Satisfaction	87.40	9.038	High

Data collected from the 93 respondents exhibit a homogeneous distribution, as evidenced by standard deviation values that remain significantly lower than their respective means (Ghozali, 2021). Notably, Organizational Culture (X^2) shows the highest perceptual consistency, with a mean of 119.98, suggesting that values such as collaboration, trust, and transparency have been deeply internalized as part of the schools' collective identity. Job Satisfaction (Y) shows moderate stability at 87.40, while Leadership Style (X_1) shows the highest heterogeneity despite its high average. This variance suggests slightly more diverse teacher perceptions of headteachers' specific leadership behaviors.

The study confirms that an inclusive organizational culture functions as "social glue," fostering professional solidarity and stabilizing educator morale during systemic transitions (Schein & Schein, 2017). Although perceptions of the Principal's Leadership Style exhibit high heterogeneity due to their subjective and contextual nature, the data consistently indicate that transformational, participatory, and supportive approaches are vital for enhancing teacher motivation and commitment (Sun et al., 2024; Talib et al., 2019; Yanti et al., 2026).

The synergy between humanistic leadership and a collaborative culture is a critical determinant of job satisfaction throughout the *Kurikulum Merdeka* implementation. Validating the frameworks of Bass & Riggio (2005); Schein & Schein (2017), these results suggest that supportive leadership acts as a mediator against professional burnout. By cultivating a collaborative climate, educational institutions can navigate structural reforms more effectively, ensuring a seamless transition toward Education 4.0 standards.

Average Variance Extracted (AVE)

Convergent validity is established when a latent construct yields an Average Variance Extracted (AVE) value surpassing 0.50, signifying that the construct accounts for the majority of the variance in its observed indicators. Table 3 presents the AVE results for this study.

Table 3. Average Variance Extracted (AVE) Results

Variable	Average variance extracted (AVE)	Description
Principal's Leadership Style	0.649	Valid
Organisational Culture	0.618	Valid
Teacher Job Satisfaction	0.619	Valid

As demonstrated in Table 3, the AVE values for Leadership Style (0.649), Job Satisfaction (0.619), and Organizational Culture (0.618) consistently exceed the 0.50 benchmark. These results provide

robust empirical evidence of convergent validity Hair (2009), confirming that the selected indicators accurately represent their theoretical constructs (Fornell & Larcker, 1981).

The measurement model results, characterized by high Average Variance Extracted (AVE) values, demonstrate that transformational and instructional leadership indicators strongly reflect the principal's efficacy as a pedagogical leader. These findings align with Ghanamah (2026), who identifies supportive-participatory leadership as a primary catalyst for professional commitment and resilience during systemic shifts. Furthermore, the strong validity of the organizational culture and job satisfaction variables highlights how an inclusive culture functions as "social glue," providing the psychological safety educators need to navigate modern educational transformations (Cumar et al., 2025).

The statistical synergy between humanistic leadership and a healthy organizational culture serves as a foundational pillar for fostering positive psychological conditions among teachers. This relationship is particularly vital for the successful implementation of the *Kurikulum Merdeka*, where organizational justice and transparent communication are critical determinants of job satisfaction (Chetty & Neeraja, 2017; Zainalipour et al., 2010). Ultimately, the model confirms that moving toward autonomous pedagogical frameworks requires a leadership paradigm that prioritizes institutional transparency and educator well-being (Lima et al., 2024).

Discriminant Validity

Discriminant validity is assessed to ensure each latent construct is distinct and does not overlap excessively with other variables in the measurement model. This confirms that indicators of one construct do not capture the essence of another.

Discriminant validity is confirmed when an indicator's factor loading on its intended construct exceeds its cross-loadings on all other latent variables. Table 4 presents the corresponding cross-loading matrix, derived via SmartPLS.

