



THE ROLE OF INNOVATIVE ORGANIZATIONAL CULTURE AND DIGITAL TRANSFORMATION READINESS IN EDUCATIONAL INSTITUTION PERFORMANCE

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Abstract

Digital transformation has become an essential strategy for educational institutions in responding to the challenges of the Industrial Revolution 4.0 and the post-pandemic era. This study aims to analyze the influence of innovative organizational culture **and** digital transformation readiness **on the** performance of educational institutions, and to test the mediating role of digital transformation readiness. Using a quantitative approach with Partial Least Squares Structural Equation Modeling (PLS-SEM), data were collected from 57 teachers and staff at SMKN 7 Malang. The results indicate that innovative organizational culture has a significant positive effect on both digital transformation readiness ($\beta = 0.695$) and institutional performance ($\beta = 0.812$). Moreover, digital transformation readiness also positively affects institutional performance ($\beta = 0.291$) and mediates the relationship between innovative culture and performance. The findings highlight that institutional success in the digital era depends not only on technological adoption but also on the development of a progressive, innovation-oriented culture. This study contributes theoretically by strengthening the Resource-Based View (RBV) and Dynamic Capability Theory, and practically by providing strategic insights for educational leaders in fostering digital readiness and innovation within institutions.

Keywords: Innovative Organizational Culture, Digital Transformation Readiness, Educational Institution Performance, PLS-SEM

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INTRODUCTION

مقدمة

The development of information technology has become a major driving force in the digitalization of education. With the rise of the internet, mobile devices, and online learning platforms, education has become more accessible and interactive, allowing for dynamic engagement between teachers and students. This integration of technology not only enhances efficiency but also enriches the overall learning experience (Najib & Maunah, 2022). In the context of globalization and the Fourth Industrial Revolution, digital transformation has evolved beyond a technical necessity to become a strategic component in achieving the vision and mission of educational institutions.

The COVID-19 pandemic accelerated this transformation, compelling schools and universities worldwide to adopt digital and blended learning models (Dhawan, 2020). However, successful digital transformation requires more than technology; it depends on human resource readiness, adequate infrastructure, and organizational commitment to innovation. Therefore, digital transformation must be viewed as a holistic strategic process involving planning, leadership, and a supportive organizational culture.

An innovative organizational culture serves as a foundation for digital transformation readiness. Such a culture encourages creativity, openness to change, and collaboration among members of the institution (Aboobaker, N., & Zakkariya, 2021). Which means that if a teacher and staff feel supported by an adaptive culture, they will dare to try and implement technological innovation. Recent research further emphasizes the strategic importance of cultivating an innovative organizational culture to accelerate digital transformation. Conducted an exploratory analysis and found that an innovative culture provides a significant strategic advantage in enhancing both digital transformation and big data analytics capabilities (Orero-blat, 2024). Their findings highlight that organizations with creativity-driven, flexible, and learning-oriented environments tend to adopt new technologies more effectively and sustain higher performance levels in digital contexts. This aligns with the present study's assumption that an innovative culture serves as a core enabler of institutional agility, allowing educational institutions to respond proactively. Emphasized that when organizational culture promotes learning and adaptability, educators are more willing to adopt technological innovation. Similarly, O'Connor and Martinez (2024) found that visionary leadership and transparent communication strengthen digital transformation by reducing resistance to change (O'Connor, L. & Martinez, 2024). These insights highlight that fostering an innovative culture is essential to enhancing digital readiness.

However, despite the growing emphasis on digital transformation in education, empirical studies examining the mediating role of digital transformation readiness between innovative organizational culture and institutional performance remain limited, particularly in developing-country contexts. Most previous research has focused on the direct relationship between culture and performance or on leadership's influence in technology adoption. This creates a research gap concerning how internal readiness mechanisms bridge cultural innovation and measurable institutional outcomes. Addressing this gap is crucial for understanding the dynamic capabilities that enable institutions to thrive in digital environments.

Therefore, this study aims to analyze the influence of innovative organizational culture and digital transformation readiness on the performance of educational institutions. Specifically, it seeks to test the mediating role of digital transformation readiness in strengthening the relationship between cultural innovation and institutional performance. By doing so, this research contributes both theoretically through extending the Resource-Based View (RBV) and Dynamic Capability Theory and practically, by offering strategies for developing innovative, digitally ready educational institutions in Indonesia.

METHOD

منهج

This study uses a quantitative method with a correlational type. The main objective is to test the relationship between transformational leadership, technological readiness, and the effectiveness of digital learning, and to analyze the mediating role of technological readiness. Data were collected through an online questionnaire distributed to teachers from schools that have implemented digital learning using a Likert scale of 1–5 which is commonly used in social research to measure how much respondents agree with certain statements (Sugiyono, 2021). The instruments used are adjusted based on indicators that have been proven valid from previous studies. The data collected will be analyzed using Structural Equation Modeling (SEM) with the help of software such as SmartPLS. SEM was chosen because this method can test causal relationships between concepts simultaneously and can analyze complex mediating roles (Ghozali & Latan, 2015).

