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Digital Skills, E-Government, and Organizational Performance: The Moderating Role of Trust in Government

Raezal[1*], Goso[2], Ilham Tahier Topase[3], Nugraha Akbar Nurrochmat[4]
[123]Universitas Muhammadiyah Palopo, Indonesia
[4]University of Life Sciences, Warsaw, Poland

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**Correspondence Address:*
raezalreza23@gmail.com

Abstract:
This study examines the relationships between digital skills, e-government, and organizational performance, while investigating the moderating role of trust in government in health education institutions. The study used a quantitative, cross-sectional survey design and involved 150 employees selected through purposive sampling. The study collected data using a structured questionnaire and analyzed them through Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess both direct relationships and moderating effects. The findings show that digital skills and e-government are positively and significantly related to organizational performance, indicating that employees' digital competencies and the implementation of digital government systems are important organizational resources. However, trust in government does not significantly moderate either the relationship between digital skills and organizational performance or the relationship between e-government and organizational performance. These results suggest that the performance benefits associated with digital capabilities may not necessarily depend on employees' trust in government. The study contributes to digital governance literature by providing empirical evidence on the boundary conditions of digital capability–performance relationships. Practically, health education institutions should prioritize strengthening employees' digital competencies and improving e-government implementation, while addressing institutional trust as a complementary governance concern rather than assuming it amplifies the performance effects of digital transformation.

INTRODUCTION

Digital transformation has become central to public-sector reform (Mishra et al., 2025; Valaskova et al., 2025; Maulia et al., 2026), yet expanding digital government does not automatically improve organizational performance. In Indonesia, the 2024 E-Government Development Index (EGDI) reached 0.6564, ranking the country 64th globally, while the national Electronic-Based Government System (SPBE) index reached 3.12 out of five. However, only 48 of 615 evaluated central and local government institutions achieved the highest "satisfactory" category (United Nations, 2024; Ministry of Administrative and Bureaucratic Reform, 2025). This gap indicates that technological progress can coexist with uneven institutional outcomes. Digital systems create organizational value only when institutions and employees can deploy them effectively

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(Liu et a., 2025; Lestari & Prianthara, 2026). Therefore, examining how digital skills and e-government relate to organizational performance, and whether trust in government shapes relationships, is important for effectiveness and benefits (Elmatsani et al., 2024; Tokovska et al., 2023).

This study draws on the Resource-Based View (RBV), which explains performance through the deployment of valuable resources and capabilities. Digital skills represent an internal human capability that enables employees to access and apply digital information, operate platforms, solve work-related problems, and adapt to technological change (Stofkova et al., 2022; Chohan & Hu, 2022; Saleh et al., 2025). E-government is conceptualized as an institutional digital capability that supports information accessibility, administrative integration, coordination, transparency, and accountability (Gu et al., 2023; Ibrahimy et al., 2023). Organizational performance represents the outcome of deploying these human and institutional capabilities. Trust in government is positioned as a moderator, reflecting confidence in public institutions' competence, transparency, reliability, and information protection (Alsarraf et al., 2023; Pandey, 2023). This framework tests both direct capability–performance relationships and the conditional role of institutional trust.

Health education institutions face challenges in translating digital transformation into organizational performance. Their activities combine educational administration, health-related professional development, information management, and technology-intensive services, requiring employees to use digital systems competently and consistently. Nevertheless, health-related organizations and education systems continue to experience gaps in digital competencies and training despite expanding technology use (Abou Hashish & Alnajjar, 2024; Navarro-Martínez et al., 2023). Employees may lack the skills to integrate digital tools into routine tasks, while fragmented systems and institutional constraints can limit e-government benefits. Moreover, trust in government may influence how employees perceive institutional digital initiatives, yet its role in shaping the performance value of digital capabilities remains uncertain. These challenges make it necessary to examine human capabilities, institutional digital systems, and trust together within health education organizations.

Prior research establishes the relevance of digital skills for effective participation in digital-government environments. Digital competencies support employees' readiness to adopt and use government systems (Jeilani et al., 2025; Harlina & Qamari, 2026), reduce barriers associated with digital inequality (Rosenberg, 2024), and complement managerial digital readiness and leadership in transformation processes (Aldhi et al., 2026). These findings support the view that employee capabilities help convert technological resources into productive activities. In parallel, e-government has been understood as a strategic capability for service delivery, administrative efficiency, transparency, and public-value creation (Elayah, 2025; Yang, 2026; Espinosa & Pino, 2025; Tiika et al., 2024). However, prior studies often address digital skills and e-government in separate streams or focus on technology adoption rather than their combined relationships with organizational performance. Their joint contribution to organizational performance therefore requires further examination.

