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THE INFLUENCE OF DIGITALIZATION AND COMPETENCE ON EMPLOYEE PERFORMANCE WITH TRANSFORMATIONAL LEADERSHIP AS A MEDIATING VARIABLE AT THE NGANTANG DISTRICT OFFICE

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Abstract

This study aims to analyze the impact of digitalization and competence on employee performance, with transformational leadership as a mediating variable at the Ngantang District Office. Utilizing a quantitative research approach, data were collected through surveys from selected respondents. The study employs regression and path analysis to examine the relationships between variables. The findings indicate that digitalization and competence have a significant positive effect on employee performance, as they enhance efficiency, decision-making speed, and service quality. However, the successful implementation of digitalization depends on employees' competency levels and the support of transformational leadership. Transformational leaders play a crucial role in motivating employees, fostering adaptability, and reducing resistance to digital transformation. The study highlights that transformational leadership partially mediates the relationship between digitalization, competence, and performance, meaning that leadership effectiveness can enhance the benefits of digital initiatives. The results support the Job Demands-Resources theory, emphasizing that a combination of technological advancements and strong leadership positively impacts employee performance. The findings provide practical implications for improving digital adoption strategies, developing competency-based training programs, and enhancing leadership approaches to optimize employee performance in public administration.

Keywords: *Digitalization, Competence, Transformational Leadership, Employee Performance, Public Administration*

INTRODUCTION

The rapid advancement of digital technology has transformed various aspects of public administration, including governance at the district level. Digitalization has become an essential strategy for improving efficiency, transparency, and service

delivery in government institutions (Bharadwaj et al., 2013; Heeks, 2018). However, successful digital transformation is not solely dependent on technological adoption; it also requires employees with adequate digital competencies. In rural areas such as Ngantang District, where access to technology and digital literacy is still developing, the effectiveness of digitalization efforts largely depends on employees' ability to integrate and utilize these technologies in their daily tasks (Vial, 2019; Kane et al., 2015).

Employee competence plays a crucial role in determining the success of digital transformation. Competency includes not only technical skills but also adaptability, problem-solving abilities, and decision-making skills (Spencer & Spencer, 1993; Mulder, 2017). In government offices, especially in remote areas, a lack of digital competence among employees can hinder the full utilization of available digital platforms. Prior studies suggest that training and continuous development are necessary to bridge this gap, ensuring that employees can effectively operate digital systems to enhance administrative processes and public service delivery (Gonçalves et al., 2021; Casalino, 2020).

Transformational leadership has been identified as a key factor in facilitating digital transformation and improving employee performance. Leaders with a transformational approach inspire and motivate employees to embrace change, adopt new technologies, and enhance their skills (Bass & Avolio, 1994; Yukl, 2010). In the context of government offices, such leadership helps in overcoming resistance to digitalization, fostering an innovative work culture, and ensuring smooth transitions in technological adaptation. The presence of transformational leadership is especially critical in rural districts where technological transitions often face resistance due to limited digital infrastructure and employee apprehension (Northouse, 2016; Podsakoff et al., 1990).

The integration of digitalization, competence, and transformational leadership creates a dynamic framework for improving employee performance. Digital technology, when combined with competent employees and visionary leadership, can optimize government operations, improve decision-making, and provide better public services (Traunmuller, 2017; Sharma, 2014). However, empirical studies specifically examining these relationships in local government settings, such as the Ngantang District Office, remain limited. Understanding these interactions is essential for policymakers to design effective digital adoption strategies, training programs, and leadership development initiatives tailored to public administration needs (Monteiro & Dias, 2021; Polimaki, 2020).

This study aims to examine the influence of digitalization and employee competence on performance, with transformational leadership as a mediating variable. The research provides insights into how government offices in rural areas can enhance their operational efficiency through technology adoption and leadership empowerment (Asbari et al., 2020; Judge & Piccolo, 2004). By exploring these factors, the study

contributes to both academic literature and practical policymaking, offering recommendations for improving employee productivity, fostering digital adaptability, and strengthening leadership capabilities in the public sector.

LITERATURE REVIEW

Digitalization

Digitalization refers to the integration of digital technologies into various organizational processes to improve efficiency, productivity, and service quality (Bharadwaj et al., 2013). In public administration, digitalization enhances transparency, accountability, and accessibility of services, allowing governments to streamline operations and provide better services to citizens (Heeks, 2018). However, successful digital transformation requires proper infrastructure, employee readiness, and leadership support (Vial, 2019). In rural government offices like Ngantang District, digitalization faces challenges such as limited internet access, low digital literacy, and resistance to change among employees. Prior research suggests that digitalization significantly impacts employee performance by reducing administrative burdens and improving decision-making processes (Kane et al., 2015).

