DIGITAL LEADERSHIP AND EMPLOYEE PERFORMANCE: MEDIATING ROLE OF DIGITAL CULTURE AND DIGITAL SKILL IN FINANCIAL SERVICES COMPANIES IN JAKARTA

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Abstract:

Background: Digital Transformation Landscape in Indonesia asserts that successful digital transformation in Indonesia depends not only on technology adoption but also on human resource readiness and leadership effectiveness in guiding change processes.
Purpose: This study aims to analyze the influence of digital leadership on employee performance, with digital culture and digital skills serving as mediating variables, among employees working in financial services companies in Jakarta, including the banking, securities, investment, insurance, and financing sectors.
Design/methodology/approach: The research employs a quantitative approach by distributing questionnaires to 124 respondents and analyzing the data using Structural Equation Modeling (SEM). The study used non-probability purposive sampling due to limited population accessibility and specific criteria for respondents, namely employees who have worked in the company for at least one year and utilize digital technology in their daily tasks.
Findings/Result: The findings indicate that digital leadership has a positive and significant effect on employee performance, both directly and through the mediation of digital culture and digital skills.
Conclusion: These results conclude that strong digital leadership enhances employees' digital skills, fosters a digital culture, and improves employee performance, thereby supporting the company's digital transformation initiatives, while also extending the literature on their mediating roles in digital transformation contexts.
Originality/value (State of the art): A well-established digital culture encourages employees to view digital technology not merely as a tool but as an integral part of daily work practices. The internalization of digital-based values, norms, and habits enables employees to leverage technology for faster, more integrated information sharing, collaboration, and innovation.

Keywords: digital leadership, digital culture, digital skill, employee performance, financial services industry

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INTRODUCTION

Currently, the rapid emergence and development of digital technology have significantly transformed the global business landscape, compelling companies to adapt through digital transformation. According to Giebel & Lammers (2025), advancements in digital technology can help organizations enhance employee productivity by enabling more effective and efficient work processes. However, despite continuous technological progress, labor productivity in several countries remains stagnant (Commisso & Cantrell, 2023). This phenomenon indicates a gap between technology adoption and its application in supporting workforce productivity.

Although many organizations have implemented digital transformation, a McKinsey (2021) survey reveals that only 26% of respondents reported success in improving employee performance through such initiatives. Therefore, it is crucial to identify factors that drive the success of digital transformation. The Digital Transformation Landscape in Indonesia (2023) asserts that successful digital transformation in Indonesia depends not only on technology adoption but also on (i) human resource readiness and (ii) leadership effectiveness in guiding change processes.

The role of digital leadership is critical in shaping the future of organizational digital development (Yao et al. 2024). Digital leadership encompasses (i) designing and implementing strategies, (ii) inspiring employees to engage in digital transformation activities, and (iii) ensuring the effective and efficient use of digital tools (Kokot et al. 2021). However, Wang et al. (2024) report that 44% of leaders lack digital talent, defined here as the technical skills necessary for leveraging digital technologies. Digital talent serves as the foundation for digital leadership; thus, its absence hinders the development of effective digital leadership (Amelda et al. 2021). The urgency for organizations to foster digital leadership is supported by the KPMG Global Tech Report (Stancu, 2023), which states that companies with digital leadership experience a 72% increase in employee productivity, compared to only 48% in companies without such leadership.

Qiao et al. (2024) emphasize that digital leadership plays a vital role in organizations undergoing digital transformation by promoting collaboration, providing access to digital resources, and fostering a digital culture. A PwC Global (2021) survey reveals that 72% of leaders believe digital culture facilitates successful implementation of digital transformation. A strong digital culture creates an environment where information sharing, collaboration, and innovation occur rapidly (Azis et al. 2024). Furthermore, the success of digital transformation also depends on employee readiness (Darmawan et al. 2023), which is determined by employees' digital skills in adopting technology in their work. For employees, Chen et al. (2023) note that developing digital skills is essential for remaining relevant and competitive in the digital era.

