

The Influence of Digital Shadowing and Organizational Culture on the Speed of Adaptation of New Employees in the Soppeng Regent's Office

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Abstract

This study is urgently needed to determine how digital shadowing and organizational culture influence the adaptation speed of new employees, enabling the Soppeng Regent's Office to enhance onboarding effectiveness, accelerate workforce integration, and improve organizational performance. The rapid advancement of digital transformation has significantly reshaped organizational practices, particularly in employee onboarding and adaptation processes within public sector institutions. This study aims to examine the influence of digital shadowing and organizational culture on the speed of adaptation among new employees at the Soppeng Regent's Office, Indonesia. A quantitative approach with a cross-sectional survey design was employed, involving 52 respondents selected through stratified random sampling. Data were collected using structured questionnaires and analyzed using multiple linear regression with SPSS. The findings reveal that both digital shadowing and organizational culture have a positive and significant effect on employee adaptation speed, both partially and simultaneously. Digital shadowing enhances learning efficiency by enabling new employees to observe workflows and access real-time information, thereby accelerating task understanding and reducing uncertainty. Meanwhile, organizational culture demonstrates a more dominant influence, indicating that a supportive and adaptive work environment plays a critical role in facilitating employee adjustment. The coefficient of determination (R^2) shows that 46% of the variation in adaptation speed is explained by the two variables, while the remaining is influenced by other factors. These results highlight the importance of integrating technological onboarding strategies with a conducive organizational culture to optimize employee adaptation. This study contributes to the literature on digital transformation and human resource management in public sector organizations, particularly in developing countries, by emphasizing the synergy between technological and socio-cultural factors in accelerating employee integration.

Keywords: *Digital Shadowing, Organizational Culture, Employee Adaptation, Onboarding, Public Sector*

Introduction

Previous studies have consistently highlighted the importance of digital technologies in facilitating employee learning and adaptation during the onboarding process. For example, Emphasized that virtual job shadowing provides employees with opportunities to observe work practices remotely, thereby enhancing task understanding and reducing uncertainty during the initial stages of employment (Jeske & Olson, 2022). Their findings suggest that digital observation mechanisms can improve learning efficiency by allowing employees to access procedural and contextual information more flexibly than traditional face-to-face orientation programs. Likewise, argued that technology enabled onboarding practices contribute to

stronger employee engagement and faster integration into organizational routines (Petrilli et al., 2022). These studies collectively indicate that digital technologies have become increasingly important in supporting workforce development in modern organizations (Brown, 2024; Tona et al., 2025).

However, despite the growing body of literature on digital onboarding, the specific concept of digital shadowing remains relatively underexplored (Kurniawanto, 2025). Existing studies have predominantly focused on digital learning platforms, virtual training programs, and online onboarding systems rather than examining how observation-based learning through digital shadowing influences employee adaptation outcomes (Santos et al., 2024). Furthermore, most investigations have evaluated digital interventions from a technological perspective, emphasizing system effectiveness and user acceptance while paying limited attention to organizational factors that may influence their success (Bauer, 2025). As a result, there remains insufficient understanding of whether digital shadowing can effectively accelerate adaptation when implemented within organizations characterized by different cultural environments and bureaucratic structures (Inriyani et al., 2025; Mufida & Sendjaja, 2026).

In parallel with technological developments, organizational culture has been widely recognized as a critical determinant of employee behavior and workplace adjustment. Argued that organizational culture shapes how individuals interpret organizational expectations, interact with colleagues, and perform assigned responsibilities (Schein, 2017). Supporting this view, that organizations characterized by innovative and collaborative cultures tend to facilitate faster employee integration because newcomers receive greater social support and clearer behavioral guidance (Park & Kim, 2020; Amri et al., 2026). Similarly, the previous studied reported that organizational culture significantly affects employee adaptability, particularly in environments undergoing organizational change and digital transformation (Mulyati & Setyawati, 2024). These findings demonstrate that organizational culture serves as a fundamental mechanism through which employees acquire knowledge, understand norms, and develop a sense of belonging within the workplace (Bowers et al., 2023; Seo, 2023).

Although previous studies have confirmed the importance of organizational culture, their findings also reveal several limitations. Most studies have treated organizational culture as an independent factor influencing employee performance, commitment, or job satisfaction rather than specifically examining its role in accelerating employee adaptation. Moreover, many empirical investigations have been conducted in private-sector organizations that typically possess flatter organizational structures and more flexible management systems. Consequently, the applicability of these findings to public-sector institutions, which often operate under formalized procedures and hierarchical decision-making processes, remains uncertain. This limitation is particularly relevant in developing countries where bureaucratic traditions continue to influence organizational behavior despite ongoing digital transformation initiatives.