Competence

Employee competence refers to the combination of knowledge, skills, and attitudes required to perform job tasks effectively (Spencer & Spencer, 1993). In the digital era, digital competence has become a crucial factor in workplace productivity, particularly in government institutions where digital tools are increasingly adopted for administrative functions (Gonçalves et al., 2021). Competency development through training and continuous learning is essential for employees to effectively utilize digital systems and enhance service delivery (Mulder, 2017). Studies indicate that employees with higher competency levels demonstrate greater efficiency, problem-solving capabilities, and adaptability to technological changes (Boyatzis, 2008). In local government settings, inadequate digital competence can hinder the effectiveness of digital initiatives, highlighting the need for targeted training programs.

Transformational Leadership

Transformational leadership is a leadership style that inspires and motivates employees to exceed expectations, embrace innovation, and achieve organizational goals (Bass & Avolio, 1994). This leadership style is characterized by four key dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Avolio & Bass, 2004). In the context of digital transformation, transformational leaders play a critical role in reducing employee resistance, fostering a culture of continuous learning, and encouraging digital adoption (Judge & Piccolo, 2004). Prior studies have shown that transformational leadership

positively influences employee engagement, adaptability, and overall performance (Yukl, 2010). In rural government offices, where digital transformation is often met with resistance, strong transformational leadership can facilitate smoother transitions and ensure the effective implementation of digital tools.

Employee Performance

Employee performance is a measure of how well an individual fulfills job responsibilities and contributes to organizational goals (Robbins & Judge, 2017). Performance is influenced by multiple factors, including digitalization, competence, and leadership style (Podsakoff et al., 1996). In government institutions, high employee performance translates to efficient service delivery, better decision-making, and improved public satisfaction (Mathis & Jackson, 2019). Studies suggest that digitalization enhances performance by streamlining workflows and reducing manual processes (Bharadwaj et al., 2013), while competence ensures employees can effectively utilize digital tools (Spencer & Spencer, 1993). Additionally, transformational leadership has been linked to higher employee motivation, engagement, and productivity (Judge & Piccolo, 2004).

The Mediating Role of Transformational Leadership

Transformational leadership acts as a bridge between digitalization, competence, and employee performance. Leaders who adopt a transformational style create an environment where employees feel encouraged to develop their digital competencies and embrace technological advancements (Bass, 1985). Research indicates that transformational leadership enhances the impact of digitalization on performance by fostering innovation and reducing resistance to change (Vial, 2019). Similarly, transformational leaders strengthen the relationship between competence and performance by providing guidance, mentorship, and skill development opportunities (Avolio & Bass, 2004). In rural government offices like Ngantang District, where digital transformation faces several barriers, transformational leadership plays a crucial role in ensuring employees are motivated and prepared to adapt to new digital systems.

RESEARCH METHOD

Research Design

This study employs a quantitative research design to analyze the relationship between digitalization, competence, transformational leadership, and employee performance at the Ngantang District Office. The research uses an explanatory approach, which aims to explain causal relationships between variables through hypothesis testing. Data is collected using a structured survey and analyzed through regression analysis and path analysis to determine the direct and indirect effects of digitalization and competence on employee performance, with transformational leadership as a mediating variable.

This design ensures that the findings are statistically valid and can provide empirical evidence to support strategic improvements in digital adoption and leadership development in public administration.

Population and Sample

The population of this study consists of all employees working at the Ngantang District Office, including administrative staff and managerial personnel involved in public service operations. Given the relatively small population, purposive sampling is used to select respondents who have direct experience with digitalization initiatives and leadership influence in their work environment. The sample size is determined based on statistical adequacy for regression analysis, ensuring sufficient representation of different employee roles and levels within the organization

Variables and Indicators

The research design includes three types of variables:

1. Independent Variables:
    - Digitalization (X1)
    - Competence (X2)
2. Mediating Variable:
    - Transformational Leadership (Y1)
3. Dependent Variable:
    - Employee Performance (Y2)

Data Collection Techniques

Primary data is collected through questionnaires, which are distributed to employees at the Ngantang District Office. The questionnaire consists of Likert-scale questions measuring perceptions of digitalization, competence, transformational leadership, and employee performance. To enhance reliability, the questionnaire is pre-tested before final distribution. Secondary data, such as government reports and digital transformation policies, are also reviewed to complement the analysis. Data is collected both physically and electronically, ensuring accessibility for all respondents.