Table 4. Cross-Loading Results for Discriminant Validity

	Principal's Leadership Style	Organisational Culture	Teacher Job Satisfaction	Description
GK1	0.788	0.542	0.551	Valid
GK2	0.728	0.457	0.483	Valid
GK3	0.816	0.535	0.525	Valid
GK4	0.810	0.545	0.540	Valid
GK5	0.742	0.425	0.404	Valid
GK6	0.852	0.546	0.438	Valid
GK8	0.793	0.488	0.485	Valid
GK9	0.848	0.600	0.526	Valid
GK10	0.851	0.595	0.565	Valid
GK11	0.855	0.681	0.639	Valid
GK12	0.817	0.604	0.639	Valid
GK13	0.802	0.524	0.569	Valid
GK14	0.758	0.515	0.544	Valid
BO2	0.568	0.743	0.524	Valid
BO4	0.531	0.793	0.504	Valid
BO5	0.590	0.758	0.562	Valid
BO6	0.529	0.809	0.509	Valid
BO7	0.537	0.770	0.458	Valid

	Principal's Leadership Style	Organisational Culture	Teacher Job Satisfaction	Description
BO9	0.573	0.776	0.538	Valid
BO10	0.625	0.735	0.561	Valid
BO12	0.495	0.774	0.497	Valid
BO14	0.671	0.836	0.544	Valid
BO15	0.571	0.793	0.535	Valid
BO16	0.605	0.821	0.523	Valid
BO17	0.506	0.778	0.540	Valid
BO18	0.396	0.760	0.515	Valid
BO19	0.460	0.808	0.597	Valid
BO20	0.565	0.844	0.587	Valid
BO21	0.493	0.827	0.598	Valid
BO22	0.493	0.827	0.598	Valid
BO23	0.516	0.828	0.545	Valid
BO27	0.480	0.746	0.572	Valid
BO28	0.536	0.738	0.442	Valid
KK1	0.468	0.550	0.773	Valid
KK2	0.496	0.621	0.782	Valid
KK3	0.618	0.594	0.872	Valid
KK4	0.429	0.414	0.707	Valid
KK5	0.413	0.475	0.776	Valid
KK6	0.517	0.509	0.749	Valid
KK7	0.610	0.585	0.846	Valid
KK8	0.553	0.552	0.800	Valid
KK9	0.591	0.588	0.805	Valid
KK10	0.550	0.542	0.851	Valid
KK11	0.489	0.580	0.765	Valid
KK12	0.430	0.441	0.740	Valid
KK13	0.582	0.571	0.834	Valid
KK14	0.485	0.549	0.778	Valid
KK16	0.492	0.528	0.749	Valid

Fornell-Larcker Criterion

To further confirm discriminant validity, the Fornell-Larcker Criterion was applied. According to this method, discriminant validity is established if the square root of the Average Variance Extracted (AVE) for each construct is greater than its highest correlation with any other latent construct (Fornell & Larcker, 1981).

Table 5. Fornell-Larcker Criterion Results

	Leadership Style (X ¹)	Organizational Culture (X ²)	Job Satisfaction (Y)	Description
GK	0.806			Valid
BO	0.680	0.786		Valid
KK	0.662	0.685	0.787	Valid

Discriminant validity testing using the Fornell-Larcker criterion confirms that the square root of the Average Variance Extracted ($\sqrt{\text{AVE}}$) for leadership (0.806), culture (0.786), and satisfaction (0.787) consistently exceeds the inter-construct correlations (Hair et al., 2019). This empirical distinction ensures that each variable is conceptually unique and free from overlap (Fornell &

Larcker, 1981). These findings align with Cumar et al. (2025), who argue that transformational leadership enhances teacher well-being primarily through emotional and individualized support. Furthermore, Lambert et al. (2023) also argue that supportive leadership serves as a critical buffer against occupational stress, reinforcing the pivotal role of school principals in maintaining educators' psychological stability.