Research on trust in government has mainly considered its association with citizens' acceptance, satisfaction, and continued use of digital-government services (Luo et al., 2024; Mazhar et al., 2025). Such studies establish trust as relevant to digital governance but provide less evidence at the organizational level. In particular, trust has rarely been examined as a boundary condition that changes the relationships between

employees' digital skills, e-government implementation, and organizational performance. This omission is important because trust may shape whether institutional digital initiatives are perceived as competent, dependable, and secure (Alsarraf et al., 2023; Pandey, 2023). Furthermore, the literature has paid limited attention to health education institutions, where educational and health-related functions create distinctive digital demands. Consequently, the literature leaves unresolved whether trust strengthens the organizational value of digital capabilities in this setting.

This study's novelty lies in testing trust in government as a moderator of capability–performance relationships, rather than assuming that trust necessarily improves digital transformation outcomes across public organizations undergoing technology-enabled administrative and service transformation. It integrates employee-level digital skills and institution-level e-government in one model and examines whether their associations with organizational performance vary with employees' trust in government. This extends the Resource-Based View by considering institutional trust as a boundary condition on human and digital resources. The health education context provides an empirical setting for testing this proposition, and the contribution lies in clarifying whether trust strengthens, weakens, or does not significantly alter these relationships. This matters because digital capability investments may generate organizational value even when trust does not exert a detectable moderating influence.

Accordingly, this study examines the relationships between digital skills and e-government and organizational performance and tests whether trust in government moderates these relationships in health education institutions. It asks whether digital skills and e-government are associated with organizational performance and whether trust changes these associations. The model expects positive relationships between digital skills and performance and between e-government and performance, because employee competencies and institutional digital systems can support effective processes. It tests whether trust in government strengthens these relationships through confidence in institutional competence and reliability. The two moderation paths are Digital Skills × Trust in Government → Organizational Performance and E-Government × Trust in Government → Organizational Performance. Testing these paths provides evidence on trust's boundary role and informs decisions about digital capability investments in health education institutions.

RESEARCH METHODS

Population and Sample

The population of this study comprised employees working in health education and healthcare institutions in Palopo City, South Sulawesi, Indonesia. The participating institutions included STIKES Bhakti Pertiwi Luwu Raya, RSUD dr. Palemmai Tandi, and several community health centers *(Puskesmas)* located in Palopo City. Respondents consisted of academic staff, administrative personnel, healthcare personnel, and institutional employees who were familiar with or actively involved in the use of digital systems and e-government-related services within their respective institutions. The inclusion of both health education and healthcare institutions reflects the interconnected nature of digital administration, institutional services, and public-sector health governance in the study setting. A quantitative research approach was employed using a cross-sectional survey design.

Data were collected from respondents who met two inclusion criteria: having at least one year of work experience and being directly involved in or familiar with

institutional digital systems. The minimum one-year work-experience criterion was applied to ensure that respondents had sufficient organizational exposure to evaluate digital skills, e-government implementation, trust in government, and organizational performance within their institutions. Eligibility was confirmed through screening questions included at the beginning of the questionnaire.

A purposive sampling technique was employed because the study required respondents who possessed relevant experience with institutional digital systems and organizational processes. This sampling strategy enabled the researchers to select respondents who were considered capable of providing information relevant to the constructs examined. However, because purposive sampling is a non-probability sampling technique, the findings should be interpreted with consideration of potential selection bias and limited statistical generalizability beyond the institutions included in the study.

A total of 150 valid respondents from STIKES Bhakti Pertiwi Luwu Raya, RSUD dr. Palemmai Tandi, and several *Puskesmas* in Palopo City were included in the final analysis. The adequacy of the sample size was assessed with reference to the complexity of the structural model. The moderation model contains five predictor terms for Organizational Performance: Digital Skills (DS), E-Government (EG), Trust in Government (TG), the interaction between Digital Skills and Trust in Government (DS × TG), and the interaction between E-Government and Trust in Government (EG × TG). Using a significance level of 0.05, statistical power of 0.80, and a medium anticipated effect size ($f^2 = 0.15$), the required minimum sample is approximately 92 respondents. Therefore, the final sample of 150 respondents exceeds the minimum statistical-power requirement for estimating the proposed model.

