

## NAVIGATING DIGITAL TRANSFORMATION: THE IMPACT OF LEADERSHIP, DIGITAL LITERACY, AND ORGANIZATIONAL CULTURE

Lenita Waty

Universitas Advent Indonesia

[lenita.waty@unai.edu](mailto:lenita.waty@unai.edu)

### **Abstract**

*Leadership, digital literacy, digital transformation is a critical component of organizations' success. In today's digital world, when the concept of digital literacy is crucial, the role of leadership in building organizational culture is critical. The purpose of this study was to investigate the role that leadership plays in shaping digital transformation through organizational culture and digital literacy. A total of 120 employees were handed questionnaires, of which 108 (or 90%) were useable. The results are: 1). Leadership has a negative and not significant impacts on digital transformation; 2). Leadership has a positive and significant impact on organizational culture; 3). Leadership has a positive and significant impact on digital literacy; 4). Organizational Culture have a positive and significant impact on digital transformation; 5). Digital Literacy have a positive and significant impact on Digital transformation; 6). Leadership has a positive and significant impact on digital transformation through digital literacy; 7). Leadership has a positive and significant impact on digital transformation through organizational culture. The novelty is leadership, digital literacy, and organizational culture is fundamental in the digital transformation process. The interaction between these elements highlights the necessity for leaders to promote technology advancement and cultivate a culture that priorities continuous learning, adaptability, and innovation. This is crucial for driving firms towards attaining digital excellence.*

**Keywords: Digital Literacy, Digital Transformation, Organizational Culture**

## INTRODUCTION

In recent times, there has been a notable acceleration in the process of digital transformation. This may be attributed to the rapid progress in technology, the growing digitization of the economy, and the emergence of novel business models. According to (Shan et al., 2019), organizations that do not adopt digital transformation face the potential consequences of lagging behind in terms of efficiency, productivity, and competitiveness as the economy increasingly undergoes digitization. The process of digital transformation encompasses the extensive incorporation of digital technology across all facets of an organization, resulting in substantial modifications to operational procedures and the provision of value (Ng et al., 2017). Nevertheless, numerous businesses encounter difficulties in effectively implementing digital transformation as a result of insufficient strategy, inadequate support from leadership, constrained resources, and a reluctance to embrace change (Gupta, 2005).

The phenomenon of digital transformation has a profound influence on multiple dimensions inside an organization, encompassing customer experience, operational procedures, business models, as well as the individuals and cultural dynamics involved (Herbert, 2017). The achievement of a successful digital transformation necessitates leaders to build a well-defined vision, effectively communicate it, and proficiently motivate and manage their teams throughout the process of change. Furthermore, it is imperative to acknowledge and tackle the apprehensions of employees regarding automation and the potential loss of employment (Cascio et al. 2016).

Digital literacy is an essential factor for the successful implementation of digital transformation initiatives, encompassing the proficiency in utilizing digital technologies and communication tools. According to (Belhadi et al., 2022), organizations that possess a greater degree of digital literacy among their workforce demonstrate enhanced efficiency and productivity in the adoption and implementation of novel technologies. According to Cartelli (2013), digital literacy encompasses various dimensions, including functional, critical, and creative literacy, as well as digital accountability, productivity,

information literacy, cooperation, and learning. According to Wart et al., (2017), leaders have a crucial responsibility in promoting digital literacy among their teams and managing the conflict that arises from the intersection of technical progress and employee concerns. The success of digital transformation is heavily impacted by organizational culture. According to Jiang et al., (2022), the presence of an open, inventive, and flexible culture is crucial in order to effectively embrace change and successfully incorporate new technologies and processes. Positive organizational culture places a strong emphasis on the strengths of employees, prioritizes incentives rather than punishment, and fosters individual growth (Robbins, 2018)

Numerous leadership theories, including transformational and contingency leadership, provide distinct viewpoints of leadership styles. According to Maxwell, (2022) and Northouse, (2021) transformational leaders possess the ability to inspire and motivate their people, whereas contingency leaders demonstrate adaptability by tailoring their leadership approach to the unique circumstances at hand. According to McShane & Steven (2008), leadership abilities cover a range of qualities, including emotional intelligence, integrity, drive, leadership motivation, self-confidence, intelligence, and business acumen.