Subsection Identification

Population and Sample

The population in this study were teachers and staff in a SMKN 7 Malang that has culture organization innovative. Population is a generalization area of objects or subjects that become certain quantities and characteristics determined by research to be studied and conclusions drawn (Sugiyono, 2015) . In this study, the entire population is used as a sample called the population. And if the subjects owned are less than 100, then the entire population will be used. So the sample to be taken is in accordance with the population of 57 teachers and staff. The sampling technique used is purposive sampling, which is selecting samples based on certain criteria that are in accordance with the research objectives (Arikunto, 2019) . The inclusion criteria for the respondents were: (1) the organization continues to seek new ways to develop in accordance with its era, (2) has a flexible organizational structure in responding to digital changes, (3) has learning that is designed according to student needs. The sample size is determined based on the SEM formula, which is a minimum of 5 to 10 respondents for each research indicator (Hair et al., 2019) . In this study, the number of respondents was 57 people.

Research Design

This study uses a quantitative approach with a correlational path mediation analysis type. Quantitative research is a research approach based on the philosophical view of positivism. (Sugiyono, 2020) . The philosophy of positivism is an approach that believes that valid knowledge can only be obtained through empirical data and observations that can be measured objectively. Meanwhile, research with the type of correlational path mediation analysis is a type of non-experimental quantitative research that aims to determine the relationship between variables, both direct and indirect influences (mediation) from one variable to another through a third variable or mediator. This approach was chosen because it is in accordance with the purpose of the study, namely to examine how the relationship between variables is through intermediary or mediating variables. The variables in this study include three elements, namely innovative organizational culture, digital transformation readiness and educational institution performance.

Data collection technique

method of data collection in this study was by using an online questionnaire. The questionnaire uses a five-point Likert scale, which is commonly used in social research to measure several significant responses to a given statement (Sugiyono, 2021) . We chose the online format because it is more flexible and can reach more people. The type of instrument in this study is a questionnaire, a data collection technique carried out by giving respondents several questions via a *Google form* to be answered and then analyzed by the researcher (Awaluddin & Wahyudiati, 2022) . Inferential statistics are used to describe the research data. The data obtained are analyzed according to the hypothesis taken. The method used to measure respondents' answers is to use a Likert scale for the variables of innovative organizational culture (X1), digital transformation readiness (X2), and educational institution performance (Y). The type of *Likert scale* with the following score determination:

Strongly Disagree (STS)	: 1
Disagree (TS)	: 2
Neutral (N)	: 3
Agree (S)	: 4
Strongly Agree (SS)	: 5

Primary data in this study were collected through questionnaires, while secondary data were obtained from indirect sources such as documents. The hypothesis testing method used is *the Partial Least Square Structural Equation Modeling (PLS-SEM)*. *PLS-SEM is a variance- based analysis* . Used for exploratory research and development of existing theories. This analysis aims to test the research hypothesis and measurement model by looking at its validity and reliability. PLS-SEM is considered more appropriate for this study because it is considered more appropriate because this method can build variables and conduct hypothesis testing even though the number of samples is relatively small (Hair, et. et al., 2017) .

Instruments and Measurement

The research instrument consisted of a structured questionnaire comprising three main constructs, each adapted from well-established theoretical frameworks and prior validated studies. All items were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

1. Innovative Organizational Culture (IOC): measured using ten indicators adapted from Cameron and Quinn's (2011) *Competing Values Framework (CVF)*, which conceptualizes organizational culture as a multidimensional construct encompassing flexibility, innovation, and collaboration. This framework is widely applied in education to assess the extent to which institutions support creativity, openness to change, and knowledge sharing (Kim S. Cameron & Robert E. Quinn, 2011).
2. Digital Transformation Readiness (DTR): which explains an organization's ability to integrate, build, and reconfigure internal and external competences to respond to technological changes. The scale includes dimensions such as digital leadership, technology adoption, and organizational learning capacity, reflecting the institution's preparedness for digital transformation (M. Hoyng & A. Lau, 2023). In addition, proposed a comprehensive framework for assessing the digital readiness of higher education institutions, emphasizing the multidimensional nature of digital transformation readiness (Ladiqi et al., 2023). Their study demonstrates that readiness is not merely a matter of infrastructure but also involves leadership engagement, staff competencies, and institutional learning capacity. The findings suggest that when institutions integrate data-informed strategies and continuous professional development, they become more capable of sustaining innovation and achieving higher organizational performance. This perspective supports the argument that digital readiness functions as both a technological and organizational capability that bridges innovative culture and institutional effectiveness.
3. Institutional Performance (IP): measured using indicators adapted from O'Connor & Martinez (2024), grounded in the Resource-Based View (RBV), which posits that intangible resources such as innovation, leadership, and culture contribute to superior institutional outcomes. The items assess efficiency, service quality, and goal achievement as manifestations of institutional performance (O'Connor, L. & Martinez, 2024).

