

The Effect of Organizational Learning and Transformational Leadership on Employee Performance with Job Satisfaction as A Mediation Variable

Evi Komala¹, Rr. Erlina², Zainnur M. Rusdi³

^{1,2,3}Master of Management Study Program, Faculty of Economics and Business, University of Lampung, Indonesia

Article Info

Article history:

Received 2026-02-04

Revised 2026-02-23

Accepted 2026-03-01

Keywords:

Civil Servant Performance

Job Satisfaction

Organizational Learning

Public Organization

Transformational Leadership

ABSTRACT

This study aims to analyze the effect of organizational learning and transformational leadership on the performance of civil servants in Bandar Lampung City, with job satisfaction serving as a mediating variable. The results of the data analysis indicate that organizational learning has a positive and significant effect on civil servant performance, suggesting that a strong learning culture and mastery of technology enhance employee performance. Transformational leadership is found to have a significant, negative direct effect on performance, suggesting that its effectiveness depends on support from other mechanisms. Furthermore, job satisfaction has been shown to play a significant mediating role in the relationships between organizational learning and performance, as well as between transformational leadership and performance. These findings emphasize that improving civil servant performance is not solely determined by structural and leadership factors, but is also strongly influenced by employee job satisfaction. Therefore, public organizations need to manage organizational learning processes and leadership styles in a balanced manner to sustainably enhance job satisfaction and employee performance.

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Corresponding Author:

Evi Komala

Master of Management Study Program, Faculty of Economics and Business, University of Lampung

Email: evikomala62@gmail.com

1. INTRODUCTION

The development of digital transformation has brought about significant changes in various aspects of organizational life, including how human resources and work processes are managed [1]. Digital transformation not only relies on the application of information technologies such as cloud computing, data analytics, and the Internet of Things (IoT), but also demands changes in organizational systems, culture, and strategies to effectively adapt to the ever-evolving environment [2]. Digital transformation also presents challenges,

including the need to improve digital competencies, shifts in work culture, and resistance to change, which must be overcome through adaptive leadership and organizational support [3].

Digital transformation requires organizations not only to adopt digital technologies but also to fundamentally transform their learning culture and organizational adaptability to sustain competitiveness and innovation [4]. Digital technologies enhance communication, accelerate decision-making, and improve operational efficiency, while simultaneously demanding continuous organizational learning and employee skill development to respond effectively to digital challenges [5]. Prior studies emphasize that the success of digital transformation largely depends on organizations' ability to build a sustainable learning culture that enables knowledge integration, innovation, and improved employee performance [6].

Organizational learning serves as a dynamic capability that facilitates the creation, sharing, and retention of knowledge, thereby strengthening organizational adaptability in rapidly changing environments [7]. Research shows that organizations with strong learning practices are better able to integrate digital strategies, enhance employee competencies, and foster innovation [8]. Continuous organizational learning has also been shown to positively influence employee performance by increasing skills and motivation.

Transformational leadership plays a critical role in driving organizational learning and digital transformation by articulating an inspiring vision, empowering employees, and fostering innovation and adaptability [9], [10]. Empirical evidence consistently demonstrates that transformational leadership enhances job satisfaction by building trust, motivation, and psychological safety, which in turn improves employee performance [11]. Job satisfaction functions as a key mediating variable linking transformational leadership and organizational learning to employee performance, particularly in digital transformation contexts [12].

Job satisfaction reflects employees' emotional evaluation of their work and significantly influences motivation, commitment, and performance [13]. High job satisfaction reduces turnover and absenteeism, strengthens intrinsic motivation, and supports innovation and organizational sustainability [14]. Numerous studies confirm that organizational learning and transformational leadership enhance employee performance both directly and indirectly through job satisfaction, including in public-sector organizations [15].

Overall, the literature underscores that organizational learning and transformational leadership are strategic drivers of employee performance in the digital era, with job satisfaction serving as a crucial mediating mechanism. These relationships are particularly relevant for civil servants in Bandar Lampung City, where effective learning cultures and leadership practices are essential to improving performance and organizational effectiveness within local government institutions.