Several studies have also attempted to examine the relationship between digital transformation and organizational culture (Vial, 2021). That successful digital transformation depends not only on technological readiness but also on the presence of a supportive organizational culture that encourages learning, innovation, and adaptation (Kane et al., 2023). Similarly, found that resistance to digital transformation often stems from cultural barriers rather than technological limitations (Susilawati et al., 2024). Employees may possess access to advanced systems and digital tools, yet organizational norms and established work

practices can slow the adoption process (Hanelt et al., 2021). These findings imply that technology and culture should not be viewed as separate dimensions but rather as interconnected factors that jointly influence organizational outcomes (Verhoef et al., 2021).

Nevertheless, previous studies have generally examined digital transformation and organizational culture from a broad organizational perspective without specifically focusing on the adaptation process of new employees. Existing research tends to emphasize organizational performance, employee productivity, service quality, or innovation capability as primary outcomes. Comparatively less attention has been devoted to understanding how newly recruited employees navigate the transition into unfamiliar work environments during periods of digital change. Since employee adaptation represents a critical stage that influences future performance, engagement, and retention, this issue warrants more focused investigation.

A further limitation of previous studies concerns their geographical and institutional contexts. Most empirical evidence regarding digital onboarding, virtual learning, and organizational culture originates from developed countries where digital infrastructure, technological literacy, and organizational readiness are generally more advanced. In such contexts, digital shadowing may function differently compared to developing countries, where varying levels of technological access, digital competencies, and bureaucratic complexity may influence implementation outcomes. Consequently, findings derived from developed-country settings cannot be automatically generalized to public-sector organizations in Indonesia.

Within the Indonesian context, research concerning employee adaptation has largely focused on private companies, educational institutions, and state-owned enterprises. While these studies provide valuable insights into human resource management practices, they offer limited evidence regarding local government institutions. Regional government offices possess unique organizational characteristics, including formal administrative procedures, hierarchical authority structures, strict regulatory compliance requirements, and strong bureaucratic traditions. These characteristics create a work environment that differs substantially from private-sector organizations and may influence how new employees experience adaptation processes. Therefore, further investigation is needed to understand whether digital shadowing and organizational culture operate similarly within local government bureaucracies.

The Regional Secretariat Office of Soppeng Regency represents an appropriate setting for addressing this research gap. As part of Indonesia's broader bureaucratic reform agenda, the institution has implemented various digital initiatives to improve administrative efficiency, transparency, and public service quality. At the same time, the organization continues to operate within a bureaucratic framework characterized by established procedures and hierarchical structures. This combination of digital transformation efforts and traditional organizational characteristics provides a valuable context for examining how technology-based learning mechanisms and organizational culture interact to influence employee adaptation outcomes.

Based on the comparison of previous studies, several research gaps can be identified. First, existing studies have predominantly examined digital onboarding, virtual learning, and organizational culture as separate constructs, leaving limited understanding of their combined influence on employee adaptation. Second, research specifically focusing on digital shadowing remains scarce compared with broader investigations of digital onboarding systems and technology-based training programs. Third, empirical evidence regarding the interaction between digital shadowing and organizational culture in shaping adaptation speed is still limited. Fourth, most previous studies have been conducted in private-sector organizations or

developed-country contexts, creating a lack of evidence from local government institutions in developing countries. Finally, there remains insufficient understanding of how digital transformation initiatives can support employee adaptation within bureaucratic organizations characterized by formal procedures and cultural rigidity.

Accordingly, this study seeks to address these gaps by examining the influence of digital shadowing and organizational culture on the speed of new employee adaptation within the Soppeng Regent's Office. Unlike previous studies that focus on either technological or cultural dimensions independently, this research integrates both variables within a single analytical framework to provide a more comprehensive explanation of employee adaptation processes. Furthermore, the study contributes empirical evidence from a regional government institution in Indonesia, thereby expanding the contextual scope of existing literature and offering insights that are relevant to public-sector organizations undergoing digital transformation.

The novelty of this research lies in three important aspects. First, it develops an integrated perspective that combines digital shadowing and organizational culture as complementary determinants of employee adaptation speed. Second, it extends the emerging literature on digital shadowing by examining its application within a public-sector bureaucratic environment, a context that has received limited scholarly attention. Third, the study provides empirical evidence from a local government institution in Indonesia, contributing to a deeper understanding of how digital transformation initiatives can be aligned with organizational culture to improve human resource management practices and support bureaucratic reform objectives.

Method

This study employs a quantitative research approach to examine the influence of digital shadowing and organizational culture on the speed of adaptation among new employees at the Regional Secretariat Office of Soppeng Regency, Indonesia. A quantitative design is considered appropriate because the research aims to measure relationships between variables, test hypotheses objectively, and generate generalizable findings through statistical analysis. The study adopts a cross-sectional survey design, where data are collected at a single point in time from a defined population.