Table 1 presents the demographic characteristics of the 150 respondents. Female respondents accounted for 56.9% (n = 85), while male respondents represented 43.1% (n = 65). The largest age group was 31–40 years (36.7%), followed by 41–50 years (28.7%), 20–30 years (20.0%), and over 50 years (14.6%). Regarding work experience, 33.3% of respondents had worked for 5–10 years, 26.7% for 11–15 years, 21.3% for more than 15 years, and 18.7% for fewer than five years. In terms of educational attainment, 66.6% held a diploma or bachelor's degree, 28.7% held a master's degree, and 4.7% held a doctoral degree. These demographic characteristics are presented to describe the composition of the sample and are not treated as evidence of measurement reliability or validity, which were assessed separately through the PLS-SEM measurement-model evaluation.

Table 1. Description of respondents

Variable	Cases (%)	Variable	Cases (%)
Gender		**Work Experience**	
Male	65 (43.1%)	< 5 years	28 (18.7%)
Female	85 (56.9%)	5-10 years	50 (33.3%)
Age		11-15 years	40 (26.7%)
20- 30 years	30 (20.0%)	> 15 years	32 (21.3%)
31- 40 years	55 (36.7%)	**Education Level**	
41- 50 years	43 (28.7%)	Diploma/ Bachelor's degree	100 (66.6%)
> 50 years	22 (14.6%)	Master's degree	43 (28.7%)
		Doctoral degree	7 (4.7%)

Source: Processed primary data (2026).

Measurement

The study measured four latent constructs: Digital Skills (DS), E-Government (EG), Trust in Government (TG), and Organizational Performance (OP). The measurement items were adapted from established studies and modified to suit the context of health education institutions. As presented in Table 2, all constructs were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0 to assess both the measurement model and the structural model

Table 2. Research Variables and Indicators

Variable	Code	Indicators	References
Digital Skills (DS)	DS1	Employees are able to use digital technologies effectively in their work.	Rodríguez-Hevía et al. (2020); Stofkova et al. (2022); Rosenberg (2024)
	DS2	Employees can access and manage digital information efficiently.	
	DS3	Employees solve work-related problems using digital technologies.	
	DS4	Employees continuously improve their digital competencies.	
	DS5	Employees confidently use digital platforms for communication and collaboration.	
E-Government (EG)	EG1	Digital government services are easily accessible.	I. K. Mensah & Adams (2020); Jeilani et al. (2025); Gu et al. (2023)
	EG2	E-government services are easy to use.	
	EG3	E-government improves administrative efficiency.	
	EG4	E-government provides timely and accurate information.	
	EG5	E-government enhances transparency and accountability.	
Trust in Government (TG)	TG1	I trust government institutions in delivering digital public services.	Alsarraf et al. (2023); Luo et al. (2024); Pandey (2023)
	TG2	Government agencies are transparent in digital service delivery.	
	TG3	Government protects users' personal information.	
	TG4	Government agencies are competent in providing digital services.	
	TG5	I have confidence in government digital governance.	
Organizational Performance (OP)	OP1	Employees demonstrate high levels of productivity in performing their work.	Khelassi et al. (2025); Avotra et al. (2021); Tiika et al. (2024)
	OP2	Organizational services are delivered more efficiently.	
	OP3	The institution responds quickly to stakeholder needs.	
	OP4	The quality of administrative services has improved.	
	OP5	Overall organizational performance has improved.	

Data were collected between January and March 2026 using a structured online questionnaire distributed to employees of health education institutions. Before the main survey, experts reviewed the questionnaire, and the researchers pilot-tested it to ensure

the clarity and relevance of the measurement items. Participation was voluntary, and respondents were informed about the study's purpose, anonymity, and the confidentiality of their responses (Alrasyid et al., 2026). The researchers obtained and used 150 valid questionnaires for subsequent analysis.

RESULTS AND DISCUSSION

Results

Measurement Model Evaluation

The measurement model was assessed for reliability and convergent validity before testing the structural relationships among the constructs. We examined convergent validity using factor loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's alpha (α). The results of the convergent validity assessment are presented in Table 3.