The increasing demands of digital transformation have placed civil servant performance in Bandar Lampung City at the center of bureaucratic reform. LAKIP data for 2022–2024 show a positive trend, with performance scores rising from 65.8% in 2022 to 67.8% in 2023 and projected to reach 69.2% in 2024, reflecting improvements in governance, human resource capacity, digital innovation, and inter-sectoral coordination. However, the continued “B” category indicates that individual civil servant performance has

not yet fully met the requirements for fast, transparent, accountable, and responsive public services.

The 2024 BPSDM report reveals that only 45% of civil servants participated in online training, with disciplinary levels remaining below national targets. This low participation highlights gaps in organizational learning, driven by limited digital literacy, low internal motivation, and insufficient supervisory support. These conditions also reflect weaknesses in transformational leadership, as leaders have not fully motivated or encouraged active employee participation. Furthermore, low motivation, limited recognition, inadequate development opportunities, and weak social support indicate gaps in job satisfaction, which may hinder performance improvement [16].

Overall, the disparity between improving organizational performance and suboptimal individual performance underscores the urgency of examining the roles of organizational learning, transformational leadership, and job satisfaction in enhancing civil servant performance in Bandar Lampung City.

A theoretical gap further reinforces this empirical gap. Previous research has shown inconsistencies in the influence of these variables on employee performance. Some studies found a positive effect of organizational learning and transformational leadership on performance via job satisfaction [17], whereas others found no significant effect [18]. This inconsistency highlights a theoretical gap: the integration of organizational learning, transformational leadership, and job satisfaction within a single research framework in the context of Indonesian public bureaucracy is still limited, as most models originate from the private sector or developed countries [19].

Job satisfaction is positioned as a mediating variable because it serves as a strategic link between organizational learning and transformational leadership and employee performance. Dewi et al. [20] define job satisfaction as an individual's positive emotional state toward their work, while Xu et al. [21] emphasize it as a motivational factor that drives performance. Li et al. [22] add that job satisfaction is influenced by recognition, development opportunities, and healthy work relationships. The Job Demands Resources Model [23] reinforces the view that job satisfaction results from job resources such as a learning culture, leader support, and a conducive work system, which, in turn, increase employee productivity. Previous research confirms that organizational learning and transformational leadership enhance performance more strongly through job satisfaction [24].

The above description leads researchers to analyze the influence of organizational learning and transformational leadership on civil servant performance, with job satisfaction as a mediating variable in Bandar Lampung City. This research is expected to make practical contributions to civil servant human resource development policies and to the public management literature, while also providing a comprehensive understanding of the interactions among variables in improving civil servant performance in the era of digital transformation. Furthermore, this research is expected to produce applicable recommendations for government agencies on formulating civil servant management strategies that are performance- and innovation-oriented and adaptive to technological developments.

Framework

This study examines the influence of organizational learning and transformational leadership on employee performance, with job satisfaction as a mediating variable, in the context of public-sector digital transformation. Organizational learning creates a work environment that encourages competency development and innovation, thereby increasing employee satisfaction and performance [25].

Conversely, transformational leadership provides motivation, direction, and individual attention, which positively impacts job satisfaction and ultimately improves employee performance [26]. Both organizational learning and transformational leadership have a direct effect on performance and an indirect pathway through job satisfaction as a mediator [27].