This design is suitable for answering the research questions, as it enables the identification of causal relationships and the magnitude of influence between independent variables (digital shadowing and organizational culture) and the dependent variable (adaptation speed). The research was conducted at the Soppeng Regent's Office, located on Jl. Salotungo, Lalabata Rilau, Lalabata District, Soppeng Regency, South Sulawesi, Indonesia. The study took place over a two-month period, from December 2024 to January 2025. This location was selected because it has implemented digital-based onboarding practices, including digital shadowing, making it a relevant context for investigating the proposed research variables.

The population of this study consists of 137 newly recruited employees who participated in orientation and adaptation processes involving digital shadowing during the 2024–2025 period. This population is appropriate because it directly represents individuals who have experienced the phenomenon under investigation. In order to ensure representativeness and allow generalization of findings, a stratified random sampling technique was employed. The population was divided into homogeneous strata based on relevant characteristics (such as department or job function), and samples were randomly selected from each stratum. The sample size was determined using the Slovin formula with a margin of error of 10%. Based on

this calculation, a total of 58 respondents were selected as the sample. This sample size is considered sufficient to represent the population while maintaining statistical reliability. The use of probability sampling ensures that each member of the population has an equal chance of being selected, thereby reducing sampling bias and improving the validity of the results.

Data for this study were collected from both primary and secondary sources. Primary data were obtained directly from respondents through a structured questionnaire designed to measure the variables of interest. The questionnaire consisted of closed-ended statements using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The instrument was developed based on established theoretical constructs and previous empirical studies related to digital shadowing, organizational culture, and employee adaptation.

In addition to questionnaires, non-participant observation was conducted to capture contextual information regarding workplace dynamics, onboarding procedures, and the implementation of digital shadowing practices. This method allowed the researcher to observe real organizational processes without direct involvement, ensuring objectivity and minimizing researcher bias. Documentation analysis was also performed by reviewing relevant organizational records, policy documents, training materials, and academic literature. These secondary data sources were used to strengthen the theoretical foundation and provide contextual support for interpreting the findings.

The research instrument underwent validity and reliability testing prior to data analysis. Content validity was assessed through expert judgment to ensure that each item accurately represented the intended construct. Empirical validity was tested using Pearson's product-moment correlation, where each item score was correlated with the total score of its respective variable. Items were considered valid if the correlation coefficient exceeded the critical value at a significance level of 0.05. Reliability testing was conducted using Cronbach's alpha coefficient to evaluate the internal consistency of the instrument. A Cronbach's alpha value of 0.70 or higher was considered acceptable, indicating that the instrument produced consistent and reliable measurements. These procedures ensure that the data collected are both accurate and dependable for subsequent analysis.

The operationalization of variables in this study was clearly defined to enable precise measurement. Digital shadowing (X1) is defined as a technology-assisted mentoring process that allows new employees to observe and learn from experienced staff through digital platforms. This variable was measured based on indicators such as frequency of use, accessibility of digital tools, and perceived usefulness of the shadowing process. Organizational culture (X2) refers to shared values, norms, and behavioral patterns within the organization.

It was measured using adapted dimensions from the Organizational Culture Assessment Instrument (OCAI), including aspects such as collaboration, innovation, task orientation, and adherence to procedures. The dependent variable, adaptation speed (Y), is defined as the extent to which new employees can quickly adjust to their work environment, job responsibilities, organizational rules, and social interactions. This variable was measured through indicators such as task comprehension, ability to perform job duties, social integration, and confidence in executing responsibilities. All variables were measured using Likert-scale items, ensuring consistency and comparability across responses.

Data analysis was carried out using IBM SPSS Statistics software. The analysis process consisted of three main stages: descriptive analysis, classical assumption testing, and

inferential analysis. Descriptive analysis was used to summarize respondent characteristics and provide an overview of the data distribution. This included frequency distributions, percentages, means, and standard deviations.

Before conducting inferential analysis, classical assumption tests were performed to ensure that the regression model met the necessary statistical requirements. Normality was tested using the Kolmogorov–Smirnov test and Normal Probability Plot, where a significance value greater than 0.05 indicates normally distributed residuals. Multicollinearity was assessed using Variance Inflation Factor (VIF) and tolerance values, with VIF values below 10 and tolerance values above 0.10 indicating the absence of multicollinearity. Heteroscedasticity was examined using the Glejser test and scatterplot analysis, where a non-significant result ($p > 0.05$) indicates homoscedastic residuals. To test the research hypotheses, multiple linear regression analysis was employed. This technique allows for the simultaneous examination of the effects of multiple independent variables on a dependent variable. The regression model estimates the extent to which digital shadowing and organizational culture influence the speed of adaptation among new employees.