RESULT AND DISCUSSION

Responden Profile

This study involved **197 respondents**, who are employees of Village Offices in Ngantang District, Malang Regency. The respondent profile provides in the tabel 1. below:

Table of Respondent Profile

Category	Sub-Category	Number of People	Percentage (%)
Age	Junior High School (SMP)	5	3%
	Senior High School (SMA/SMK)	71	36%
	Bachelor's Degree (S1)	117	59%
Gender	Master's Degree (S2)	4	2%
	Male	129	65%
	Female	68	35%
Years of Service	< 1 year	9	4.6%
	1 - 5 years	81	41.1%
	6 - 10 years	57	28.9%
	> 10 years	50	25.4%

From the table 1 above, in terms of education level, the majority of respondents hold a bachelor's degree (S1) (59%), followed by senior high school graduates (36%), junior high school graduates (3%), and master's degree holders (2%). Regarding gender distribution, the majority of respondents are male (65%), while female respondents make up 35%. In terms of years of service, most respondents have been working for 1-5 years (41.1%), followed by those with 6-10 years of experience (28.9%), and employees with more than 10 years of experience (25.4%). Respondents with less than 1 year of service are only 4.6%, indicating that most employees have sufficient experience in their roles.

Overall, the data suggests that the respondents have relatively high levels of education and diverse work experience. The majority fall within the 1-10 year service range, which may indicate workforce stability in village government administration. The dominance of male employees in the sample also reflects a pattern where male workers may be more prevalent in the village government workplace.

Instrument Test Result

The validity test was conducted to measure whether each questionnaire item accurately represents the variable it intends to assess. Based on the table above, all items have r calculated values greater than the r table value (0.138), indicating that they are statistically valid. The reliability test was conducted using **Cronbach's Alpha** to measure the internal consistency of each variable. A Cronbach's Alpha value **above 0.60** indicates that a variable is **reliable** and produces consistent results. All the data provide in the Table 2. below:

Table of Validity and Reliability Test Results

Variable	Item	r Calculated	r Table	Validity	Cronbach's Alpha	Reliability
Digitalization (X1)	X1.1.1	0.712**	>0.138	Valid	0.775	Reliable
	X1.1.2	0.783**	>0.138	Valid		
	X1.1.3	0.562**	>0.138	Valid		
	X1.2.1	0.856**	>0.138	Valid		
	X1.2.2	0.784**	>0.138	Valid		
	X1.2.3	0.778**	>0.138	Valid		
Competency (X2)	X2.1.1	0.798**	>0.138	Valid	0.781	Reliable
	X2.1.2	0.795**	>0.138	Valid		
	X2.1.3	0.814**	>0.138	Valid		
Transformational Leadership (Y1)	Y1.1.1	0.763**	>0.138	Valid	0.777	Reliable
	Y1.1.2	0.738**	>0.138	Valid		
	Y1.1.3	0.834**	>0.138	Valid		
Employee Performance (Y2)	Y2.1.1	0.738**	>0.138	Valid	0.782	Reliable
	Y2.1.2	0.810**	>0.138	Valid		
	Y2.1.3	0.792**	>0.138	Valid		

From the table above, it's found that the Digitalization (X1) variable has item correlation values ranging from 0.562 to 0.856, all of which exceed the threshold of 0.138. This confirms that the questionnaire items used to measure digitalization are effective in representing the construct. The Competency (X2) variable has validity values between 0.795 and 0.814, signifying a strong relationship between the indicators and the measured concept. The Transformational Leadership (Y1) variable shows correlation values between 0.738 and 0.834, meaning that the measurement items effectively assess transformational leadership. The Employee Performance (Y2) variable exhibits values from 0.738 to 0.810, proving that all indicators appropriately capture employee

performance aspects. Since all items are valid, it implies that the questionnaire can be used confidently to gather data for further analysis.

In other hand, reliability test results show the Digitalization (X1) variable has a Cronbach's Alpha of 0.775, indicating high internal consistency. The Competency (X2) variable has a Cronbach's Alpha of 0.781, which shows that responses to competency-related items are reliable. The Transformational Leadership (Y1) variable has a Cronbach's Alpha of 0.777, meaning that its measurement items consistently assess the same concept. The Employee Performance (Y2) variable has a Cronbach's Alpha of 0.782, confirming that the questionnaire items related to employee performance are stable and dependable. Since all variables have Cronbach's Alpha values above 0.70, they are highly reliable, meaning the questionnaire provides consistent responses over repeated measurements.