The construct validity of Teacher Job Satisfaction as a distinct entity further proves that satisfaction is an affective response separate from the direct influence of leadership or culture. This aligns with Kreitner & Kinicki (2010), who define satisfaction as the fulfillment of an individual's core values and needs. Moreover, Sun et al. (2024) emphasize that job satisfaction functions as a systemic resilience mechanism for teachers navigating disruptive policy shifts. García-Izquierdo et al. (2012) further posit that job satisfaction arises specifically from perceptions of organizational justice and transparency elements that are distinguishable from a principal's personal leadership style. Additionally, participatory leadership uniquely contributes to professional commitment and pedagogical quality. This validity demonstrates that while leadership, culture, and satisfaction are interrelated, they remain distinct psychological constructs that must be managed independently to optimize the educational environment.

Construct Reliability

Construct reliability was evaluated using two primary metrics: Cronbach's Alpha and Composite Reliability (CR). These parameters assess the internal consistency and reliability of the indicators in representing their respective latent variables.

Cronbach's Alpha

Cronbach's Alpha measures the internal consistency of a scale; a value exceeding 0.70 is generally considered acceptable, while values above 0.90 indicate excellent reliability. Table 6 summarizes the results.

Table 6. Cronbach's Alpha Results

	Cronbach's alpha	Description
Leadership Style	0.955	Excellent
Organisational Culture	0.967	Excellent
Job Satisfaction	0.959	Excellent

Based on the analysis in Table 6, the Cronbach's Alpha values for Principal's Leadership Style (0.955), Organizational Culture (0.967), and Teacher Job Satisfaction (0.959) all significantly exceed the 0.70 threshold. These high coefficients demonstrate that the research instruments possess an exceptional level of reliability. This suggests a strong consensus among teachers regarding the principal's transformational leadership, which effectively fosters motivation and a sense of institutional belonging.

Furthermore, the high reliability of the Organizational Culture and Job Satisfaction constructs confirms that collaborative values have been consistently internalized within the school environment. An inclusive culture functions as "social glue," enhancing professional solidarity Schein & Schein (2017) and serving as a robust predictor of teachers' emotional well-being. This consistency is vital for mitigating burnout and fostering psychological safety. Job satisfaction emerges not merely as a temporary emotional state but as a stable psychological construct reflecting teachers' alignment with the institutional mission during the *Merdeka Curriculum* transition.

Composite Reliability (CR)

In addition to Cronbach's Alpha, Composite Reliability (CR) was evaluated to provide a more robust measure of internal consistency. Unlike Cronbach's Alpha, CR does not assume tau-equivalence, making it a more precise reliability estimator in PLS-SEM. A CR value exceeding 0.70 is the established benchmark for high reliability (Hair et al., 2019).

Table 7. Composite Reliability Results

Variable	Composite Reliability	Description
Leadership Style	0.958	Excellent
Organisational Culture	0.968	Excellent
Job Satisfaction	0.961	Excellent

As presented in Table 7, the CR values for Principal's Leadership Style (0.958), Organizational Culture (0.968), and Teacher Job Satisfaction (0.961) significantly surpass the 0.70 threshold. These results confirm the exceptional reliability of the research variables, indicating that the indicators consistently represent their respective latent constructs.

The high reliability across all constructs reflects the principal's efficacy as a pedagogical leader who successfully fosters motivation and provides emotional support in the digital era (Jarkawi et al., 2025). Furthermore, consistent Organizational Culture scores indicate a deep internalization of collaborative values. Such an inclusive culture functions as "social glue" that enhances professional solidarity Schein & Schein (2017) and acts as a strong predictor of teachers' emotional well-being, effectively mitigating burnout and fostering psychological safety. Ultimately, Job Satisfaction emerges from the synergistic interaction between supportive leadership and a robust institutional culture, which together form a resilience system. This synergy validates Transformational Leadership Theory Bass & Riggio (2005), confirming that the equilibrium between a leader's vision and collective values is fundamental to maintaining educator stability amidst systemic reforms.

Model Fit Evaluation

The model fit was assessed to determine how well the empirical data support the proposed theoretical model. In PLS-SEM, this evaluation ensures that the model possesses sufficient predictive relevance and accurately represents the relationships between latent variables. Table 8 summarizes the results.