Hypothesis testing was conducted using both partial (t-test) and simultaneous (F-test) significance tests. The t-test was used to determine the individual effect of each independent variable on the dependent variable, while the F-test assessed the combined effect of all independent variables. A significance level of 0.05 was used as the threshold for statistical decision-making. Additionally, the coefficient of determination (R^2) was calculated to measure the proportion of variance in the dependent variable explained by the independent variables. A higher R^2 value indicates a stronger explanatory power of the model. Overall, the research methodology is designed to provide a systematic, replicable, and rigorous framework for examining the relationships among variables. The procedures followed in this study are clearly structured and aligned with established quantitative research standards, ensuring that the findings are valid, reliable, and meaningful within the context of public sector organizational studies.

Results

Data Collection and Respondent Profile

Data in this study were collected through the distribution of questionnaires to newly recruited employees at the Soppeng Regent's Office. The instrument was designed based on three main variables: digital shadowing (X1), organizational culture (X2), and the speed of employee adaptation (Y). The data collection process was conducted both directly and through digital platforms to ensure accuracy and representativeness.

Table 1. *Questionnaire Distribution Results*

Description	Total
Number of respondents	58
Questionnaires distributed	58
Questionnaires returned	52
Valid questionnaires	52
Response rate	89.66%

Based on Table 1, a total of 58 questionnaires were distributed, and 52 were returned and deemed valid for analysis, resulting in a response rate of 89.66%. Therefore, the final sample consisted of 52 respondents. This response rate indicates a high level of respondent participation and suggests that the collected data are sufficiently representative of the target

population. A response rate exceeding 70% is generally considered adequate for minimizing non-response bias and ensuring the reliability of survey-based research findings. Respondent characteristics were analyzed descriptively (Hair et al., 2022).

In terms of gender, 53.85% of respondents were female, while 46.15% were male. Regarding educational background, the majority of respondents (86.54%) held a bachelor's degree, followed by diploma holders (7.69%) and high school graduates (5.77%). These findings indicate that the sample is dominated by relatively well-educated employees, which may positively influence their ability to understand digital technologies and adapt to organizational changes. This observation is consistent with the findings previous studies, who argued that employees with higher educational attainment tend to demonstrate greater readiness to engage with technology-based learning systems and adapt more effectively to new work environments (Jeske & Olson, 2022).

Instrument Testing (Validity and Reliability)

Validity testing was conducted to assess whether each questionnaire item accurately measures the intended construct. The results indicate that all items across the three variables have corrected item-total correlation values exceeding the critical r-table value (0.273), confirming that all items are valid. Reliability testing was performed using Cronbach's Alpha. The results are presented below:

Table 2. Reliability Test Results

<i>Variable</i>	<i>Cronbach's Alpha</i>	<i>Number of Items</i>
Digital Shadowing (X1)	0.831	6
Organizational Culture (X2)	0.767	5
Adaptation Speed (Y)	0.760	5

All variables have Cronbach's Alpha values above 0.60, indicating that the instrument is reliable and consistent. The Digital Shadowing variable achieved the highest reliability coefficient (0.831), followed by Organizational Culture (0.767) and Adaptation Speed (0.760). These values demonstrate that all measurement items consistently represent their respective constructs and are suitable for further statistical analysis. Cronbach's Alpha values above 0.70 indicate acceptable internal consistency, while values above 0.60 remain acceptable for exploratory social science research. The high reliability observed in this study suggests that respondents interpreted the questionnaire items consistently, thereby strengthening the credibility of the subsequent regression and hypothesis testing analyses.

Classical Assumption Tests

The normality test was conducted using the Kolmogorov–Smirnov method. The results show a significance value of 0.200, which is greater than 0.05, indicating that the residuals are normally distributed.

Table 3. Normality Test Results

<i>Statistic</i>	<i>Value</i>
N	52
Kolmogorov-Smirnov Sig.	0.200

The normality test results presented in Table 3 show a Kolmogorov–Smirnov significance value of 0.200, which exceeds the threshold of 0.05. This indicates that the residuals are normally distributed and that the data satisfy one of the essential assumptions of multiple linear regression analysis. A normal distribution of residuals ensures that the estimated regression coefficients are unbiased and statistically reliable. A significance value greater than

0.05 in the Kolmogorov–Smirnov test indicates that the residual distribution does not significantly deviate from normality. Therefore, the results confirm that the regression model can be used for further hypothesis testing without violating the normality assumption.



Figure 1. Normal P–P Plot

Figure 1. illustrates the Normal P–P Plot of standardized residuals. The data points are distributed closely around the diagonal reference line and do not show substantial deviations from the expected pattern. This graphical evidence further supports the findings of the Kolmogorov–Smirnov test, confirming that the residuals are normally distributed. The consistency between the statistical test and graphical assessment strengthens the validity of the regression model. When residual points follow the diagonal line in a P–P Plot, the assumption of normality can be considered fulfilled (Hair et al., 2022). Consequently, the regression estimates generated in this study can be interpreted with greater confidence.