Table 3. Convergent Validity

Constructs	Items	Factor loading	Average variance extracted (AVE)	Composit Reliability (CR)	Cronbach's alpha (α)
Digital Skills	DS1	0.920	0.811	0.955	0.942
	DS2	0.908			
	DS3	0.905			
	DS4	0.894			
	DS5	0.873			
E-Government	EG1	0.877	0.747	0.937	0.747
	EG2	0.828			
	EG3	0.869			
	EG4	0.865			
	EG5	0.880			
Trust in Government	TG1	0.866	0.701	0.921	0.893
	TG2	0.847			
	TG3	0.766			
	TG4	0.856			
	TG5	0.849			
Organizational Performance	OP1	0.859	0.757	0.940	0.920
	OP2	0.884			
	OP3	0.855			
	OP4	0.896			
	OP5	0.856			

All reported indicator loadings exceeded 0.70, ranging from 0.766 to 0.920. The reported AVE values ranged from 0.701 to 0.811, while composite reliability ranged from 0.921 to 0.955. These values indicate satisfactory indicator reliability, internal consistency, and convergent validity based on the currently reported measurement results. However, the reported Cronbach's alpha value for E-Government (α = 0.747) should be verified against the original SmartPLS output because it is identical to the reported AVE and appears comparatively low relative to the consistently high indicator loadings and composite reliability.

Accordingly, although the results in Table 3 provide sufficient evidence of convergent validity, they do not establish whether the four constructs are empirically distinguishable. High indicator loadings, AVE, and composite reliability demonstrate measurement quality within each construct but do not rule out potential conceptual or

empirical overlap between constructs. Therefore, discriminant validity must be assessed separately to confirm that each construct captures a distinct underlying concept and that the measurement model does not exhibit problematic construct overlap.

Discriminant Validity

Discriminant validity was assessed using the Fornell–Larcker criterion to determine whether each construct was empirically distinct from the other constructs in the measurement model. Specifically, we compared the square root of the Average Variance Extracted (AVE) for each construct with its correlations with all other constructs. Discriminant validity is established when the diagonal values (square roots of AVE) exceed the corresponding inter-construct correlations. Table 4 presents the Fornell–Larcker results as currently reported in the manuscript, providing the basis for evaluating the distinctiveness of the four constructs.

Table 4. Discriminant validity

Constructs	1	2	3	4
Digital Skills	0.900			
E-Government	0.893	0.864		
Trust in Government	0.895	0.916	0.837	
Organizational Performance	0.896	0.919	0.916	0.870

Based on the reported values, the Fornell–Larcker criterion is not satisfied. Specifically, the correlation between E-Government and Trust in Government (0.916) exceeds the square root of the AVE for both E-Government (0.864) and Trust in Government (0.837). A similar pattern is observed for E-Government and Organizational Performance, with a correlation of 0.919 exceeding their respective diagonal values. Furthermore, the correlation between Trust in Government and Organizational Performance (0.916) also exceeds the corresponding square roots of their AVE values. These findings indicate that the inter-construct correlations are consistently higher than the variance captured by each construct's indicators, raising substantial concerns about the empirical distinctiveness of the three constructs.

More importantly, this pattern suggests that E-Government, Trust in Government, and Organizational Performance may share considerable common variance, potentially reflecting conceptual overlap or insufficient discriminant validity within the measurement model. This overlap raises concerns about whether the three constructs represent distinct theoretical dimensions or whether their empirical relationships are partly attributable to a lack of measurement distinction. Consequently, the current results do not provide adequate evidence of discriminant validity, and any interpretation of the structural relationships involving these constructs should be treated with caution. The previous claim that discriminant validity had been established must therefore be withdrawn pending verification of the original SmartPLS output, including the construct correlation matrix, AVE values, and indicator assignments. Further assessment using the Heterotrait–Monotrait Ratio (HTMT) is also recommended as a complementary test. If the reported values are confirmed, potential measurement-model misspecification and construct overlap must be investigated before proceeding with substantive conclusions regarding the structural model.

Structural Model and Hypotheses Testing

Following the measurement-model assessment, the structural model was examined to evaluate the proposed direct and moderating relationships. The analysis focused on the estimated path coefficients, t-statistics, p-values, coefficient of

determination (R^2), and predictive relevance (Q^2). The moderation hypotheses were assessed through the interaction terms between Digital Skills and Trust in Government (DS × TG) and between E-Government and Trust in Government (EG × TG). Table 5 presents are results.

Table 5. Hypothesis testing

Hypotheses	Relationships	Path Coefficients	T statistics	R Square	Q^2	P values	Decision
Direct effect							
H1	DS → OP	0.077	3.064**			0.002**	Supported
H2	EG → OP	0.068	5.344**			0.000**	Supported
Moderating Effects							
H3	DS*TG → OP	0.066	0.954^{ns}			0.340^{ns}	Not Supported
H4	EG*TG → OP	0.067	0.372^{ns}			0.710^{ns}	Not Supported
	OP			0.890	0.662		

Note: ** is statistically significant at the 5%; ^{ns} is not significant.