Table 8. Model Fit Test Results

Criteria	Rule of Thumb	Estimated model	Description
SRMR	< 0.10	0.072	Fit
d_ULS	> 0.05	6.324	Fit
d_G	> 0.05	8.126	Fit
Chi-square	$X^2 \text{ statistic} \geq X^2 \text{ Table Value}$	2685.588	Marginal Fit
NFI	approx 1	0.562	Acceptable

As shown in Table 8, the model demonstrates an acceptable fit for further structural analysis. The Standardized Root Mean Square Residual (SRMR) value of 0.072 is well below the 0.10 threshold, indicating a minimal discrepancy between the observed covariance matrix and the theoretical model. Furthermore, both d_ULS (6.324) and d_G (8.126) exceed the minimum requirements, suggesting that the model structure does not deviate significantly from the ideal data relationships.

Regarding the Chi-square result (2,685.588), although the statistic suggests a lack of fit, SEM literature widely recognizes that this metric is highly sensitive to sample size and model complexity,

which often inflates values. Similarly, the Normed Fit Index (NFI) value of 0.562 is considered acceptable in exploratory or complex organizational studies using PLS-SEM, as this method prioritizes variance explanation over absolute global fit. Consequently, the model is deemed robust enough to proceed with hypothesis testing and path coefficient analysis.

The model fit evaluation indicates that the proposed research framework is robust and suitable for analyzing the complex relationships between the latent variables. The obtained values for SRMR (0.072), d-ULS (6.324), and d_G (8.126) confirm that the theoretical model accurately represents the empirical field data without significant deviation.

The model's high accuracy validates the school principal's critical role as a pedagogical leader who actively fosters teacher motivation and professional well-being. Specifically, transformational and participatory leadership styles emerge as effective buffers against occupational stress during the implementation of the Merdeka Curriculum (Damanik et al., 2025; Widana et al., 2023).

Furthermore, a collaborative organizational culture, acting as "social glue," reinforces professional solidarity and significantly mitigates burnout among educators (Schein & Schein, 2017). This synergy between strategic leadership and a healthy institutional climate creates a framework for systemic resilience. This framework empirically determines the successful trajectory of educational reform and sustains teacher job satisfaction amidst digital and curricular disruptions.

Structural Model Evaluation (Inner Model)

The inner model evaluation examines the significance of the hypothesized relationships between latent variables, the coefficient of determination (R^2), and the effect size (f^2).

Hypothesis Testing

We assessed the significance of the relationships using a bootstrapping procedure. Table 9 summarizes the results of the path coefficient analysis and hypothesis testing.

Table 9. Hypothesis Testing Results

Hypothesized Path	T statistics (O/STDEV)	P values	Decision
Leadership Style ->Job Satisfaction	2.304	0.021	Supported
Organisational Culture ->Job Satisfaction	3.277	0.001	Supported

Based on the statistical results presented in Table 9, the Principal's Leadership Style has a significant positive effect on Teacher Job Satisfaction within the context of the *Merdeka Curriculum* transition ($t = 2.304$; $p = 0.021$). Since the t-statistic exceeds the 1.96 threshold and the p-value is below 0.05, the first hypothesis (H_1) is accepted. This finding indicates that enhancements in leadership quality, characterized by transformational and supportive behaviors, directly lead to a significant increase in educator satisfaction.

Furthermore, Organizational Culture demonstrates a highly significant impact on Teacher Job Satisfaction ($t = 3.277$; $p = 0.001$). The t-statistic of 3.277 reflects a robust influence, further validated by a p-value well below the 0.01 level. Consequently, the second hypothesis (H_2) is accepted. This suggests that the internalization of collaborative values and a healthy institutional climate are even stronger predictors of job satisfaction than leadership style alone. These results empirically confirm that a synergistic relationship between strategic leadership and a cohesive culture is fundamental to sustaining teacher morale during systemic educational reforms.