Table 4. Multicollinearity Test Results

Variable	Tolerance	VIF
Digital Shadowing	0.965	1.036
Organizational Culture	0.965	1.036

The multicollinearity test results presented in Table 4. indicate that both independent variables have tolerance values of 0.965 and Variance Inflation Factor (VIF) values of 1.036. These values are well within the accepted thresholds, indicating the absence of multicollinearity among the independent variables. Tolerance values above 0.10 and VIF values below 10 indicate that independent variables are not highly correlated with one another (Hair et al., 2022). The results therefore demonstrate that Digital Shadowing and Organizational Culture represent distinct constructs and contribute independently to explaining the variation in employee adaptation speed. This condition enhances the accuracy of coefficient estimation and strengthens the interpretability of the regression results.

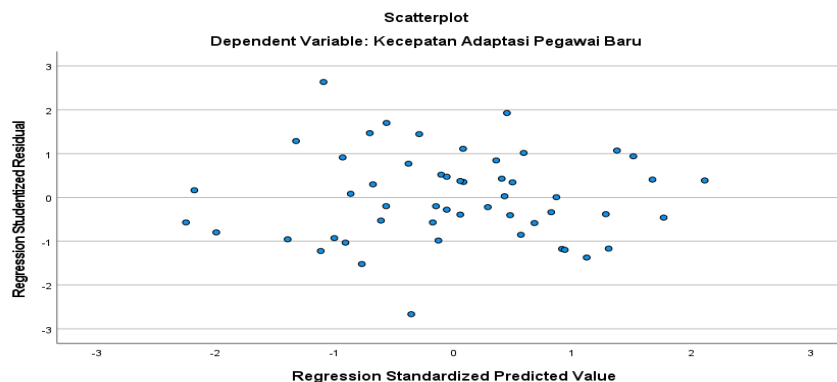


Figure 2. Heteroscedasticity Scatterplot

Figure 2. presents the scatterplot used to evaluate heteroscedasticity. The residual points appear randomly distributed around the zero line without forming any systematic pattern such as clustering, funnel shapes, or wave-like distributions. This pattern indicates that the variance of the residuals remains constant across different levels of the predicted values. The findings suggest that the regression model satisfies the homoscedasticity assumption. A random distribution of residuals in a scatterplot indicates the absence of heteroscedasticity problems (Ghozali, 2021). Therefore, the regression coefficients obtained in this study can be considered efficient and suitable for hypothesis testing.

Regression Analysis

Multiple linear regression analysis was conducted to examine the influence of digital shadowing and organizational culture on the speed of employee adaptation.

Table 5. Multiple Linear Regression Results

Variable	B	Std. Error	Beta
Constant	-1.107	3.132	—
Digital Shadowing	0.448	0.085	0.566
Organizational Culture	0.505	0.109	0.494

The regression results presented in Table 5. indicate that both Digital Shadowing and Organizational Culture have positive coefficients, suggesting that improvements in these variables contribute to faster employee adaptation. The coefficient for Digital Shadowing is 0.448, while Organizational Culture has a coefficient of 0.505. These results imply that Organizational Culture exerts a slightly stronger influence on adaptation speed compared to Digital Shadowing. The positive relationship between Digital Shadowing and adaptation speed supports the findings previous studies, who reported that technology-based observation and learning mechanisms enhance employee understanding of job responsibilities and accelerate workplace adjustment (Jeske & Olson, 2022). Similarly, the significant contribution of Organizational Culture aligns, which emphasizes that shared values and norms facilitate employee integration into organizational systems. The stronger coefficient observed for Organizational Culture suggests that although technology plays an important role, the social and cultural environment remains a fundamental determinant of successful adaptation within public-sector organizations.

Hypothesis Testing

Partial hypothesis testing using the t-test shows that both variables significantly influence adaptation speed.

Table 6. t-Test Results

Variable	t-value	Sig.
Digital Shadowing	5.298	0.001
Organizational Culture	4.622	0.001

The t-test results shown in Table 6 indicate that Digital Shadowing has a t-value of 5.298 with a significance level of 0.001, while Organizational Culture has a t-value of 4.622 with a significance level of 0.001. Since both significance values are below the 0.05 threshold, each independent variable has a statistically significant positive effect on employee adaptation speed. These findings confirm that technology-based learning mechanisms and supportive organizational environments are both important determinants of successful onboarding. The results are consistent with previous studies conducted by the previous studies, who found that virtual shadowing enhances learning effectiveness and accelerates employee adjustment

(Jeske & Olson, 2022). Likewise, demonstrated that organizational cultures characterized by collaboration and innovation facilitate faster adaptation among new employees (Park & Kim, 2020). Therefore, the present findings reinforce the argument that adaptation outcomes are influenced by both technological and cultural dimensions within organizations.