The financial services industry is among the sectors experiencing rapid growth in digital transformation. Shan & Wade (2024) report that 91% of respondents believe changes in this industry will be transformational, and financial services exhibit the highest potential for change compared to other sectors. In Indonesia, the financial services industry plays a vital role in economic development by providing funding, investment, and transaction services (Kemenkeu Learning Center, 2025).

Although the industry has been driven toward digital transformation, an Oliver Wyman survey of 200 senior executives indicates that transformation failures in financial services are primarily due to a lack of business commitment (Pelletier et al. 2024). Similarly, in Indonesia, the Financial Services Authority (OJK) reports that failures in digital transformation stem from a lack of urgency and internal resistance to maximizing digital initiatives (Munjin, 2023). Digital leadership's role in shaping digital culture and enhancing employee digital skills is therefore a key factor in ensuring that digital technologies are not only available but also effectively utilized to improve employee performance.

Based on these issues, this study focuses on examining the influence of digital leadership on employee performance, with digital culture and digital skills as mediating variables among employees working in financial services companies in DKI Jakarta, including banking, insurance, financing, securities, and investment companies.

Leadership refers to a leader's ability to influence individuals or groups within an organization to achieve shared goals (Northouse, 2016) while shaping organizational values and behaviors (Saputra, 2021).

Along with rapid technological advancement and digital transformation, the concept of leadership has evolved into digital leadership. Digital leaders play a crucial role in guiding organizations through successful digital transformation, as leaders with a digital transformation mindset can foster collaboration and identify digital capabilities within the organization (Qiao et al. 2024). Therefore, digital leadership can be understood as a leader's ability to influence, motivate, and empower employees to contribute effectively by utilizing digital technologies as part of organizational work processes (Öngel et al. 2023).

In the context of digital transformation, organizational culture has evolved into digital culture as an adaptive response to technological change and organizational sustainability (Welch & Feeney, 2014; Elijah, 2016; Azra et al. 2024). According to Lee (2020), digital culture refers to an organizational culture in which thinking patterns, work practices, and interactions are shaped by the utilization of digital technology, enabling communication, participation, and collaboration to occur more rapidly, effectively, and adaptively within the organization. Therefore, digital culture is considered an important factor in supporting successful digital transformation (Nurani et al. 2025).

Digital transformation also highlights the importance of employees possessing digital skills to effectively adapt to technological developments and organizational changes (Obermayer et al. 2022). This is reinforced by Zervas & Stiakakis (2024), who state that digital skills are essential for organizations to survive and excel amid technological advancements. Furthermore, according to Sartika et al. (2023), digital skills refer to an individual's ability to effectively use digital devices, technologies, and platforms. Bellanca (2020) explains that digital skills encompass an individual's capability to utilize and adapt to various digital technologies as needed to efficiently complete tasks.

Employee performance refers to the work achievements attained by individuals within an organization (Eliyana et al. 2019; Chan et al. 2024). According to Hee et al. (2019), employee performance encompasses both the behaviors exhibited by employees in completing tasks and the outcomes achieved in alignment with organizational targets. Individuals who demonstrate high performance contribute significantly to the attainment of organizational goals (Sonnentag & Frese, 2005). Armstrong & Taylor (2014) define employee performance as behaviors that result in completed work outcomes. This is reinforced by Chan et al. (2024), who explain that high-performing employees consistently meet or exceed performance standards, produce high-quality work, and generate a positive impact on the organization as a whole.

Previous research has extensively examined the influence of digital leadership on employee performance, both directly and through various mediating variables. Additionally, some prior studies have examined the role of digital culture (Shin et al. 2023) and digital skills (Tulungen et al. 2022) as mediating variables in an organizational context. However, research that simultaneously tests the role of digital culture and digital skills as mediating mechanisms in the relationship between digital leadership and employee performance remains limited. Consequently, the understanding of how digital leadership influences employee performance through the formation of digital culture and the development of digital skills is still not fully explained, particularly in the context of financial services companies undergoing digital transformation. This is an important area to study because the digital transformation undertaken by companies influences how employees work and the demands for more adaptive, technology-based performance, particularly in financial services companies in Jakarta that are undergoing accelerated digital transformation through the use of technology-based services and work systems. In this process, the success of digital transformation is determined not only by the role of digital leadership in steering change but also by the readiness of the organization and employees to adapt to these changes. Therefore, digital culture and digital skills are crucial to examine as mechanisms that explain how digital leadership can be translated into improved employee performance, enabling companies to maintain service quality, work efficiency, and competitiveness amid increasingly rapid technological advancements.