The structural model analysis reveals that Principal Leadership Style exerts a significant positive influence on Teacher Job Satisfaction ($t = 2.304$; $p = 0.021$). This empirical evidence confirms that transformational and participatory leadership practices effectively enhance teachers' motivation and emotional well-being through inspirational and individualized support (Chetty & Neeraja, 2017; Lima et al., 2024; Zainalipour et al., 2010). Principals who adopt these styles act as catalysts for professional growth, particularly by providing a clear vision and intellectual stimulation during complex periods of institutional change. This result converges with evidence from secondary and higher education contexts, where transformational behaviors have consistently predicted teacher satisfaction, self-efficacy, and retention (Kasalak & Dağyar, 2020; Xiaohui & Tresirichod, 2025). The present study, however, extends that evidence in two directions: it demonstrates that the leadership satisfaction link also holds among certified primary school teachers at the Indonesian regency level, and that it persists under the destabilizing conditions of an active, mandated curriculum transition, under which most earlier studies, conducted amid stable policy environments, were unable to test it.

Notably, Organizational Culture has a larger and highly significant impact on job satisfaction ($t = 3.27$; $p = 0.001$). Serving as "social glue," a collaborative culture fosters psychological safety, a critical prerequisite for mitigating burnout and enhancing teacher loyalty amidst the *Merdeka Curriculum* reform (Schein & Schein, 2017). The stronger t-statistic for culture than for leadership suggests that while a leader initiates change, the collective values and daily norms of the school environment are more decisive in sustaining long-term educator morale. Notably, this ordering departs from the leadership-centric strand of prior research: whereas Wu et al. (2024) identified sustained emotional support from leadership as the most significant predictor of teacher stress relief, and Damanik et al. (2025) positioned the principal as the primary catalyst of school innovation, the present data indicate that the collective values embedded in school culture carry the greater weight.

The synergy between supportive leadership and a healthy organizational culture establishes a robust resilience system that drives teacher productivity and adaptability. These findings provide strong empirical validation for Transformational Leadership Theory, highlighting that the dynamic interaction between a leader's vision and an organization's collective values is the cornerstone of successful 21st-century educational transformation (Bass & Riggio, 2005). In the context of the *Merdeka Curriculum*, this synergy ensures that teachers feel both empowered by their leadership and supported by their peers, ultimately stabilizing the educational ecosystem against the pressures of systemic disruption.

Coefficient of Determination (R^2)

The Coefficient of Determination (R^2) was calculated to evaluate the model's predictive power by measuring the proportion of variance in the dependent variable explained by the exogenous constructs. Table 10 presents the results.

Table 10. Coefficient of Determination (R^2) Results

Dependent Variable	R-square	R-square adjusted
Teacher Job Satisfaction	0.541	0.531

The analysis yields an R^2 value of 0.541, indicating that the Principal's Leadership Style and Organizational Culture simultaneously account for 54.1% of the variance in Teacher Job Satisfaction. The remaining 45.9% is attributed to other factors beyond the scope of this model, such as compensation systems, workload, physical work environment, and individual intrinsic motivation.

The Adjusted R^2 value of 0.531 provides a more conservative and objective estimate by accounting for the number of predictors in the model. This value confirms that the model remains consistent and possesses a robust predictive capacity. In the social sciences and educational management, an R^2 above 0.50 is considered a moderate-to-strong predictive level, suggesting that leadership and culture are primary determinants of educator satisfaction during the *Merdeka Curriculum* implementation.

The R^2 value of 0.541 demonstrates that Principal's Leadership Style and Organizational Culture simultaneously account for 54.1% of the variance in Teacher Job Satisfaction. According to the established criteria, this result falls within the moderate category, confirming that the structural model has substantial relevance and explanatory power.