The correlation between leadership and digital literacy is evident within the context of the digital corporate environment. The phenomenon of leadership possesses the capacity to exert an influence on the development and enhancement of digital literacy skills. Conversely, the acquisition and proficiency in digital literacy can significantly impact the effectiveness and efficacy of leadership. The influence of organizational culture in determining leadership styles and effectiveness is of utmost importance. Hence, it is imperative to comprehend the interplay among these components in order to achieve effective digital transformation (Kraus et al., 2021).

In the ever-changing digital landscape, the integration of digital technology, leadership, digital literacy, and organizational culture together play a crucial role. The interplay between these components significantly impacts an organization's capacity to effectively adapt and flourish in this dynamic environment.

This study aims to ascertain the answers to the subsequent inquiries: To what extent does a leader's approach influence the digital literacy of employees? What is the relationship between an employee's level of digital literacy and an organization's digital transformation journey? What is the impact of leadership on the development and maintenance of corporate culture? What role does an organization's culture play in the process of digital transformation? In what ways can leadership facilitate digital transformation by implementing digital literacy efforts aimed at employees? Furthermore, what strategies can leaders employ to foster a favorable company culture that facilitates the process of digital transformation?

## LITERATURE REVIEW AND HYPOTHESIS

### **The Influence of Leadership on Digital Transformation**

Digital transformation refers to the integration of technological improvements into an organization's operational framework, hence exerting a profound influence on production levels and competitive positioning. Effective leadership is essential in providing guidance to a business throughout this process.

Numerous studies continuously underscore the crucial significance of leadership in the process of digital transformation. According to Martin (2018), leadership has a crucial role in establishing a vision, facilitating effective communication, and cultivating an environment that promotes innovation. The study conducted by Schrage et al. (2021) shown that the presence of effective leadership and a dedicated focus on digital transformation significantly enhance the probability of achieving successful outcomes. Abbu et al. (2022) emphasized the importance of leadership competencies in addressing and surmounting obstacles associated with organizational transformation. Costigan (2018) highlighted the significance of effective leadership in enabling both technological and cultural transformations inside a business.

The objective of this study is to authenticate the significance of leaders in establishing an atmosphere that fosters creativity, experimentation, and the assimilation of novel techniques and technology within the framework of digital transformation.

H<sub>1</sub>: Leadership have a positive and significant impacts on digital transformation

### **The Influence of Leadership on Organizational Culture**

Numerous studies have been conducted to investigate the significant association between leadership and organizational culture. Transformational leadership behaviors, such as charisma and individual concern, are connected with the building of a healthy and nurturing workplace culture, according to Williams Jr et al. (2018). According to Schein, (2006), top-level executives' leadership styles have a substantial impact on an organization's culture by showing cultural beliefs, attitudes, and actions that are congruent with the intended corporate culture.

These studies highlight the importance of leadership in building and shaping company culture by matching their conduct with intended cultural ideals. Therefore, the objective of this research is to authenticate these results and delve deeper into their potential ramifications.

H<sub>2</sub>: Leadership have a positive and significant impact on organizational culture

### **The Influence of Leadership on Digital Literacy**

Scholars in the domain of digital transformation have been actively examining the correlation between leadership and digital literacy, specifically within the framework of organizational endeavors to adopt digital transformation. According to a recent investigation conducted by Laufer et al. (2021), it was shown that executives who possess proficient digital literacy abilities are more adept at effectively leading their firms through the intricate process of digital transformation. Adam-Turner & Burnett (2018), conducted a study which revealed that leaders have a significant impact on the development of an organizational culture that promotes successful digital integration. The influence of culture, in turn, shapes the digital literacy skills of employees. The findings of the study

suggest that leaders that express support for technology and actively encourage the utilization of digital tools are more inclined to have staff who possess proficient digital literacy abilities. The aforementioned findings highlight the significant impact that leaders exert on the enhancement of digital literacy skills within their teams and organizations. These studies underscore the significance of leadership in cultivating digital literacy inside companies and underscore the necessity for leaders to possess fundamental digital literacy abilities in order to proficiently steer their organizations through the process of digital transformation. Thus, the objective of this study is to substantiate these theories by means of empirical evidence.