METHODS

This study employed a quantitative approach because it aims to examine and test the relationships among variables based on predefined hypotheses. This study collected data through questionnaires distributed to respondents meeting specific criteria. The sample criteria included employees with a minimum tenure of one year in the financial services industry (banking,

securities, insurance, financing, and investment companies), located in DKI Jakarta, and actively using digital technology in their daily work.

The selection of the financial services industry was based on its significant contribution to Indonesia's economy (OJK, 2025) and its high potential for transformational change compared to other industries (Shan & Wade, 2024). The minimum tenure requirement of one year was determined based on previous studies indicating that employees typically require an adjustment period of 6–12 months to adapt to the organization (De Vos et al. 2003; Lee et al. 2011; Woodrow & Guest, 2019). Additionally, the criterion of employees using digital technology in daily tasks was established to ensure that respondents were actively engaged in digital activities, thereby providing more relevant responses based on their experience.

This study included 22 indicators; therefore, the minimum sample size was 110 and the maximum was 220, following the recommended rule of multiplying the number of indicators by 5–10 (Hair et al. 2020). Data were analyzed using inferential statistics through Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the research hypotheses. PLS-SEM was selected due to its suitability for predictive research models involving multiple latent constructs and complex relationships, including mediation effects. Prior to hypothesis testing, questionnaire items were assessed for validity and reliability using 30 collected responses and analyzed with SPSS software. SPSS was used as a preliminary step to assess the reliability and validity of the measurement items before conducting structural model analysis using PLS-SEM. Furthermore, all questionnaire items were measured using a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"), as suggested by Koo & Yang (2025), who emphasize that a well-designed Likert scale should include a clear midpoint, such as in a 1–5 scale, to accommodate respondents who prefer a neutral stance.

Digital Leadership was measured using the scale developed by Shin et al. (2023), which consists of six indicators. These indicators were selected because they capture key aspects of leadership behavior in digital transformation contexts. The instrument is considered appropriate for this study as it reflects leadership practices relevant to organizations undergoing digital transformation. Digital Culture was assessed using the measurement developed by Proksch et al. (2021), comprising five indicators. These indicators were chosen because they represent core dimensions of a digital work environment.

Digital Skills were measured using the instrument developed by Zervas & Stiakakis (2025), which includes seven indicators. These indicators were selected as they comprehensively reflect employees' capabilities in using digital technologies. Employee Performance was measured using the scale developed by Pradhan & Jena (2017), focusing on the task performance dimension. This dimension was selected because it is the most relevant indicator of individual job outcomes in structured organizational settings.

These measurement items were slightly adapted to suit the context of the financial services industry in DKI Jakarta. The adaptation process involved minor modifications in wording to improve clarity and contextual relevance without altering the original meaning of the constructs. This ensures that the items remain theoretically consistent while being easily understood by respondents working in digitally driven financial organizations. Variables concept operationalization in Table 1.

Based on the validity test using the Pearson Product-Moment Correlation technique, all indicators in this study demonstrated correlation coefficients exceeding the r-table value (0.361), indicating that all indicators are valid. Additionally, reliability testing showed that all variables had Cronbach's Alpha values greater than 0.60, confirming that all variables are reliable. Therefore, all constructs exhibit strong internal consistency and are suitable for proceeding to the main questionnaire distribution phase.

One form of organizational adaptation in today's digital age is the development of a digital culture, characterized by data-driven decision-making, digital innovation, and a collaborative work environment (Mollah et al. 2024). A company's adoption of technology does not automatically create a digital culture; rather, it involves a process of internalizing digital values and behaviors that become ingrained in the organization. In this process, digital leadership plays a crucial role as a guiding force that drives the integration of technology used within the organization into daily work practices and shapes employees' mindsets to align with digital transformation. Through strategic

planning, communication, and leading by example, digital leaders help foster an environment that supports the development of the organization's digital culture (Araujo et al. 2021). In line with this, Shin et al. (2023) emphasize that digital leaders are responsible for designing and implementing organizational strategies that are not only technology-oriented but also focused on fostering a digital culture within the company. Hypothesis 1: Digital leadership has a positive effect on digital culture in financial services companies in DKI Jakarta.