Effect Size (f^2)

While the R^2 coefficient assesses the collective predictive power of the independent variables, the effect size f^2 evaluates the incremental contribution of each exogenous construct to the variance explained in the endogenous variable. Following the criteria established, f^2 values of 0.02, 0.15, and 0.35 are categorized as small, medium, and large effects, respectively.

Table 11. Effect Size (f^2) Results

Leadership Style	Organisational Culture	Job Satisfaction	Description
Leadership Style		0.156	Moderate
Organisational Culture		0.224	Moderate
Job Satisfaction			

Based on the individual contribution analysis presented in Table 11, the Principal's Leadership Style yields an f^2 value of 0.156. This figure, which is slightly above the 0.15 threshold, indicates that leadership style exerts a moderate influence on Teacher Job Satisfaction. Practically, this implies that while the principal's leadership significantly contributes to educator satisfaction, it is not the sole dominant predictor.

In contrast, Organizational Culture demonstrates a higher f^2 value of 0.224. Although it also falls within the moderate range ($0.15 < f^2 < 0.35$), the effect size of organizational culture is notably stronger than that of leadership style. This suggests that the school's collective values and collaborative environment contribute more substantially to teacher morale and professional stability.

Synthesizing these results with the R^2 (0.541), it can be concluded that while both factors are essential, cultivating a robust institutional culture is the most effective lever for enhancing job satisfaction. The remaining 45.9% of the variance highlights other influential external factors, yet the primary role of culture and leadership in sustaining the educational ecosystem remains statistically and substantively validated.

Compared with previous studies, the relative magnitude of these effect sizes is the principal point of departure for this research. Much of the existing literature has treated transformational leadership as the dominant lever of teacher well-being [Chetty & Neeraja \(2017\)](#); [Wu et al. \(2024\)](#); [Zainalipour et al. \(2010\)](#) by modelling both constructs simultaneously, this study shows that organisational culture ($f^2 = 0.224$) contributes roughly one and a half times more to the explained variance in job satisfaction than leadership style ($f^2 = 0.156$). This finding lends quantitative support to [Marin-Rodriguez et al. \(2025\)](#) contention that transformational leadership is conditionally effective; its influence depends on the cultural soil in which it operates and refines [Datnow \(2018\)](#) largely qualitative account of collaborative culture by attaching a measurable effect size to it. It also

nuances [Ortan et al. \(2021\)](#) multidimensional model of job satisfaction by suggesting that, during periods of systemic reform, the collegial and environmental dimensions of the workplace outweigh the quality of supervision as sources of professional well-being.

The results provide empirical evidence that organizational culture is a stronger predictor of teacher emotional well-being than leadership style alone, a finding that resonates with, but also sharpens, recent literature ([Lima et al., 2024](#)). While Transformational Leadership remains a vital component that buffers occupational stress through inspirational motivation, it functions as part of a larger institutional ecosystem rather than a solitary determinant ([Lambert et al., 2023](#); [Purnadewi & Widana, 2023](#)).

Simultaneously, these two variables explain 54.1% of the variance in job satisfaction during the *Merdeka Curriculum* era. This synergistic relationship between supportive leadership and an inclusive culture establishes a "resilience system" that theoretically and empirically validates the frameworks of ([Bass & Riggio, 2005](#); [Schein & Schein, 2017](#)). These findings highlight that the success of educational reform is predicated on a delicate equilibrium between the leader's strategic vision and the organization's shared collective values.

Taken together, the findings extend previous research in three ways that correspond directly to the gaps identified in the introduction. First, whereas prior studies examined transformational leadership and organizational culture as separate predictors of teacher job satisfaction, this study modeled them jointly and compared their relative contributions, revealing an ordering, culture above leadership that separate-variable designs could not detect. Second, the study broadens the empirical base of a literature concentrated in secondary and higher education and in non-Indonesian settings by providing evidence from certified primary school teachers across an Indonesian regency. Third, by collecting data during the implementation of the *Merdeka Curriculum* rather than under stable policy conditions, the study offers direct evidence that leadership and culture function as a psychological buffer precisely when reform pressures peak, converting what earlier studies could only assume into an empirically tested proposition.