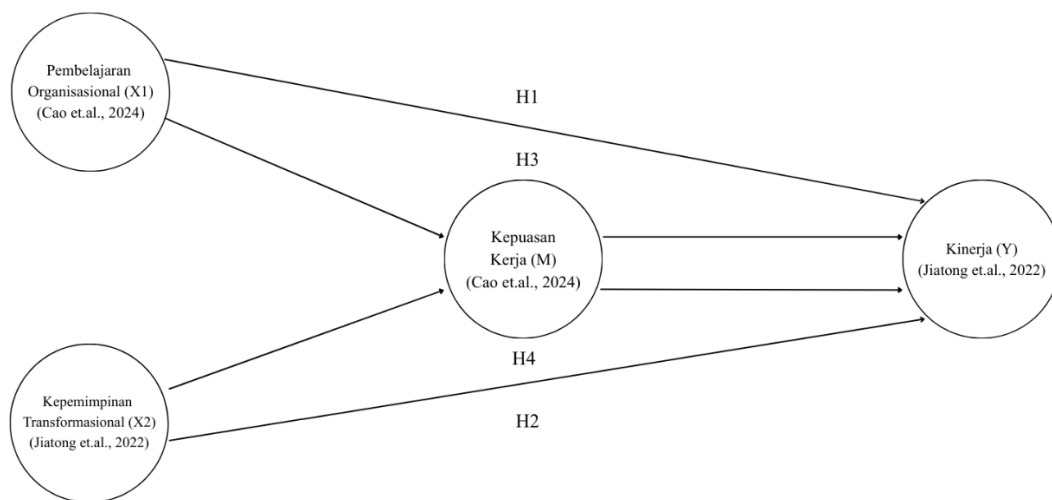


Figure 1. Conceptual Framework

2. METHOD

This study adopts a quantitative explanatory research design to examine causal relationships among variables, as defined by Giggins et al. [28]. The research empirically analyzes the effects of organizational learning and transformational leadership on employee performance, with job satisfaction serving as a mediating variable. A quantitative approach is employed to ensure objective and systematic measurement, with data analyzed using Structural Equation Modeling with Analysis of Moment Structures (SEM-AMOS).

Data sources consist of both primary and secondary data. Primary data were collected through questionnaires distributed to civil servants (PNS) within the Bandar Lampung City Government. Secondary data were obtained from official documents issued by the Human Resources and Human Development Agency (BKPSDM), the Central Bureau of Statistics (BPS), Government Agency Performance Reports (LKjIP), strategic planning documents, and relevant books, scientific journals, and previous studies.

The study population comprises all civil servants working in the Bandar Lampung City Government, totaling 6,561 employees in 2024 (BKPSDM Bandar Lampung). These include functional, implementing, and structural positions across all regional government agencies (OPD), providing comprehensive institutional coverage. The sample was selected

using purposive sampling, with criteria including a minimum of two years of work experience and exposure to organizational learning or transformational leadership practices. The minimum tenure requirement ensures respondents have adequate organizational understanding and sufficient experiential learning, as supported by prior and recent empirical studies linking tenure to performance and commitment.

The sample size was determined following SEM guidelines recommended by Giggins et al. [28], which suggest a minimum of ten respondents per questionnaire item. With 23 measurement items, the recommended sample size is 230 respondents.

3. RESULTS AND DISCUSSION

Instrument Testing

Validity and Reliability Test Results

Instrument testing was conducted using SEM–AMOS to ensure the validity and reliability of the research indicators. Indicators are considered valid when the standardized loading factor is ≥ 0.50 and reliable when Composite Reliability (CR) ≥ 0.70 and Average Variance Extracted (AVE) ≥ 0.50 . The results show that all indicators across organizational learning, transformational leadership, job satisfaction, and performance meet these criteria, indicating that all constructs are valid and reliable.

Table 1. Validity Test Results

Variable	Indicator	Standardized Loading	Desc.
Organizational Learning	X1_1	0,940	Valid
	X1_2	0,866	Valid
	X1_3	0,857	Valid
	X1_4	0,769	Valid
	X1_5	0,755	Valid
	X1_6	0,932	Valid
	X1_7	0,956	Valid
Transformational Leadership	X2_1	0,710	Valid
	X2_2	0,891	Valid
	X2_3	0,795	Valid
	X2_4	0,909	Valid
	X2_5	0,791	Valid
	X2_6	0,668	Valid
	X2_7	0,827	Valid
	X2_8	0,794	Valid
Job Satisfaction	Z1	0,956	Valid
	Z2	0,943	Valid
	Z3	0,979	Valid
Performance	Y1	0,874	Valid
	Y2	0,886	Valid
	Y3	0,987	Valid
	Y4	0,826	Valid
	Y5	0,972	Valid