H<sub>3</sub>: Leadership have a positive and significant impact on digital literacy

### **The Influence of Organizational Culture on Digital Transformation**

A lot of academic research has looked into the link between organizational culture and digital transformation. These studies have looked at things like leadership styles, cultural values, and the physical environment of the company. For example, a study found a link between a culture of innovation, risk-taking, and experimentation and the success of digital transformation efforts. On the other hand, a culture that is resistant to change and doesn't get much support from upper management was linked to less success with digital transformation (Tuukkanen et al., 2022). Additionally, Trenerry et al. (2021) did research that showed a positive link between companies using digital technologies and creating a culture of openness, cooperation, and ongoing learning. An open, supportive, and learning-oriented company culture helps digital transformation success, while a closed and resistant culture limits it. Organizational culture positively impacts digital transformation by affecting people's attitudes and actions toward digital technology and innovation. So, the goal of this study is to use real-world data to support this hypothesis.

H<sub>4</sub>: Organizational Culture have a positive and significant impact on digital transformation

### **The Influence of Digital Literacy on Digital Transformation**

Multiple studies have linked digital literacy to digital transformation. Deja et al., (2021) found that higher digital literacy was associated with a greater willingness to participate in digital transformation projects because it allowed people to better understand technology and its applications for business goals. Another study by Cai et al., (2020) found that enterprises with more digitally literate personnel performed better in digital transformation. These findings highlight the importance of digital literacy in digital transformation. Current theory and prior research suggest a strong correlation between digital literacy and successful digital transformation, with organizations with higher digital literacy more likely to succeed in implementing digital transformation initiatives and improving business outcomes. This study aims to validate this theory through empirical evidence.

H<sub>5</sub>: Digital Literacy have a positive and significant impact on Digital transformation

### **Digital Literacy as a Mediating Variable in the Influence of Leadership to Digital Transformation**

Research shows that digital literacy moderates leadership's impact on digital transformation. Van Laar et al. (2020), found that leaders with strong digital literacy can better communicate and execute digital transformation initiatives. Advanced digital literacy also helps people adopt and use new technology, making the digital shift easier.

Li et al. (2019) examined how digital literacy mediates transformational leadership and digital transformation results. Positive relationships were identified between digital literacy, transformational leadership, and digital transformation outcomes. Digital literacy partially influenced transformational leadership and digital transformation outcomes.

Cetindamar et al. (2021) explored how digital literacy affects organizational digital technology adoption. Digital transformation efforts are more successful in firms run by digitally literate CEOs, who are more willing to adopt digital technologies.

These studies show that leaders with advanced digital literacy are better at adopting and implementing digital technologies, which makes digital transformation initiatives more

successful. Organizations must prioritize digital literacy training for leaders and workers. Therefore, the purpose of this investigation is to determine whether the theory will be supported by the findings.

H<sub>6</sub>: Leadership has a positive and significant impact on digital transformation through digital literacy

### **Organizational Culture as a Mediating Variable in the Influence of Leadership to Digital Transformation**

Numerous scholarly inquiries have delved into the correlation between organizational culture, leadership, and digital change. The study conducted by Fischer et al. (2020) revealed a favorable relationship between transformational leadership and digital transformation. The impact of transformational leadership on digital transformation was shown to be more pronounced when the organizational culture was supportive of digital transformation. Furthermore, the organizational culture was identified as a mediator between leadership and the results of digital transformation. The study conducted by Imran et al., (2021) demonstrated a significant association between transformational leadership and the outcomes of digital transformation. This relationship was found to be mediated by cultural intelligence. These studies emphasize the significant importance of corporate culture and cultural intelligence in modulating the relationship between leadership and the achievement of effective digital transformation endeavors. Therefore, the purpose of this investigation is to determine whether the theory will be supported by the findings.

H<sub>7</sub>: Leadership has a positive and significant impact on digital transformation through organizational culture

### **RESEARCH METHOD**

This study uses a quantitative method Sudarmanto et al., (2021) because it uses numbers to prove or disprove ideas that have already been put forward (Leavy, 2017). The research will be conducted using a correlational design, which implies that correlational statistics



will be used to characterize and quantify the degree of connection or link between two or more variables (Creswell, 2009). The examination of the data was done with SEM-PLS version 3.2.9, and it involved looking at both the outer and the inner models.

The data was collected between December 2022 to January 2023. The survey included 23 questions regarding Organizational Culture, Digital Transformation, Digital Literacy, and Leadership, in addition to questions about the demographic information of the participants. The information was collected from the various work units of batch 2000 of Universitas Advent Indonesia class alumni. Participants were also informed of the privacy and confidentiality of their responses. A total of 120 employees were handed questionnaires, of which 108 (or 90%) were useable. More over half of the responders were men (51%) and the remainder were women (49%). 15% of employees have worked for the organisation for 1 to 5 years, 13% for 6 to 10 years, 17% for 11 to 15 years, 19% for 16 to 20 years, 9% for 21 to 25 years, and 31% for more than 26 years.