Table 7. F-Test Results

Model	F-value	Sig.
Regression	20.883	0.001

Table 7 presents the results of the simultaneous F-test. The calculated F-value of 20.883 with a significance level of 0.001 indicates that Digital Shadowing and Organizational Culture jointly influence employee adaptation speed. Since the significance value is substantially below 0.05, the regression model is statistically significant and capable of explaining variation in the dependent variable. This result supports the perspective of contemporary human resource management theory, which argues that employee adaptation is a multidimensional process influenced by both technological and organizational factors. Emphasized that successful adaptation in the digital era requires the integration of technological support systems and organizational environments that encourage learning and collaboration (Rohida et al., 2025). Therefore, the significant F-test result demonstrates that Digital Shadowing and Organizational Culture should be viewed as complementary rather than independent determinants of adaptation success:

Table 8. Coefficient of Determination

R	R Square	Adjusted R Square
0.678	0.460	0.438

The coefficient of determination results presented in Table 4.7 show an R Square value of 0.460 and an Adjusted R Square value of 0.438. This indicates that approximately 46% of the variation in employee adaptation speed can be explained by Digital Shadowing and Organizational Culture, while the remaining 54% is influenced by other variables not included in the model. The moderate explanatory power of the model suggests that employee adaptation is a complex phenomenon affected by multiple factors. Previous studies have identified additional determinants such as leadership support, employee motivation, communication effectiveness, work engagement, organizational commitment, and technological readiness (Petrilli et al., 2022). Therefore, future research may consider incorporating these variables to improve the explanatory capacity of adaptation models in public-sector organizations.

Summary of Findings

Overall, the findings demonstrate that both Digital Shadowing and Organizational Culture significantly influence the speed of adaptation among newly recruited employees at the Soppeng Regent's Office. Organizational Culture appears to have a more dominant influence, indicating that the values, norms, and working environment established within the organization play a crucial role in facilitating employee adjustment. Nevertheless, Digital Shadowing also contributes substantially by providing employees with opportunities to learn work processes more efficiently through technology-based observation and interaction. These findings support the theoretical perspective that employee adaptation is shaped by both social and technological factors. The results of this study are consistent with the organizational culture theory (Schein, 2017).

As well as the empirical findings (Jeske & Olson, 2022; Park & Kim, 2020). Consequently, organizations seeking to accelerate employee adaptation should not rely solely on digital technologies but should also foster organizational cultures that encourage learning, collaboration, and openness to change. Such integration is particularly important in public-sector institutions undergoing digital transformation and bureaucratic reform.

Discussion

The Effect of Digital Shadowing on Employee Adaptation Speed

The findings of this study demonstrate that digital shadowing has a positive and statistically significant effect on the speed of adaptation among new employees. This is evidenced by the significance value of 0.001 and a high t-statistic, indicating strong empirical support for the first hypothesis. The positive regression coefficient further confirms that increased implementation of digital shadowing is associated with faster adaptation processes. This result highlights the growing importance of technology-based learning in organizational settings, particularly within the context of digital transformation. Digital shadowing enables new employees to observe real-time workflows, understand job responsibilities, and learn decision-making processes through virtual environments.

Unlike traditional onboarding methods, which often rely on static training materials or face-to-face instruction, digital shadowing provides dynamic, context-rich learning experiences. From a theoretical perspective, this finding aligns with experiential learning theory, which suggests that individuals learn more effectively through observation and direct engagement with real-world activities. By allowing employees to “shadow” experienced colleagues digitally, organizations facilitate faster knowledge acquisition and reduce uncertainty during the early stages of employment.

This is particularly relevant in public sector organizations, where procedures can be complex and highly structured. Moreover, this result is consistent with previous studies indicating that virtual job shadowing improves task clarity, reduces ambiguity, and accelerates orientation processes. In the context of the Soppeng Regent's Office, digital shadowing appears to function as an effective mechanism for bridging the gap between formal training and practical job execution. Therefore, the implementation of digital shadowing can be considered a strategic tool for enhancing onboarding efficiency in government institutions.

The present finding also extends the work of the previous studies, who emphasized the effectiveness of virtual job shadowing in enhancing employee learning and task understanding (Jeske & Olson, 2022). Similar to their findings, the results of this study indicate that observation-based digital learning contributes significantly to reducing adaptation time among newly recruited employees. However, this study provides additional evidence from a public-sector setting in Indonesia, where bureaucratic procedures and formal administrative structures differ considerably from the organizational environments examined in previous studies.