Source: Amos Output 29.0, 2025

Table 2. Reliability Test Results

Variable	Composite Reliability (CR)	AVE	Description
Organizational Learning	0,956	0,759	Reliable
Transformational Leadership	0,935	0,643	Reliable
Job Satisfaction	0,972	0,921	Reliable
Performance	0,960	0,830	Reliable

Source: Amos Output 29.0, 2025

Based on Tables 1 and 2, all indicators of organizational learning, transformational leadership, job satisfaction, and performance exhibit standardized factor loadings ≥ 0.50 and AVEs above 0.50, indicating good construct validity. Reliability testing confirms that all constructs have Composite Reliability (CR) values ≥ 0.70 , demonstrating satisfactory internal consistency.

Normality Test

Normality was assessed using skewness and kurtosis critical ratio (c.r.) values in AMOS. The data meet the normality assumption as the c.r. values fall within ± 2.58 .

Table 3. Normality Test Results

Variable	min	max	skew	c.r.	kurtosis	c.r.
Y5	1,000	5,000	-,965	-5,972	,202	,626
Y4	1,000	5,000	-,963	-5,963	,253	,785
Y3	1,000	5,000	-1,010	-6,256	,327	1,012
Y2	1,000	5,000	-1,032	-6,391	,212	,657
Y1	1,000	5,000	-1,014	-6,279	,353	1,092
Z1	1,000	5,000	-1,581	-9,788	3,066	9,493
Z2	1,000	5,000	-1,736	-10,745	3,167	9,803
Z3	1,000	5,000	-1,598	-9,896	2,905	8,992
X2_1	1,000	5,000	-1,740	-10,772	3,055	9,456
X2_2	1,000	5,000	-1,891	-11,711	3,290	10,186
X2_3	1,000	5,000	-1,719	-10,645	2,385	7,385
X2_4	1,000	5,000	-1,938	-11,997	3,610	11,174
X2_5	1,000	5,000	-1,722	-10,661	2,705	8,374
X2_6	1,000	5,000	-1,664	-10,303	2,266	7,014
X2_7	1,000	5,000	-1,615	-10,000	1,750	5,418
X2_8	1,000	5,000	-1,077	-6,667	,813	2,518
X1_1	1,000	5,000	-1,912	-11,839	4,267	13,209
X1_2	1,000	5,000	-2,107	-13,047	5,017	15,530
X1_3	1,000	5,000	-2,060	-12,751	5,387	16,678
X1_4	1,000	5,000	-1,814	-11,231	3,402	10,531
X1_5	1,000	5,000	-1,821	-11,276	3,718	11,510
X1_6	1,000	5,000	-1,853	-11,472	3,517	10,888
X1_7	1,000	5,000	-1,952	-12,084	3,895	12,059
Multivariate					761,978	170,383

Source: Amos Output 29.0, 2025

Based on Table 3, the data violate both univariate and multivariate normality, as indicated by skewness and kurtosis critical ratios (c.r.) exceeding ± 2.58 and by a multivariate kurtosis c.r. of 170.383 (Hair et al., 2022). Therefore, the Bollen–Stine Bootstrap method

was applied. The bootstrap p-value of 0.063 (> 0.05) indicates that the structural model fits the data adequately despite non-normality.

Structural Model Test

The structural model was evaluated using SEM with AMOS and assessed through multiple goodness-of-fit indices.