Digital culture refers to the values, norms, and work practices that shape how employees use technology within an organization (Luthra, 2024). In an organizational setting, digital culture fosters a work environment that supports rapid information flow, intensive collaboration, and a drive for digital innovation (Azis et al. 2024). More than just a technology-based work system, digital culture also shapes employees' ways of thinking and behavior in completing their work. An environment that supports the use of technology, virtual collaboration, and adaptation to digital changes fosters the development of more flexible and responsive work patterns within organizations (Weston et al. 2017). These conditions ultimately enhance employees' ability to produce higher-quality work outcomes (Azra et al. 2024). Thus, digital culture is not merely a technological support system, but also a mechanism that influences employee work behavior and performance quality. Hypothesis 2: Digital culture has a positive effect on employee performance in financial services companies in DKI Jakarta.

Leadership plays a crucial role in developing employees' skills and competencies, particularly in the era of digital transformation, which demands enhanced digital skills (Tulungen et al. 2022). In this context, digital leaders serve not only as guides but also as facilitators who create a work environment that supports the use of technology in daily activities. Through guidance, support, and encouragement to use digital tools within the organization, digital leaders increase employee engagement with technology in their work (Mollah et al. 2024). This expands employees' exposure to technology and enables them to gradually develop digital skills through ongoing work practices and the process of adapting to the organization's digital systems.Thus, digital leadership serves as a driving force that facilitates the improvement of employees' digital skills through increased interaction with and adaptation to technology in their daily work. This is consistent with Lussier & Achua (2015), who state that leaders influence the development of team members' capabilities, including digital skills, which ultimately contribute to improved organizational performance. Hypothesis 3: Digital leadership has a positive effect on digital skills in financial services companies in DKI Jakarta.

Table 1. Variables Concept Operationalization

Construct	Indicator	Source
Digital Leadership	Risk awareness in digital technology adoption, encouragement of digital technology utilization, emphasis on digital ethics, explanation of digital technology benefits, sharing of technology-related experiences, alignment of digital technology with organizational vision	Shin et al. (2023)
Digital Culture	Open discussion on digital work outcomes, decision-making based on team input and data utilization, cross-department collaboration using digital technology, collaborative work culture beyond hierarchical roles, Idea contribution for enhancing digital technology use	Proksch et al. (2021)
Digital Skill	Effective digital technology use, productivity through digital skills, problem-solving in digital technology use, adaptability to digital changes, initiative in using digital solutions, willingness to learn new technologies, peer support in digital technology use	Zervas & Stiakakis (2025)
Employee Performance	High work standards, independent task completion, multitasking ability, timely task completion	Pradhan & Jena (2017)

Digital skills refer to an individual's ability to effectively use digital devices, technologies, and platforms in the workplace, playing a crucial role in enhancing efficiency, productivity, and overall performance (Sartika et al. 2023). In a digital work environment, these skills serve not only as technical competencies but also as capabilities that enable employees to adapt to changes in technology-driven work systems. By mastering digital skills, employees are able to optimize the use of technology in their work processes, making their work more efficient, structured, and accurate. This directly contributes to increased productivity and higher-quality work within the organization. Furthermore, Meena & Santhanalakshmi (2025), as cited in Zervas & Stiakakis (2025), assert that digital skills enable employees to manage workflows more effectively through the use of digital technology, which ultimately leads to improved individual performance. Hypothesis 4: Digital skills have a positive effect on employee performance in financial services companies in DKI Jakarta.