All indicators were reviewed and validated by three education management experts to ensure theoretical alignment and contextual relevance to Indonesian vocational education institutions.

Data Analysis Techniques

The collected data will be analyzed using Structural Equation Modeling (SEM) with the help of software such as SmartPLS. SmartPLS was chosen because this method can test causal

relationships between concepts simultaneously and can analyze complex mediation roles (Ghozali & Latan, 2015) .

The first step in the analysis is to test whether the instrument is valid and reliable using Confirmatory Factor Analysis (CFA). The goal is to ensure that the questions in the questionnaire actually measure the concept to be measured. For reliability, the Composite Reliability and Cronbach's Alpha values will be examined. To test whether technology readiness acts as a mediator, the bootstrapping method will be used. This method is recommended in mediation analysis because it provides accurate estimates for the mediation effect and does not rely too much on the assumption that the data must follow a normal distribution (Hayes, 2017).

RESULT | نتائج

The R-squared value of 0.702 indicates that 70.2% of the variation in the performance of educational institutions can be explained by innovative organizational culture and digital transformation readiness. This suggests that the proposed model has strong predictive power and is highly relevant for understanding institutional performance in the context of digital transformation.

The structural model was analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the SmartPLS application. The results of the hypothesis testing are presented in Table 1.

Table 1. Results of Path Coefficient Analysis (SmartPLS Output):

Relationship	Original Sample (β)	T-Statistic	P-Value	Decision	Interpretation
Innovative Organizational Culture → Institutional Performance	0.812	12.654	0.000	Supported	A one-unit increase in innovative organizational culture is associated with a 0.812-unit improvement in institutional performance.
Innovative Organizational Culture → Digital Transformation Readiness	0.695	8.289	0.000	Supported	Strengthening innovative culture by one unit increases digital readiness by 0.695 units.
Digital Transformation Readiness → Institutional Performance	0.291	2.340	0.019	Supported	Enhancing digital readiness by one unit leads to a 0.291-unit rise in institutional performance.
Indirect Effect: Innovative Organizational Culture → Digital Transformation Readiness → Institutional Performance	0.202	2.245	0.025	Supported	Digital readiness mediates the influence of culture on performance by 0.202 units.

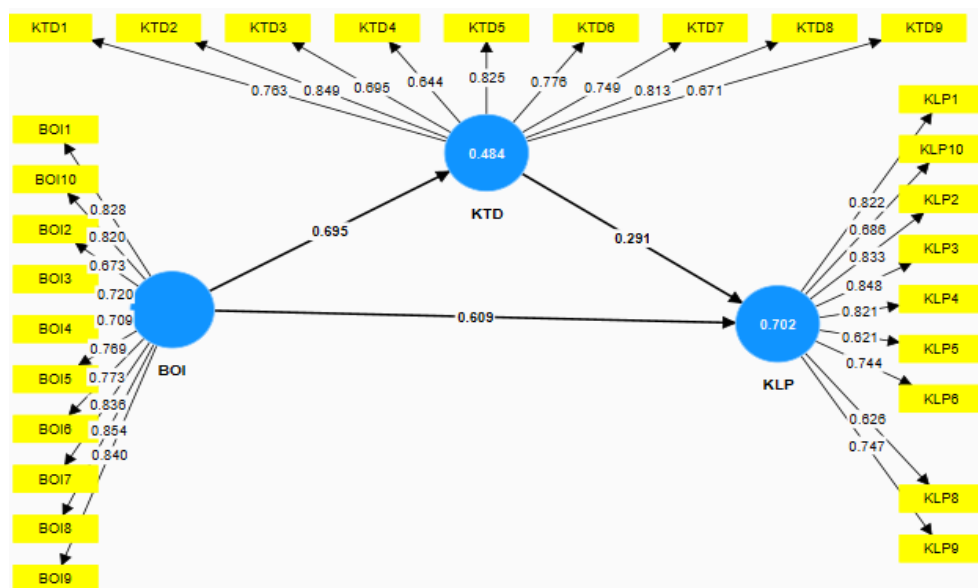


Figure 1 Structural Model of Innovative Organizational Culture, Digital Transformation Readiness, and Institutional Performance

Source: SmartPLS 4 output (processed by the author, 16 June 2025).