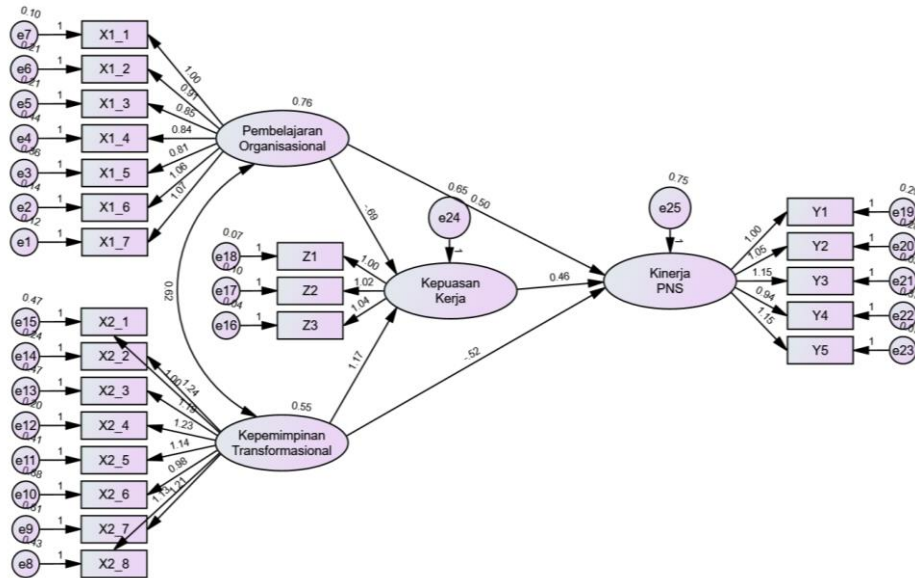


Figure 2. Structural Model Test Results
Source: Amos Output 29.0, 2025

After specifying the structural model, the next step is to evaluate the degree of fit between the hypothesized model and the empirical data to ensure the model meets SEM requirements and produces valid and reliable estimates.

Model Fit Analysis (Goodness of Fit)

Model fit analysis was conducted to assess how well the proposed structural model represents the empirical data by comparing the estimated and observed covariance matrices. This study applied multiple goodness-of-fit indices, as no single index is sufficient to determine overall model adequacy.

Table 4. Results of the Model Suitability Test (Goodness of fit)

Goodness of Fit Index	Cut-off Value Criteria	Model Values	Description
Chi-square (CMIN)	Small and insignificant	841,071	Not Fit
Probability (p-value)	≥ 0,05	0,000	Not Fit
CMIN/DF	≤ 3,00 (good); ≤ 5,00 (accepted)	4,024	Marginal Fit
GFI	≥ 0,90 (good); ≥ 0,60 (accepted)	0,761	Marginal Fit
AGFI	≥ 0,90 (good); ≥ 0,60 (accepted)	0,684	Marginal Fit
RMSEA	≤ 0,08 (good); ≤ 0,10–0,12 (complex models)	0,115	Marginal Fit
NFI	≥ 0,90 (good); ≥ 0,70 (accepted)	0,876	Marginal Fit
TLI	≥ 0,90 (good); ≥ 0,80 (enough)	0,883	Marginal Fit
CFI	≥ 0,90 (good)	0,904	Fit

Source: Amos Output 29.0, 2025

The model fit results indicate a Chi-square (CMIN) value of 841.071 with a probability of 0.000, suggesting that the model does not meet absolute fit criteria. However, consistent, the Chi-square test is highly sensitive to large sample sizes and should not be used as the sole criterion. The CMIN/DF value of 4.024 falls within the acceptable threshold (≤ 5.00) for complex SEM models. The GFI (0.761) and AGFI (0.684) values indicate a marginal but acceptable fit given the model complexity.

The RMSEA value of 0.115 indicates relatively high approximation error, yet remains tolerable for complex models. Incremental fit indices indicate acceptable performance: CFI = 0.904, TLI = 0.883, and NFI = 0.876. Overall, based on multiple goodness-of-fit indices, the model is considered acceptable and suitable for hypothesis testing.

Hypothesis Testing

Direct-effect hypothesis testing was conducted to examine the effects of organizational learning and transformational leadership on civil servant performance, without mediation. The analysis employed SEM using AMOS 29.0. Hypotheses were evaluated based on Critical Ratio (CR) ≥ 1.96 and p-value ≤ 0.05 . The significance of the estimates determines whether an effect exists, while the sign of the coefficients indicates the direction of the relationship.

Table 5. Results of Hypothesis Testing of Direct Influence Variables

Desc.	Hypothesis	Estimate	S.E	CR	P	Description
H1	The Influence of Organizational Learning on Performance	0,680	0,382	2,235	0,025	Supported
H2	The Influence of Transformational Leadership on Performance	-0,767	0,382	-2,011	0,044	Supported (significantly)

Source: Amos Output 29.0, 2025

Based on Table 5, the direct effect test shows that organizational learning has a positive and significant effect on civil servant performance in Bandar Lampung (estimate = 0.680; CR = 2.235; p = 0.025), indicating that higher organizational learning directly improves performance.