In the context of digital transformation, digital leadership serves not only as a guiding force but also as a mechanism that shapes how employees work in a technology-driven environment. Digital leadership plays a role in improving employee performance by fostering digital work behaviors, such as setting an example of how to use technology in the workplace, promoting a culture of innovation, strengthening collaboration, and providing access to relevant digital resources (Turyadi et al. 2023). In this way, leaders create a more digitally integrated work environment, enabling employees to work more efficiently and adaptively, which ultimately leads to improved performance. In line with this, digital leaders also leverage technology to enhance communication, collaboration, and knowledge sharing among employees (Kane et al. 2015; Öngel et al. 2023). This improves work effectiveness and strengthens coordination in task execution, which ultimately contributes to improved employee performance. Hypothesis 5: Digital leadership has a positive effect on employee performance in financial services companies in DKI Jakarta.

Digital leadership is becoming increasingly important in the era of digital transformation because it plays a role in shaping and building a digital culture within organizations (Shin et al. 2023). In this context, digital leaders serve not only as guides but also as agents who instill digital-based values, norms, and work behaviors that form the foundation of an organizational culture supportive of digital transformation (Araujo et al. 2021). The digital culture shaped by this leadership role not only influences employees' work patterns but also shapes their ability to leverage technology, which ultimately leads to improved employee performance (Azra et al. 2024). Thus, digital culture serves as a mechanism that bridges the link between digital leadership and organizational performance outcomes.Empirical findings also indicate that digital leadership has a positive influence on digital culture, which many studies identify as a mediating variable in explaining the relationship between digital leadership and organizational performance (Shin et al. 2023). Hypothesis 6: Digital leadership has a positive effect on employee performance through digital culture in financial services companies in DKI Jakarta.

The presence of digital leaders can encourage employees to actively engage with and utilize digital tools in their daily work, creating opportunities for continuous skill development (Mollah et al. 2024). Through guidance, influence, and support, digital leaders play a key role in shaping employees' ability to acquire and improve digital competencies (Lussier & Achua, 2015). As employees develop stronger digital skills, they become more capable of using digital technologies efficiently, which enhances workflow effectiveness, reduces operational inefficiencies, and improves task execution quality. These improvements ultimately contribute to higher employee performance in the organization (Meena & Santhanalakshmi, 2025). Hypothesis 7: Digital leadership has a positive effect on employee performance through digital skills in financial services companies in DKI Jakarta.

Figure 1 presents the conceptual model of the study, which examines how digital leadership, digital culture, and digital skills influence employee performance.

RESULTS

Outer Model Evaluation

The outer model analysis was conducted through validity tests (convergent and discriminant validity) and reliability tests (Cronbach's Alpha and Composite Reliability)(Table 2). Convergent validity was assessed using SmartPLS software by examining the Average Variance Extracted (AVE) and outer loadings for

each item. According to Hair et al. (2020), an AVE value greater than 0.50 indicates adequate convergent validity, while outer loadings should exceed 0.60 to be considered valid. All items were found to be valid, with AVE values exceeding 0.50 and outer loadings above 0.60.

Discriminant validity was tested using the Heterotrait-Monotrait Ratio (HTMT) method to determine whether each construct in the study was distinct and non-overlapping (Table 3). According to Henseler et al. (2015), an HTMT value below 0.90 indicates good discriminant validity. Based on the HTMT test conducted using SmartPLS, all constructs demonstrated adequate discriminant validity, as none exceeded the 0.90 threshold.

Additionally, reliability was assessed by examining Cronbach's Alpha and Composite Reliability using SmartPLS to measure the internal consistency of each construct. A Cronbach's Alpha value above 0.60 and a Composite Reliability value of at least 0.70 indicate reliability (Hair et al. 2021). Among the constructs, digital skills exhibited the highest reliability, with a Cronbach's Alpha of 0.957 and Composite Reliability of 0.965. Therefore, based on the results obtained using SmartPLS, the measurement model demonstrated satisfactory validity and reliability according to the established criteria.