## **DATA ANALYSIS AND RESULT**

### **Outer Model**

Start with determining a healthy reflective model by identifying indicators that reflect the construct's covary distribution of factor loading (Jarvis et al., 2003). After eliminating the construct with a loading factor  $< 0.7$ , the robust construction is studied.

Validity and reliability tests proceeded. Cronbach's Alpha is used to evaluate internal consistency because higher values imply better composite reliability. The exploratory study takes composite reliability values of 0.60–0.70 (Nunally & Bernstein, 1994). Since both Cronbach Alpha and Composite reliability are higher than 0.7, it has been determined that all variables can be considered legitimate (Table 1).

**Table 1**

Cronbach's Alpha, Compound Reliability, and Average Variance Results

	<b>Cronbach's Alpha</b>	<b>rho_A</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted (AVE)</b>
<b>Digital Literacy</b>	0,938	0,940	0,948	0,670
<b>Digital Transformations</b>	0,954	0,957	0,963	0,815
<b>Leadership</b>	0,901	0,903	0,920	0,592
<b>Organizational Culture</b>	0,925	0,928	0,943	0,768

Reliability measures, such as the outer loadings factor and average variance extracted, are used to determine convergent validity (AVE). Outer loadings of 0.708 or higher and AVE values of 0.50 or higher reveal that the construct explains over half of its indicators' variance (Hair et al., 2014). As a direct consequence of this, all of the variables are accepted as legitimate because both AVE >0.5 (table 1) and outer loading are greater than 0.70 (table 2).

**Table 2**

**Outer Loading Results**

	<b>Digital Literacy</b>	<b>Digital Transformations</b>	<b>Leadership</b>	<b>Organizational Culture</b>
<b>DLDC1</b>	0,739			
<b>DLDC2</b>	0,854			
<b>DLDCr1</b>	0,822			
<b>DLDCr2</b>	0,849			
<b>DLDI1</b>	0,851			
<b>DLDI2</b>	0,837			

<b>DLDL<sub>e1</sub></b>	0,806	
<b>DLDL<sub>e2</sub></b>	0,818	
<b>DLDR1</b>	0,785	
<b>DTF1</b>	0,881	
<b>DTF2</b>	0,931	
<b>DTF<sub>11</sub></b>	0,894	
<b>DTF<sub>12</sub></b>	0,937	
<b>DTV1</b>	0,867	
<b>DTV2</b>	0,904	
<b>LIN1</b>		0,775
<b>LIN2</b>		0,779
<b>LKB1</b>		0,760
<b>LLM1</b>		0,800
<b>LLM2</b>		0,734
<b>LSC1</b>		0,839
<b>LSC2</b>		0,813
<b>OCE1</b>		0,898
<b>OCE2</b>		0,889
<b>OCL1</b>		0,842
<b>OCR1</b>		0,870
<b>OCR2</b>		0,884

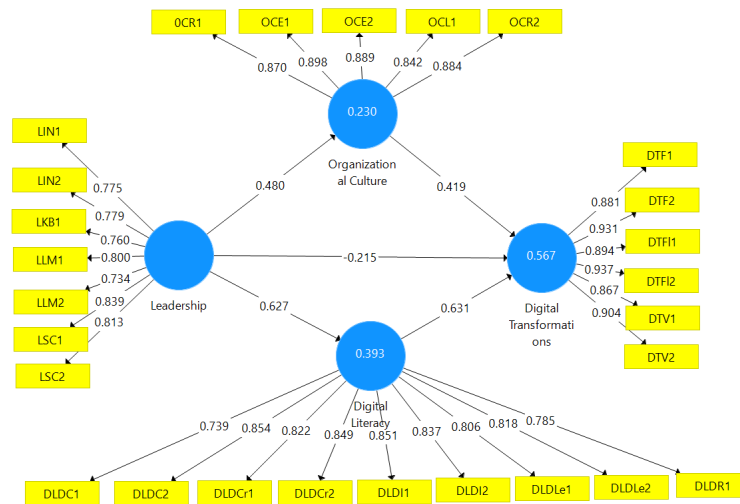
### Inner Model

#### R-square

The Path coefficients and R-square are being used in this research. The path coefficients are a reference that can be used to determine the partial magnitude of an impact, which can range from 0 to 1 and be either positive or negative. R-square measures model quality criteria, and the coefficient of determination demonstrates how much of an influence

exogenous latent variables have on endogenous latent variables. These metrics are called the coefficient of determination (Hair et al. 2010).