Structure and Hypothesis Result

Table of Structural Analysis Results

Variable Relationship	Direct Effect	p-value	Indirect Effect	Total Effect	Significance
Digitalization (X1) → Transformational Leadership (Y1)	0.288	0.000	-	0.288	Significant
Competency (X2) → Transformational Leadership (Y1)	0.508	0.000	-	0.508	Significant
Digitalization (X1) → Employee Performance (Y2)	0.174	0.001	0.157	0.445	Significant
Competency (X2) → Employee Performance (Y2)	0.190	0.000	0.277	0.785	Significant
Transformational Leadership (Y1) → Employee Performance (Y2)	0.545	0.000	-	0.545	Significant

The data form the tabel above show Total Determination Coefficient (Rm^2) = 0.723, this means that 72.3% of the variation in employee performance can be explained by digitalization, competency, and transformational leadership, while 27.7% is influenced by other factors outside the model. The structural analysis results indicate that digitalization and competency significantly impact employee performance, both directly and through transformational leadership as a mediating variable.

1. Direct Influence Analysis:
    - Digitalization ($\beta = 0.174$, $p = 0.001$) and competency ($\beta = 0.190$, $p = 0.000$) directly influence employee performance. This suggests that

organizations that enhance digitalization and competency can experience an improvement in employee performance.
    - Transformational leadership (β = 0.545, p = 0.000) has the strongest direct effect on employee performance, indicating that leadership style plays a critical role in improving workforce productivity.
2. Indirect Influence Analysis (Mediating Role of Transformational Leadership):
    - Digitalization impacts employee performance through transformational leadership, with an indirect effect of 0.157 and a total effect of 0.445. This suggests that digitalization alone may not be sufficient to enhance performance unless it is accompanied by strong leadership.
    - Competency has an even stronger mediating effect, with an indirect effect of 0.277 and a total effect of 0.785, showing that competency development becomes more effective when transformational leadership is involved.
3. Overall Model Strength ($Rm^2 = 0.723$):
    - The total determination coefficient of 0.723 suggests that the model is robust and accounts for a significant proportion of employee performance variation.
    - However, 27.7% of the variation is unexplained, indicating that future research should explore additional factors such as work environment, motivation, or organizational culture.

The study confirms that both digitalization and competency significantly enhance employee performance, especially when transformational leadership acts as a mediator. Organizations should prioritize leadership development programs, technological adaptation, and continuous competency enhancement to maximize employee performance

Analysis/Discussion

H1: The Effect of Digitalization on Employee Performance

The analysis indicates that digitalization (X1) has a significant positive effect on employee performance (Y2). The regression coefficient for digitalization is 0.174, with a p-value of 0.001, which is below the 0.05 significance level. This finding confirms that increased digitalization leads to enhanced employee performance. This result is consistent with the study by Kane et al. (2015), which found that digital transformation is a key driver of organizational performance and efficiency.

H2: The Effect of Digital Competence on Employee Performance

The study also found that digital competence (X2) significantly impacts employee performance. The regression coefficient is 0.190, with a p-value of 0.000, showing strong statistical significance. Employees with higher digital competencies tend to

perform better due to their ability to utilize digital tools effectively, adapt to technological changes, and optimize their workflow. This aligns with the findings of Dzafic & Tabu (2020), who concluded that digital competence positively influences employee performance in public administration, leading to increased productivity and efficiency.

H3: The Effect of Transformational Leadership on Employee Performance

Transformational leadership (Y1) has the strongest effect on employee performance, with a regression coefficient of 0.545 and a p-value of 0.000. This suggests that leadership plays a crucial role in motivating, guiding, and supporting employees, ultimately leading to better performance. This finding is in line with the study by Jiang & Yu (2020), which demonstrated that transformational leadership significantly enhances employee engagement, motivation, and overall job performance

H4: The Mediating Role of Transformational Leadership

The study further examined the mediating role of transformational leadership between digitalization, digital competence, and employee performance. Path analysis results confirm that transformational leadership significantly mediates the relationship between digitalization, digital competence, and employee performance. This suggests that while digitalization and competence directly improve performance, their impact is amplified when transformational leadership is present. Employees are more likely to leverage digital tools effectively when guided by supportive and visionary leaders. This supports the study by Lee et al. (2021), which found that transformational leadership plays a crucial role in mediating the effects of digitalization on employee productivity.

CONCLUSION

This study confirms that digitalization, digital competence, and transformational leadership significantly influence employee performance. Digitalization improves efficiency, digital competence enhances productivity, and transformational leadership provides motivation and direction, amplifying the positive effects of digital adoption. The mediating role of transformational leadership highlights the need for strong leadership to ensure the successful implementation of digital transformation and competency development. These findings reinforce previous research and provide valuable insights for improving human resource performance in the digital era.

Organizations should prioritize digitalization and employee competency development while fostering transformational leadership to maximize performance. Training programs should be designed to enhance digital skills, while leadership development initiatives should focus on creating visionary and supportive leaders. Additionally, organizations must ensure that digital tools are integrated seamlessly into

daily operations, supported by a culture of continuous learning and adaptation, to sustain long-term productivity and efficiency improvements.

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