Inner Model Evaluation

Additionally, the multivariate factorial analysis included tests for factor loadings, convergent validity, discriminant validity, and structural equation model assessment through evaluation of explained variance (R^2), predictive relevance (Q^2), and effect size (f^2) (Cohen, 1998; Hair et al. 2014). The coefficient of determination (R^2) was used to assess how well the model explains the variance in the dependent variables. According to Hair et al. (2021), R^2 values range from 0 to 1, with higher values indicating greater explanatory power. In social sciences, an R^2 value above 0.75 is considered substantial, between 0.25 and 0.50 moderate, and below 0.25 weak (Hair et al. 2011; Hair et al. 2021). The results show that the adjusted R^2 value for digital culture is 0.519, indicating that the model explains 51.9% of its variance. Similarly, digital skills have an adjusted R^2 value of 0.501, meaning the model explains 50.1% of its variance. Meanwhile, employee performance has an adjusted R^2 value of 0.730, indicating that the model explains 73.0% of its variance. Thus, all variables in this study fall within the substantial category, suggesting that the relationships among variables are well-suited to explain the phenomenon under investigation.

Predictive relevance was evaluated to measure the accuracy of the observed path model, where smaller differences between predicted and actual values result in higher Q^2 values. According to Hair et al. (2017), a Q^2 value greater than 0 indicates good predictive relevance, while a value below 0 suggests poor predictive relevance. The constructs in this study demonstrated good predictive relevance, with Q^2 values ranging from 0.497 to 0.521, indicating that the model provides accurate predictions (Table 4).

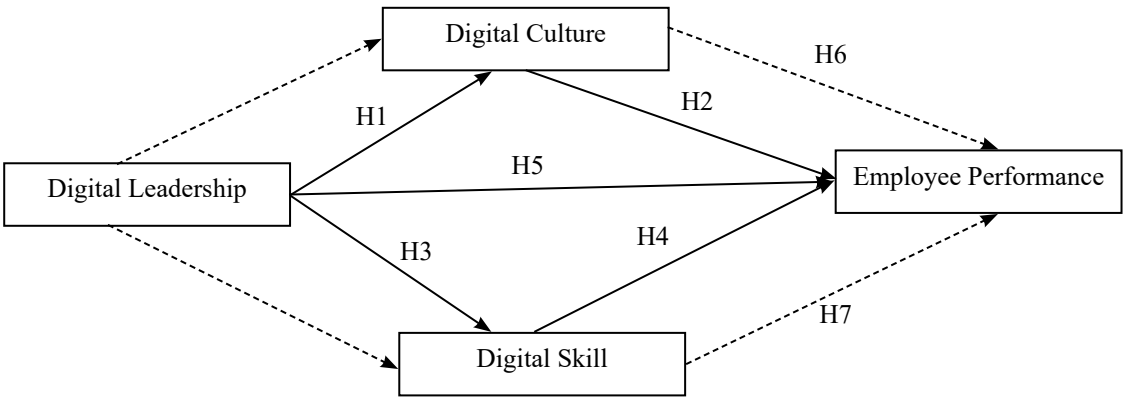

Figure 1. Conceptual model of the study

Table 2. Outer Model of the Study

Construct	Item	Factor	CR	AVE	CA	Source
Digital Leadership (DL)	DL1	0.933	0.955	0.811	0.942	Shin et al. (2023)
	DL2	0.918				
	DL3	0.912				
	DL4	0.895				
	DL5	0.886				
	DL6	0.890				
Digital Culture (DC)	DC1	0.904	0.965	0.821	0.956	Proksch et al. (2021)
	DC2	0.898				
	DC3	0.923				
	DC4	0.876				
	DC5	0.901				
Digital Skills (DS)	DS1	0.911	0.965	0.795	0.957	Zervas & Stiakakis (2025)
	DS2	0.868				
	DS3	0.899				
	DS4	0.893				
	DS5	0.870				
	DS6	0.905				
	DS7	0.896				
Employee Performance (EP)	EP1	0.937	0.969	0.886	0.957	Pradhan & Jena (2017)
	EP2	0.944				
	EP3	0.932				
	EP4	0.952				

Table 3. Discriminant Validity HTMT

Discriminant Validity HTMT			
Construct	DC	DL	DS
Digital Culture (DC)			
Digital Leadership (DL)	0.760		
Digital Skills (DS)	0.819	0.741	
Employee Performance (EP)	0.827	0.758	0.847

Table 4. Coefficient of determination in the PLS Method

Construct	R^2	R^2 adjusted	Q^2
Digital Culture	0.523	0.519	0.516
Digital Skill	0.505	0.501	0.497
Employee Performance	0,736	0.730	0.521

Effect size (f^2) was assessed to determine the magnitude of influence of independent variables on dependent variables. According to Cohen (1998) in Hair et al. (2017), f^2 values are categorized as small (0.02), medium (0.15), and large (>0.35), with larger values indicating stronger effects. Based on the effect size test, the strongest direct effect was digital leadership on digital culture, with a value of 1.097 (large category), while the effect of digital leadership on employee performance was 0.062 (small category).