**Figure 1**  
 Path Diagram



The effect of organizational culture on digital transformation has an R Square value of 0.321 and an adjusted R Square value of 0.315. Therefore, organizational culture has a 0.315 or 31.5% impact on digital transformation. The impact of the organizational culture construct on digital transformation is classified as weak because the Adjusted R Square is less than 33% (table 4). Factors connected to the organization's culture could result in a lack of influence. When determining whether or not you will be able to embrace digital transformation, the culture and environment into which people are introduced become essential determining factors, as highlighted in the relevant academic literature (Harvey & Drolet, 2006).

**Table 4**

R-Square

	R Square	R Square Adjusted
<b>Digital Literacy</b>	0,393	0,387
<b>Digital Transformations</b>	0,567	0,554
<b>Organizational Culture</b>	0,230	0,223

The simultaneous impact of organizational culture and digital transformation has an R Square value of 0.230 and an adjusted value of 0.223. This indicates that the simultaneous impact of organizational culture and digital transformation on green business strategy is 0.208 or 20.8%. The influence of organizational culture and digital transformation constructs is weak because the adjusted R-square is less than 33% (table 4). This condition may happen because of the challenge frequently presented by organizational culture in the flexibility to make adjustments. This is especially true when implementing innovative practices that incorporate green values requires the formation of structures, processes, and incentives that then shape behavior within the business (Andreas et al., 2011).

#### **Direct and Indirect Effects**

According to Table 5, the direct relationship between digital transformation and green business strategy is equal to 0.422, which indicates that for every unit increase in digital transformation, the green business strategy grows by 42.2%. The straight correlation between organizational culture and digital transformation is 0.567, which indicates that for every unit with higher organizational culture, there is a corresponding rise in digital transformation of 56.7%. The direct correlation between organizational culture and green business is 0.081, which indicates that if organizational culture rises by one unit, the strategy for green business rises by 8.1%, and all effects are positive.

The impact of organizational culture overall on the green business strategy is 0.241, which indicates that if organizational culture changes, digital transformation will have an indirect impact.

**Table 5**

Direct and Indirect Effect

Direct Effect

	Digital Literacy	Digital Transformations	Leadership	Organizational Culture
<b>Digital Literacy</b>		0,631		
<b>Digital Transformations</b>				
<b>Leadership</b>	0,627	-0,215		0,480
<b>Organizational Culture</b>		0,419		

Indirect Effect

	Digital Literacy	Digital Transformations	Leadership	Organizational Culture
<b>Leadership</b>		0,596		

## **HYPHOTHESIZED AND RELATIONSHIP**

### **The Influence of Leadership On Digital Transformation**

The hypothesis testing conducted on the leadership variable's impact on digital transformation yielded a p-value of 0.008 ( $p < 0.05$ ) and a t-statistic of 3.666 ( $p > 1.96$ ). These results suggest that there is a significant relationship between leadership and digital transformation, as indicated in Table 5. The acceptance of Hypothesis 1 has been confirmed. The influence of leadership on digital transformation is characterised by a

notable and adverse effect. In accordance with the findings of Frick et al., (2021). The findings of the study indicate that there is no significant effect of leadership empowerment on the readiness to adopt digitalization. Furthermore, a negative correlation is observed between leadership empowerment and the willingness to utilise digitalization.

The negative association between these two variables is a challenging finding. Such circumstances are plausible. When leadership priorities are misaligned, there is friction, competitiveness, and opposing discourses (Clegg et al., 2006). Uncertain expectations or guidelines, insufficient communication, unclear limits of jurisdiction, diverse personalities, conflicts of interest, and organizational changes are all common sources of conflict (Overton & Lowry, 2013).

Another aspect that contributes to a negative connection is a leader's resistance to change (Hubbart, 2023). According to Ifenthaler et al., (2021), leaders that are averse to change induce resistance to build among employees, particularly personnel with limited access to technology. Authoritarian and laissez-faire leadership styles, in particular, show a favourable link with resistance to change (ŞAHİNLİ & GEMLİK, 2022).