This suggests that the benefits of digital shadowing are not limited to private-sector organizations but can also be successfully applied within government institutions. Furthermore, the findings support experiential learning theory proposed by Kolb, which argues that learning occurs through observation, reflection, and practical experience. The significant influence of digital shadowing found in this study demonstrates that technology-mediated

observation can serve as an effective substitute for conventional face-to-face mentoring during the onboarding process.

The Role of Organizational Culture in Accelerating Adaptation

In addition to digital shadowing, organizational culture is also found to have a positive and significant effect on employee adaptation speed. The statistical results confirm that a more supportive and conducive organizational culture leads to faster adjustment among new employees. This finding reinforces the second hypothesis and highlights the critical role of cultural factors in shaping employee behavior and performance. Organizational culture serves as a framework that guides how employees interact, perform tasks, and interpret their roles within the organization. A culture characterized by openness, collaboration, and adaptability creates an environment where new employees feel more comfortable engaging with their work and colleagues.

In contrast, a rigid and bureaucratic culture may slow down adaptation by limiting communication and discouraging initiative. This finding is strongly supported by organizational culture theory, particularly Schein's model, which emphasizes that shared values and norms influence how individuals behave within an organization. In public sector institutions, where hierarchical structures are often dominant, culture becomes an essential factor in determining whether new employees can integrate smoothly. The results of this study suggest that when organizational culture supports innovation and embraces digital transformation, it enhances the effectiveness of onboarding processes. New employees are more likely to internalize organizational values, understand expectations, and build social connections when the cultural environment is supportive. Furthermore, the finding is consistent with prior empirical studies that highlight the role of culture in facilitating employee engagement and organizational learning. In the case of the Soppeng Regent's Office, the presence of a relatively adaptive culture appears to complement the implementation of digital shadowing, thereby accelerating the overall adaptation process.

Ding is also consistent with the studies previous, which found that organizational cultures characterized by collaboration, innovation, and open communication positively influence employee adjustment and workplace engagement (Park & Kim, 2020; Mulyati & Setyawati, 2024). The results indicate that organizational culture functions not only as a set of shared values but also as a social mechanism that facilitates knowledge transfer and interpersonal interaction. From a theoretical perspective, these findings strengthen argument that organizational culture influences how members perceive, think, and respond to workplace challenges (Schein's, 2017). In the context of the Soppeng Regent's Office, a supportive culture appears to reduce uncertainty among new employees and encourages them to participate more actively in organizational activities. Therefore, the study contributes to the growing body of literature suggesting that organizational culture remains a critical determinant of employee adaptation, even in environments increasingly shaped by digital technologies.

The Combined Influence of Digital Shadowing and Organizational Culture

The results of the simultaneous test (F-test) indicate that digital shadowing and organizational culture jointly have a significant effect on the speed of employee adaptation. The F-value of 20.883 with a significance level of 0.001 confirms that the regression model is statistically valid and that both variables collectively explain variations in the dependent variable. This finding suggests that employee adaptation is not influenced by a single factor but rather by the interaction between technological and social elements within the

organization. Digital shadowing primarily addresses the technical and procedural aspects of learning, while organizational culture shapes the behavioral and social dimensions of adaptation.

Together, these factors create a more holistic onboarding experience. The integration of these two variables reflects the concept of socio-technical systems, where organizational effectiveness depends on the alignment between technological tools and social structures. In this study, digital shadowing provides the necessary infrastructure for learning, while organizational culture ensures that this infrastructure is effectively utilized. Without a supportive culture, the benefits of digital shadowing may not be fully realized. Conversely, a strong culture without adequate technological support may limit the speed and efficiency of learning. Therefore, the combined influence of digital shadowing and organizational culture highlights the importance of adopting an integrated approach to employee onboarding. Organizations should not treat technology and culture as separate elements but rather as complementary components that work together to enhance adaptation outcomes.

The findings further support the socio-technical systems theory, which argues that organizational effectiveness is achieved when technological systems and social structures are aligned. Previous studies have generally examined digital onboarding and organizational culture separately; however, the results of this research demonstrate that the interaction between these factors produces a stronger influence on employee adaptation. This finding addresses a gap identified in previous literature, where limited attention has been given to understanding how technological learning mechanisms and organizational culture operate simultaneously within public-sector organizations. Consequently, the study contributes a more integrated perspective on employee onboarding by showing that successful adaptation requires both effective technological support and a conducive organizational environment. Such evidence is particularly valuable for government institutions seeking to accelerate digital transformation while maintaining organizational cohesion and employee engagement.