Transformational leadership also has a significant direct effect on performance, although the relationship is negative (estimate = -0.767; CR = -2.011; p = 0.044). Despite the negative coefficient, the parameter is statistically significant, confirming a meaningful relationship between transformational leadership and performance, as significance in SEM is determined by deviation from zero rather than coefficient direction.

Indirect Effect (Bootstrapping Mediation Test)

The mediation test examined whether job satisfaction mediates the effects of organizational learning and transformational leadership on performance. Bootstrapping in AMOS was applied to assess the significance of indirect effects without relying on normality assumptions. Mediation is considered significant when the two-tailed p-value is below 0.05.

Table 6. Results of Hypothesis Testing of Indirect Variables (Mediation)

Desc.	Mediation Path	Indirect Effect	Bootstrap	Descriptoin
H3	The Influence of Organizational Learning on Performance through Job Satisfaction as a Mediator	-0,250	0,023	Significant (Supported)
H4	The Influence of Transformational Leadership on Performance through Job Satisfaction as a Mediator	0,376	0,003	Significant (Supported)

Source: Amos Output 29.0, 2025

The mediation analysis shows that job satisfaction significantly mediates the relationship between organizational learning and civil servant performance, with a negative indirect effect (-0.250 ; $p = 0.023$), indicating partial mediation. This suggests that although organizational learning has a direct positive effect, its indirect effect through job satisfaction tends to reduce performance.

In contrast, job satisfaction positively and significantly mediates the effect of transformational leadership on performance (indirect effect = 0.376 ; $p = 0.003$), also indicating partial mediation. This implies that stronger transformational leadership enhances job satisfaction, thereby improving performance.

Overall, job satisfaction functions as a partial mediator in the relationships between organizational learning, transformational leadership, and performance. Bootstrapping confirms that both indirect effects are statistically significant ($p < 0.05$), despite differing effect directions.

Sobel Test Results

To support the bootstrapping results, the Sobel test was used to assess the significance of indirect effects via job satisfaction. Using unstandardized coefficients and standard errors, mediation was considered significant when the Z-value exceeded ± 1.96 at $\alpha = 0.05$. This test further strengthens the evidence for the mediating role of job satisfaction.

The mediating role of job satisfaction in the relationship between organizational learning and civil servant performance was examined using the Sobel test as a supporting analysis. The calculation was based on unstandardized path coefficients and standard errors, with path *a* (organizational learning \rightarrow job satisfaction) of 0.345 ($SE = 0.037$) and path *b* (job satisfaction \rightarrow performance) of 1.082 ($SE = 0.026$).

Similarly, the mediating effect of job satisfaction on the relationship between transformational leadership and performance was tested using the Sobel test. The results showed a path *a* coefficient of 0.203 ($SE = 0.024$) for transformational leadership \rightarrow job satisfaction, and a path *b* coefficient of 1.082 ($SE = 0.026$) for job satisfaction \rightarrow performance.

Table 7. Sobel Test Results

Mediation Path	Input Value	Z-statistic	Criteria	Description
Organizational Learning- Job Satisfaction- Civil Servant Performance	<i>a</i> 0,345 <i>b</i> 1,082 <i>Sa</i> 0,037 <i>Sb</i> 0,026	9,09873067	$Z > 1,96$	Mediasi Signifikan (Didukung)
Transformational Leadership- Job Satisfaction- Civil Servant Performance	<i>a</i> 0,203 <i>b</i> 1,082 <i>Sa</i> 0,024 <i>Sb</i> 0,026	8,28885698	$Z > 1,96$	Mediasi Signifikan (Didukung)

Source: Amos Output 29.0, 2025

The Sobel test results show a Z-statistic of 9.099, exceeding the critical value of ± 1.96 at the 5% significance level, indicating that job satisfaction significantly mediates the effect of organizational learning on civil servant performance. This finding confirms that organizational learning influences performance both directly and indirectly through job satisfaction, with the mediation classified as partial and consistent with the bootstrap results.