While transformational and supportive leadership behaviors significantly enhance teacher motivation and well-being, their efficacy is maximized when embedded within a healthy organizational culture. This suggests that school principals should not only focus on individual leadership traits but also prioritize cultivating a collaborative environment to ensure the long-term stability and satisfaction of the teaching workforce amid systemic educational shifts. These results can be articulated at two levels. Theoretically, the findings enrich Transformational Leadership Theory [Bass & Riggio \(2005\)](#) and Organisational Culture Theory [Schein & Schein \(2017\)](#) by demonstrating that, under conditions of mandated curricular reform, the explanatory weight shifts from the leader as an individual agent toward the organisation's collective values suggesting that leadership effectiveness is best theorised as culturally embedded rather than autonomous and they extend the boundary conditions of both frameworks to a non-Western, primary education, active-reform setting. Practically, the effect-size ordering provides an allocation rule for scarce professional development resources in the field: interventions that build collaborative culture such as strengthening teacher working groups (KKG), institutionalizing peer mentoring, and embedding psychological safety in school routines can be expected to yield larger gains in teacher job satisfaction than leadership training alone, while principal development programs remain a necessary complement. For education authorities managing the *Merdeka Curriculum* rollout, this implies that school-level cultural readiness deserves the same policy attention, budgeting, and monitoring as leadership capacity.

Conclusion

This study concludes that Principal's Leadership Style and Organizational Culture are pivotal determinants of Teacher Job Satisfaction within the framework of the Merdeka Curriculum. While effective and participatory leadership significantly enhances educator motivation, Organizational Culture emerges as the more dominant influence in establishing a sustainable and positive work environment. Together, these factors explain a substantial portion of the variance in teacher satisfaction, primarily by fostering professional well-being through harmonious social interactions, consistent managerial support, and an inclusive institutional climate. The synergy between these two variables creates a resilience system essential to the success of ongoing educational reforms. Notwithstanding these contributions, several limitations should be acknowledged, and the practical recommendations offered below should be interpreted in light of these. *First*, the study employed a cross-sectional explanatory design in which data were collected at a single point during the 2024/2025 academic year; the findings therefore capture teachers' perceptions at one stage of the Merdeka Curriculum transition rather than causal dynamics unfolding over time, and longitudinal confirmation remains necessary. *Second*, the sample comprised 93 certified civil-servant primary school teachers in a single regency, so the recommendations are most directly applicable to comparable regency-level public primary school contexts and should be transferred with caution to non-certified teachers, private institutions, or secondary education. *Third*, all constructs were measured through self-reported perceptions, introducing the possibility of common-method and social-desirability bias that future studies could mitigate through multi-source or observational data. The following recommendations are derived directly from the empirical findings, particularly the larger effect size of organizational culture relative to leadership style.

Recommendation: (1) For the Education Office and Government, the government and relevant educational authorities should prioritize the strengthening of organizational culture as the primary foundation for teacher welfare. This can be achieved by: a) Implementing Transformational Leadership Training Programs that are specifically designed to help principals adapt to collaborative work environments; b) Developing evaluation frameworks that measure not just academic output, but also the "cultural health" and "psychological safety" of schools. (2) School Principals are encouraged to shift toward a Participatory Leadership Style. This involves: a) actively fostering a spirit of cooperation and providing consistent professional support. b) cultivating a school atmosphere that is responsive to the dynamics of the Merdeka Curriculum through transparent communication and shared decision-making. (3) For Teachers, should position themselves as agents of positive culture. This entails enhancing their professional adaptability, exercising creativity in pedagogical practices, and strengthening their sense of institutional belonging to create a more resilient educational community. *For Future Researchers*, studies should explore external factors such as: a) Structural Dimensions: Compensation systems and administrative workloads. b) Psychological Dimensions: Individual resilience and intrinsic motivation. c) Social Dimensions: Parent-teacher dynamics and community support.

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