Dominant Factors and Model Explanatory Power

An important finding of this study is that organizational culture has a more dominant influence on adaptation speed compared to digital shadowing, as indicated by its higher regression coefficient. This suggests that while technology plays a crucial role in facilitating learning, the organizational environment ultimately determines how effectively employees can adapt. This result underscores the idea that human and social factors remain central to organizational success, even in the era of digital transformation. Technology can accelerate processes, but it cannot replace the need for a supportive and inclusive work environment. In the context of public sector organizations, where formal structures and procedures are deeply embedded, cultural transformation becomes a key driver of change. Additionally, the coefficient of determination (R^2) value of 0.460 indicates that 46% of the variation in adaptation speed is explained by digital shadowing and organizational culture.

This level of explanatory power can be considered moderate, suggesting that other factors also play a role in influencing employee adaptation. These may include individual characteristics such as motivation, prior experience, and learning ability, as well as organizational factors such as leadership style, training quality, and workload. The presence of these additional factors highlights the complexity of the adaptation process and suggests that future research should explore a broader range of variables. Nevertheless, the findings of this study provide strong evidence that digital shadowing and organizational culture are key determinants of adaptation speed in public sector organizations.

The finding that organizational culture exerts a stronger influence than digital shadowing suggests that technological interventions alone may not be sufficient to ensure successful employee adaptation. This observation is in line with the conclusions of Rohida et al. (2025), who argued that organizational readiness for digital transformation depends heavily on cultural support and employee acceptance. Although digital tools can facilitate knowledge acquisition, employees are more likely to adapt successfully when they operate within environments characterized by trust, collaboration, and supportive leadership. Moreover, the R^2 value of 0.460 indicates that more than half of the variation in adaptation speed remains unexplained by the current model. This finding is consistent with previous human resource management studies, which suggest that adaptation is influenced by a combination of individual, organizational, and environmental factors. Therefore, future investigations should incorporate additional variables to obtain a more comprehensive understanding of adaptation processes in public-sector organizations.

Implications for Public Sector Organizations

The findings of this study have important practical implications for human resource management, particularly in government institutions undergoing digital transformation. First, organizations should invest in the development and implementation of digital shadowing systems as part of their onboarding strategies. This includes the use of digital platforms, virtual mentoring, and recorded workflows to facilitate experiential learning. Second, efforts to strengthen organizational culture should be prioritized.

Leaders play a critical role in shaping culture by promoting values such as collaboration, openness, and adaptability. Training programs, internal communication, and policy reforms can also contribute to creating a more supportive work environment. Finally, organizations should adopt a holistic approach to employee adaptation by integrating technological and cultural strategies. This approach ensures that new employees not only acquire the necessary technical skills but also develop a strong sense of belonging and engagement within the organization. In conclusion, this study demonstrates that the combination of digital shadowing and a supportive organizational culture represents an effective strategy for accelerating the adaptation of new employees. These findings contribute to the literature on digital transformation and human resource management, particularly within the context of public sector organizations in developing countries.

From an academic perspective, the findings enrich the literature on digital onboarding and organizational behavior by providing empirical evidence from a local government institution in Indonesia. Most previous studies have focused on private-sector organizations or institutions in developed countries; therefore, this study expands the contextual understanding of employee adaptation within developing-country bureaucracies. The results also demonstrate that digital transformation initiatives should be accompanied by efforts to cultivate supportive organizational cultures. Practically, the findings suggest that policymakers and human resource managers should design onboarding systems that integrate digital learning technologies with organizational development programs. Such integration can improve employee readiness, strengthen organizational commitment, and ultimately enhance public service performance. Thus, this study contributes both theoretically and practically to the ongoing discourse on human resource management in the digital era.

Conclusion

This study aimed to examine the influence of digital shadowing and organizational culture on the speed of adaptation among new employees at the Soppeng Regent's Office. The findings confirm that both digital shadowing and organizational culture have a positive and statistically significant effect on employee adaptation speed. The t-test results showed that digital shadowing significantly influenced adaptation speed ($t = 5.298$; $p = 0.001$), while organizational culture also had a significant positive effect ($t = 4.622$; $p = 0.001$). Simultaneously, both variables significantly affected employee adaptation, as indicated by an F-value of 20.883 with a significance level of 0.001. Furthermore, the coefficient of determination ($R^2 = 0.460$) indicates that 46% of the variation in adaptation speed is explained by digital shadowing and organizational culture, while the remaining 54% is influenced by other factors outside the model.

These results confirm the research objective that the integration of technology-based learning and a supportive organizational culture plays an important role in accelerating employee adaptation within public-sector institutions. The findings imply that organizations undergoing digital transformation should not focus solely on technological innovation but should also strengthen organizational culture to create a more effective onboarding environment. Despite its contributions, this study has several limitations. The research was conducted in a single local government institution, used a quantitative approach, and examined only two independent variables. Therefore, future studies are recommended to include additional factors such as leadership style, employee motivation, technological readiness, job satisfaction, and organizational commitment. Future research may also employ mixed-method approaches and broader samples across different institutions to improve the generalizability and comprehensiveness of the findings.

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