Hypothesis Testing

This study tested the hypotheses using path coefficients through SmartPLS software (Table 5). Hypothesis testing aimed to measure the direction and magnitude of the influence between independent and dependent variables in the research model. Path coefficient values range from −1 to 1, where values closer to the extremes indicate stronger negative or positive relationships. The significance of the effects was assessed using t-statistics

and p-values obtained through bootstrapping. At a 5% significance level, a relationship is considered significant if the t-statistic exceeds 1.96 and the p-value is less than 0.05 (Hair et al. 2021).

The results indicate that digital leadership has a positive and significant effect on digital culture, with an original sample value of 0.723, t-statistic of 14.383, and p-value of 0.000, thus supporting Hypothesis 1. This finding aligns with Shin et al. (2023), who reported a positive and significant relationship between digital leadership and digital culture across various industries in South Korea. Digital culture has a positive and significant effect on employee performance, with an original sample value of 0.305, t-statistic of 2.232, and p-value of 0.026, supporting Hypothesis 2. This result is consistent with Luthra (2024) and Azra et al. (2024), who found a positive and significant relationship between digital culture and employee performance.

Digital leadership has a positive and significant effect on digital skills, with an original sample value of 0.711, t-statistic of 13.133, and p-value of 0.000, supporting Hypothesis 3. This finding is in line with Tulungen et al. (2022), who reported a positive influence of digital leadership on digital skills. Digital skills have a positive and significant effect on employee performance, with an original sample value of 0.435, t-statistic of 3.345, and p-value of 0.001, supporting Hypothesis 4. This result corroborates Sartika et al. (2023), who found a positive relationship between digital skills and employee performance.

Digital leadership has a positive and significant effect on employee performance, with an original sample value of 0.197, t-statistic of 1.982, and p-value of 0.048, supporting Hypothesis 5. This finding is consistent with Qiao et al. (2024), who reported a positive and significant relationship between digital leadership and employee performance. The mediation effect of digital culture between digital leadership and employee performance yielded an original sample value of 0.220, t-statistic of 2.190, and p-value of 0.029, supporting Hypothesis 6. Similarly, the mediation effect of digital skills between digital leadership and employee performance produced an original sample value of 0.309, t-statistic of 3.351, and p-value of 0.001, supporting Hypothesis 7. These results indicate that the mediating roles of digital culture and digital skills are partial, as the direct effect of digital leadership on employee performance remains positive and significant even without the mediators.

This study found that digital leadership has a positive and significant influence on digital culture in financial services companies in Jakarta, consistent with previous research. These findings indicate that digital leadership plays an important role in shaping organizational values and work environments that support digital transformation. In financial services companies, where operational activities increasingly rely on integrated digital systems, leaders are expected to encourage adaptability, collaboration, and openness toward technological change. These findings suggest that the success of digital transformation depends not only on technology implementation but also on leaders' ability to foster organizational behaviors that support digital adaptation.

Table 5. Results of the structural equations model

Hypothesis	SD	T-Statistic	Direct Effect	p-values	F^2
DL → DC	0.050	14.383	0.723	0.000	1.097
DC → EP	0.100	2.232	0.305	0.026	0.118
DL → DS	0.054	13.133	0.711	0.000	1.021
DS → EP	0.130	3.345	0.435	0.001	0.250
DL → EP	0.100	1.982	0.197	0.048	0.062
DL → DC → EP	0.101	2.190	0.220	0.029	-
DL → DS → EP	0.092	3.351	0.309	0.001	-

Note: Digital leadership (DL); digital culture (DC); Digital skills (DS); employee performance (EP)

The study also found a positive and significant effect of digital culture on employee performance, aligning with prior research by Luthra (2024) and Azra et al. (2024). This finding indicates that a supportive digital culture enables employees to work more effectively within technology-based work systems. In financial services companies in Jakarta, where employees are required to deliver fast and accurate services, a work environment that supports collaboration and openness to technology can improve productivity, work quality, and responsiveness to operational changes. This finding is also supported by Weston et al. (2017), who state that employee performance improves when organizations encourage the adoption of new technologies and virtual collaboration.