Similarly, the Sobel test yields a Z-statistic of 8.289, which also exceeds ± 1.96 , confirming that job satisfaction significantly mediates the relationship between transformational leadership and performance. Transformational leadership thus affects performance both directly and indirectly via job satisfaction, and since the direct effect remains significant, this mediation is also categorized as partial.

Discussion

The Effect of Organizational Learning on Civil Servant Performance

The results confirm that organizational learning has a positive and significant effect on the performance of civil servants in Bandar Lampung City. Continuous learning enhances knowledge, skills, adaptability, and work efficiency, enabling employees to respond effectively to regulatory and technological changes. This finding supports organizational learning theory and aligns with recent studies showing that systematic learning practices improve employee performance by fostering competency development and knowledge sharing [17].

The Effect of Transformational Leadership on Civil Servant Performance

Transformational leadership has a significant, but negative, direct effect on performance. In highly structured public-sector organizations, strong transformational demands may increase role pressure, psychological strain, and workload, particularly when organizational support and system readiness are insufficient. This finding aligns with prior studies indicating that transformational leadership does not always yield positive direct performance outcomes and may, under certain conditions, generate stress or resistance. Nevertheless, the hypothesis is supported because significance in SEM is determined by statistical relevance rather than coefficient direction.

The Mediating Role of Job Satisfaction in the Relationship between Organizational Learning and Performance

Job satisfaction significantly mediates the relationship between organizational learning and performance, indicating partial mediation. Organizational learning influences performance not only directly but also indirectly through employees' job satisfaction. However, intensive learning demands without adequate organizational support may reduce job satisfaction and weaken performance outcomes. This result supports role stress theory and prior research emphasizing job satisfaction as a key mechanism linking learning practices to performance.

The Mediating Role of Job Satisfaction in the Relationship between Transformational Leadership and Performance

Job satisfaction also significantly and positively mediates the effect of transformational leadership on performance. Although the direct effect of transformational leadership is negative, its indirect effect through job satisfaction is positive, indicating partial mediation. Transformational leaders who provide insight, motivation, and support enhance employees' job satisfaction, which in turn improves performance. This finding is consistent with studies highlighting job satisfaction as a critical psychological mechanism linking leadership style to performance outcomes in the public sector.

4. CONCLUSION

Based on the results of data analysis and discussion on the effects of organizational learning and transformational leadership on the performance of civil servants in Bandar Lampung City, with job satisfaction as a mediating variable, the following conclusions can be drawn:

1. Effect of Organizational Learning on Civil Servant Performance

Organizational learning has a significant direct effect on civil servant performance. The statistical results support the acceptance of the first hypothesis, indicating that a stronger learning culture and better technological competence within the local government contribute to higher employee performance.

2. Effect of Transformational Leadership on Civil Servant Performance

Transformational leadership has a significant direct negative effect on performance. The second hypothesis is accepted, indicating that transformational leadership remains statistically significant, but its effectiveness in improving performance depends on supporting mechanisms, such as job satisfaction and organizational support.

3. Mediating Role of Job Satisfaction in the Relationship between Organizational Learning and Performance

Job satisfaction significantly mediates the relationship between organizational learning and performance. The third hypothesis is accepted, indicating that poorly managed learning demands may reduce job satisfaction and, in turn, hinder optimal performance.

4. Mediating Role of Job Satisfaction in the Relationship between Transformational Leadership and Performance

Job satisfaction plays a crucial mediating role in the relationship between transformational leadership and performance. The significant and positive indirect effect supports the fourth hypothesis, demonstrating that transformational leadership becomes more effective in enhancing performance when it first increases employees' job satisfaction.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to all parties who contributed to the completion of this study. Special appreciation is extended to the respondents who willingly participated and provided valuable data for this research. The authors also acknowledge the support and guidance from colleagues and academic mentors whose insights and feedback greatly enhanced the quality of this study. Finally, the authors are grateful to their respective institutions for providing the necessary support and resources that made this research possible.

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