As shown in Table 5, Digital Skills (DS) are positively and significantly associated with Organizational Performance (OP) (β = 0.077, t = 3.064, p = 0.002), supporting H1. Although the relationship is statistically significant, the reported path coefficient is relatively small. Therefore, interpret the finding as a statistically detectable positive association rather than evidence of a substantial effect.

Similarly, E-Government (EG) is positively and significantly associated with Organizational Performance (β = 0.068, t = 5.344, p < 0.001), supporting H2. As with Digital Skills, the reported coefficient is relatively small. Thus, the result indicates a statistically significant association between E-Government and Organizational Performance, while the practical magnitude of the relationship should be interpreted cautiously.

The interaction between Digital Skills and Trust in Government (DS × TG) was not statistically significant (β = 0.066, t = 0.954, p = 0.340). Therefore, H3 was not supported. This result indicates that the present sample showed no statistically significant moderating effect of Trust in Government on the relationship between Digital Skills and Organizational Performance.

Likewise, the interaction between E-Government and Trust in Government (EG × TG) was not statistically significant (β = 0.067, t = 0.372, p = 0.710). Therefore, H4 was not supported. Accordingly, the analysis did not detect a statistically significant moderating effect of Trust in Government on the relationship between E-Government and Organizational Performance. These non-significant findings should not be interpreted as evidence that the relationships operate independently of Trust in Government; rather, they indicate that the estimated model did not support the proposed moderating effects.

The model reports an R^2 value of 0.890 for Organizational Performance, indicating that 89.0% of the variance in Organizational Performance is statistically explained by the predictors included in the estimated model. This value reflects the model's in-sample explanatory capacity and should not be interpreted as evidence of causal relationships.

The reported Q^2 value of 0.662 is greater than zero, indicating predictive relevance within the estimated PLS-SEM model, provided it was obtained through the appropriate blindfolding procedure. However, Q^2 should not by itself be interpreted as evidence of out-of-sample predictive performance. Overall, the reported results indicate substantial in-sample explanatory capacity, while the two proposed moderating effects of Trust in Government were not statistically supported.

Discussion

The findings demonstrate that digital skills play an important role in enhancing organizational performance in health education institutions. Employees with stronger digital competencies are better able to use digital technologies to support administrative processes, improve efficiency, and deliver higher-quality services. As digital transformation continues to reshape public sector organizations, digital skills have become an essential organizational capability that enables institutions to respond more effectively to technological change. This finding supports previous studies suggesting that digital competency is a critical determinant of organizational effectiveness and sustainable human resource development (Rodríguez-Hevía et al., 2020; Stofkova et al., 2022).

However, the relatively small path coefficient (β = 0.077) indicates that, although the relationship is statistically significant, its magnitude is limited. Therefore, digital skills should be understood as one relevant organizational capability rather than as a dominant determinant of organizational performance. It also reinforces the argument that organizations investing in employees' digital capabilities are more likely to achieve higher levels of organizational performance in increasingly digital work environments. However, the cross-sectional nature of this study does not establish a causal effect of such investments.

The positive association between e-government and organizational performance further highlights the strategic importance of digital governance in public institutions. Implementing e-government enables organizations to streamline administrative procedures, improve information accessibility, strengthen transparency, and enhance service quality. These improvements may contribute to more efficient organizational processes and better institutional outcomes. This finding aligns with previous research emphasizing that effective e-government implementation catalyzes organizational modernization and public sector performance improvement (Mensah, 2019; Tiika et al., 2024). the context of health education institutions, digital governance may facilitate coordination among organizational units while supporting timely and reliable service delivery for both employees and stakeholders. Nevertheless, the relatively small reported path coefficient (β = 0.068) indicates that the statistically significant relationship should not be interpreted as a strong substantive effect. Rather, e-government represents one of several organizational factors that may be associated with performance.

Trust in government did not significantly moderate the relationship between digital skills and organizational performance. More precisely, the interaction effect between Digital Skills and Trust in Government was statistically non-significant (β = 0.066, p = 0.340), indicating that no statistically significant moderating effect was detected in the present sample. This finding should not be interpreted as evidence that digital skills operate independently of trust in government or that professional competence is necessarily more influential than institutional perceptions. A non-significant interaction indicates that the strength of the Digital Skills–Organizational Performance relationship did not vary significantly with the measured level of Trust in Government. Although previous studies have emphasized the importance of trust in encouraging digital governance initiatives (Alsarraf et al., 2023; Luo et al., 2024), the present findings suggest that its moderating role may depend on the specific institutional and organizational context in which digital systems are used.