The analysis demonstrates that institutions with an innovative organizational culture characterized by openness to change, support for creativity, and visionary leadership tend to have higher readiness for digital transformation and better overall performance.

The strong path coefficient ($\beta = 0.812$) indicates that cultural innovation is the most dominant factor, emphasizing that improvements in culture can significantly boost institutional outcomes. The coefficient ($\beta = 0.695$) for digital readiness shows that innovation-friendly environments accelerate the adoption of digital tools and processes. The mediating effect ($\beta = 0.202$) highlights that readiness for digital transformation acts as a bridge connecting cultural innovation and institutional success.

Overall, the model confirms that an innovative organizational culture significantly contributes to improving institutional performance, both directly and indirectly through digital transformation readiness. The empirical evidence supports the need for educational institutions to integrate innovation-oriented cultural strategies into their digital transformation agendas to achieve sustainable competitiveness.

DISCUSSION

مناقشة

The results of this study reaffirm the crucial role of an innovative organizational culture in driving digital transformation and improving institutional performance. This finding aligns with contemporary perspectives that position culture as the strategic foundation for technological adaptation and sustainable institutional growth. Institutions that cultivate creativity, experimentation, and openness to change respond more effectively to digital transformation initiatives and are better equipped to integrate technology into educational processes.

Based on the PLS-SEM analysis, innovative organizational culture significantly influences both digital transformation readiness ($\beta = 0.695$) and institutional performance ($\beta = 0.812$), while digital readiness also has a significant mediating effect ($\beta = 0.291$). This implies that digital readiness functions not merely as a technical condition but as an organizational capability that connects cultural innovation with measurable performance outcomes. The indirect effect ($\beta = 0.202$) further indicates that fostering an innovative culture can indirectly enhance institutional

performance through strengthened digital preparedness.

These results are consistent with findings by Aboobaker and Zakkariya (2021), who argue that digital learning orientation enhances innovative behavior when supported by a learning culture that encourages openness and adaptability (Aboobaker, N., & Zakkariya, 2021). Similarly, O'Connor and Martinez (2024) emphasize that visionary leadership and transparent communication foster a conducive climate for digital transformation by reducing resistance to change (O'Connor, L. & Martinez, 2024). However, this study extends prior findings by empirically demonstrating the mediating role of digital readiness, emphasizing that it acts as a strategic link between organizational culture and performance in educational settings a relationship that has been underexplored in developing-country contexts.

From a theoretical perspective, these findings reinforce and expand the *Resource-Based View (RBV)* and *Dynamic Capability Theory*. Within the RBV framework, innovative organizational culture represents an intangible asset that is valuable, rare, and difficult to imitate, thereby forming a source of sustainable institutional advantage. Meanwhile, through the lens of Dynamic Capability Theory, digital transformation readiness can be interpreted as an organizational mechanism that enables institutions to reconfigure internal resources and processes in response to technological change. Hence, this study contributes to theory by illustrating how the interplay between cultural innovation and digital readiness enhances institutional adaptability and long-term competitiveness.

Comparatively, studies in developed countries show that digital transformation tends to be driven by advanced technological infrastructures and data-driven leadership (M. Hoyng & A. Lau, 2023). In contrast, this research highlights that in developing contexts such as Indonesia, the human and cultural dimensions play a more dominant role in determining digital success. This contextual insight enriches global understanding by showing that cultural and leadership readiness may compensate for limited technological resources in developing nations.

Practically, the results indicate that educational leaders should foster internal collaboration, strengthen digital competencies, and institutionalize innovation-based management systems. These actions are not only essential for improving current performance but also for ensuring long-term organizational resilience in facing continuous digital disruption.

CONCLUSSION | خاتمة

Digital transformation in education is an inevitable strategic process in the era of the Industrial Revolution 4.0 and post-pandemic. The findings of this study, analyzed through the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, confirm that an innovative organizational culture positively influences both digital transformation readiness and institutional performance, with digital readiness also significantly mediating this relationship.

These findings emphasize that improving institutional performance depends not merely on technological infrastructure but also on strengthening internal adaptability and innovation. Therefore, educational leaders should implement specific programs such as (1) collaborative innovation workshops among teachers and staff, (2) continuous digital competency training aligned with institutional needs, and (3) leadership coaching to enhance strategic decision-making in digital contexts.

Practically, this study contributes to policy development by recommending that educational institutions institutionalize innovation-oriented management systems and integrate

digital readiness indicators into performance evaluations. By fostering a culture that values creativity, flexibility, and technology-based collaboration, institutions can build sustainable competitiveness and resilience in the face of ongoing digital transformation. This indicates that foresting an innovation-oriented culture serves as a key strategic priority for educational institutions aiming to achieve digital excellence and sustainable performance.

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