In addition, the results indicate that digital leadership has a positive and significant relationship with digital skills, consistent with Tulungen et al. (2022). These findings suggest that leaders play an important role in preparing employees to adapt to increasingly digital work systems. In financial services companies, where operational processes and customer services are highly dependent on technology, leaders who actively encourage digital learning and technology utilization can strengthen employees' confidence and capability in using digital systems. These findings imply that digital skills are important organizational capabilities in supporting effective work performance and digital transformation.

The study further reveals that digital skills positively influence employee performance, consistent with prior research. This finding indicates that employees with strong digital skills are more capable of completing tasks efficiently, adapting to technological changes, and minimizing operational errors. In financial services companies, where service quality and accuracy are highly important, digital skills contribute not only to individual productivity but also to organizational effectiveness. Meena & Santhanalakshmi (2025), as cited in Zervas & Stiakakis (2025), further highlight that digital skills are essential for enhancing workflows and productivity.

Additionally, the study confirmed a positive and significant direct effect of digital leadership on employee performance, consistent with previous research. This finding suggests that digital leadership contributes to employee performance by encouraging employees to work more effectively within technology-driven work systems. Through support for innovation, digital collaboration, and technology utilization, leaders can create work environments that improve efficiency, responsiveness, and work quality. These findings imply that digital leadership is important in supporting organizational performance during digital transformation.

The study also found a positive and significant effect of digital leadership on employee performance through the mediation of digital culture. These findings suggest that digital leadership becomes more effective when supported by organizational values and work practices that encourage digital adaptation. In financial services companies, where work processes increasingly depend on digital coordination and technology-based services, digital culture enables employees to collaborate more effectively and adapt more quickly to operational changes. Therefore, digital culture serves as an important mechanism through which digital leadership can improve employee performance.

Finally, the study found a positive and significant effect of digital leadership on employee performance through the mediation of digital skills, consistent with Lussier & Achua (2015). This finding indicates that the influence of digital leadership on employee performance is strengthened when employees possess adequate digital capabilities to support their work activities. In financial services companies, employees who are capable of utilizing digital systems effectively are better able to complete work efficiently and respond to changing work demands. Therefore, digital skills act as an important mechanism that enables digital leadership to contribute more effectively to employee performance.

Managerial Implication

The findings of this study provide implications for formulating strategies to support digital transformation in the financial services industry through strengthening digital leadership, digital culture, digital skills, and employee performance. Leaders must understand the risks associated with the use of digital technology to ensure that risk management policies are effectively implemented, including conducting employee awareness programs to maintain security and compliance. Cross-departmental collaboration should be optimized by standardizing the use of digital tools and establishing clear procedures for document sharing. Employees' digital skills can be enhanced through

mentoring programs and recognition initiatives to promote continuous knowledge sharing. Furthermore, employees' commitment to high work standards should be reinforced through appreciation and reward systems, both financial and non-financial, to maintain motivation and encourage overall performance improvement.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The results of this study contribute to the digital leadership literature by extending prior research on the mechanisms through which digital leadership influences employee performance, particularly through the mediating roles of digital culture and digital skills. The findings indicate that the relationship between digital leadership and employee performance is not solely direct but is also explained through these mediating mechanisms.

Recommendations

This study highlights that digital leadership effectiveness is better understood when considering how it facilitates the development of a supportive digital culture and the enhancement of employees' digital skills. In this regard, digital leadership operates not only as a strategic direction-setting mechanism but also as an enabling factor that shapes organizational conditions and employee capabilities necessary for digital transformation. Thus, within the context of this study conducted in digital transformation settings, digital leadership is found to be associated with improved employee performance through both direct and indirect pathways involving digital culture and digital skills.

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