A similar pattern was observed in the relationship between e-government and organizational performance. The interaction between E-Government and Trust in

Government was also statistically non-significant (β = 0.067, p = 0.710), indicating that Trust in Government had no significant moderating effect. One possible explanation is that digital governance within health education institutions may operate through formal regulations, standardized operating procedures, and institutional policies, which could reduce the extent to which individual perceptions of government alter the relationship between e-government and organizational performance. However, this interpretation remains tentative because this study did not directly measure formal regulations, standardized operating procedures, system quality, organizational support, or institutional commitment. These factors should therefore be considered possible explanations for future investigation rather than empirical findings of the present study.

These findings contribute to the growing literature on digital governance by demonstrating that Digital Skills and E-Government are statistically associated with Organizational Performance. In contrast, Trust in Government does not significantly moderate either relationship in the examined model. While trust in government has frequently been identified as an important factor influencing citizens' acceptance and continued use of e-government services, the present results suggest that its role as a moderating condition in organizational settings may be more context-dependent. Accordingly, the findings do not imply that trust is unimportant; rather, they show that this study did not statistically support its hypothesized moderating role.

From a theoretical perspective, this study extends the understanding of digital transformation by integrating individual capability and organizational digital governance within a single framework. The findings support the Resource-Based View, which emphasizes that valuable organizational resources, such as employees' digital competencies and technological capabilities, can contribute to organizational effectiveness when they are effectively utilized. In the context of public-sector-oriented health institutions, this perspective is more appropriately interpreted in terms of organizational effectiveness, administrative capability, and service performance rather than sustainable competitive advantage in the conventional market-oriented sense. At the same time, the insignificant moderating role of trust in government provides a boundary-condition insight by showing that institutional trust does not necessarily strengthen the associations between digital skills and e-government and organizational performance. This finding opens opportunities for future studies to examine alternative organizational or institutional conditions that may better explain these relationships.

From a practical perspective, managers of health education institutions should prioritize continuous investment in digital competency development through training, professional development programs, and technology-based learning initiatives. Based on the dimensions measured in this study, particular attention may be directed toward employees' ability to use digital technologies effectively, manage digital information, solve work-related problems using digital tools, and communicate and collaborate through digital platforms. At the same time, institutions should continue improving the quality, accessibility, and integration of e-government systems to support efficient administrative processes and enhance organizational effectiveness. Priority may be given to improving system accessibility, ease of use, timely and accurate information, administrative efficiency, transparency, and accountability. However, interpret these recommendations cautiously because the study identifies cross-sectional statistical associations rather than experimentally established effects of specific interventions. Furthermore, because Trust in Government did not significantly moderate either relationship, the findings do not support the assumption that strengthening institutional

trust alone would necessarily amplify the organizational performance associations of Digital Skills or E-Government.

CONCLUSION

This study concludes that Digital Skills and E-Government are positively and significantly associated with Organizational Performance, although their relatively small coefficients indicate modest contributions. In contrast, Trust in Government does not significantly moderate either relationship, suggesting that institutional trust does not necessarily strengthen the performance implications of digital capabilities. These findings contribute to the digital-governance and organizational-capability literature by positioning Trust in Government as a potential boundary condition rather than an assumed reinforcing mechanism in digital transformation. Practically, health education and healthcare institutions should prioritize developing employees' digital competencies and improving the accessibility, usability, efficiency, transparency, and information quality of e-government systems. Nevertheless, these findings should be interpreted in light of the cross-sectional design, purposive sampling, self-reported measures, and limited geographical scope, which constrain causal inference and generalizability. Future research should employ longitudinal and multi-source approaches, broader and more representative samples, objective performance indicators, and additional organizational factors, including digital leadership, system quality, organizational support, digital readiness, and organizational culture, to provide a more comprehensive understanding of how digital capabilities contribute to organizational performance and under what institutional conditions these relationships may vary.

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CONFLICTS OF INTEREST

The authors declare no financial, professional, or personal conflicts of interest that could have influenced the research, analysis, or interpretation of the findings presented in this manuscript.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

While preparing this manuscript, the authors used AI-assisted tools to support English-language editing, grammatical refinement, and improvements in academic clarity and readability. The authors critically reviewed and verified all AI-assisted revisions and remain fully responsible for the manuscript's accuracy, originality, and integrity.

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