### **The Influence of Leadership On Organizational Culture**

The results of evaluating the leadership variable hypothesis on organizational culture yielded a p-value of 0.000 ( $p < 0.05$ ) and a t-statistic of 4,669 ( $p > 1.96$ ), showing that leadership has an impact on organizational culture (table 5). The second hypothesis is adopted (Costa et al., 2023). A company's culture is heavily shaped and impacted by its leadership. Effective leadership is required for the implementation of information technology and the improvement of business culture. Leadership during information technology application has a significant impact on how staff members accept new technologies and develops a culture that encourages innovation, collaboration, and adaptation (Polgan et al., 2023).

To shift organizational culture towards digitalization, a transformational leader is required. Transformational leaders are recognised for their capacity to generate common visions, set goals, and foster innovation (Karimi et al., 2023). Transformational leaders

create an organizational culture that encourages individuals to think creatively and offer new ways to use technology to improve processes, goods, or services (Shafi et al., 2020). Jun and Lee back up Shafi et al.'s assertion. According to his findings, there is a considerable positive association between transformative leadership and employee innovation (Jun & Lee, 2023).

Influence can also be strengthened by role modelling. Leaders set the tone for organizational culture. Employees tend to follow leaders who demonstrate a positive attitude and dedication to IT adoption (Cortellazzo et al., 2019; Polgan et al., 2023). The most impactful is that in the context of digital culture, people-oriented culture has a significant meaning (Leal-Rodríguez et al., 2023).

### **The Influence of Leadership On Digital Literacy**

The findings of evaluating the leadership variable hypothesis on digital literacy yielded a p-value of 0.000 ( $p < 0.05$ ) and a t-statistic of 10,943 ( $p > 1.96$ ), showing that leadership has an impact on digital literacy (table 5). The third hypothesis is accepted. Leadership has a critical role in influencing the growth of digital literacy among individuals and organisations. According to the findings of Niță & Guțu, (2023), research, the rising involvement of conventional transformational leadership plays a part in the development of digital literacy. These findings demonstrate that leaders have the ability to shape the environment and culture of digital literacy. Digital literacy is a vital ability for individuals and has a significant impact in obtaining professional success (Vodă et al., 2022).

Leaders' ability to articulate a cohesive and meaningful vision of the digitization process, as well as their ability to implement strategies to make it happen (Zhu et al., 2022). Allocating resources to training programmes (Detlor et al., 2022), integrating digital tools into operational procedures (Leaning, 2019), and prioritisation to stay up with technological advances (Kabakus et al., 2023), are all actions that must be taken.



### **The Influence of Organizational Culture On Digital Transformation**

The results of testing the hypothesis of the organizational culture variable on digital transformation received a p-value of 0.000 ( $p < 0.05$ ) and a t-statistic of 5,648 ( $p > 1.96$ ), showing that organizational culture has an influence on digital transformation (table 5). The fourth hypothesis is approved. Organizational culture has significant effects on digital transformation (Lan, 2021).

This result connects the previous finding. It was established by Setiono et al. (2022) that an organization's culture could influence digital transformation. To go into more detail, Diuzheva et al. (2021) mentioned in their research that to maximize the impact of an organization's digital transformation, the organizational culture must be changed to a digital type of organizational culture. This change is necessary to maximize the impact of an organization's digital transformation. The information exchange process between people and organizations is altered due to digitalization. Additionally, the establishment of a system of digital organizational culture is facilitated as a result of digitalization, which helps with the execution of transformational digital processes.

It can be difficult to establish strong ties and influence between organizational culture and digital change. To effectively respond to the changing technology landscape and market dynamics, the digital transformation process necessitates the ability to be nimble and flexible (AlNuaimi et al., 2022). An organizational culture that is willing to change and agile in its approach will be better positioned to deal with disruptions and capitalise on the numerous opportunities in digital ecosystems (Lindgren & Oskarsson, 2023).

**Table 6**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O-STDEV))	P Values	Hypothesis
Digital Literacy -> Digital Transformations	0,631	0,640	0,080	7,885	0,000	H1 Accepted
Leadership -> Digital Literacy	0,627	0,633	0,057	10,943	0,000	H2 Accepted
Leadership -> Digital Transformations	-0,215	-0,228	0,081	2,660	0,008	H3 Accepted
Leadership -> Organizational Culture	0,480	0,486	0,103	4,669	0,000	H4 Accepted
Organizational Culture -> Digital Transformations	0,419	0,431	0,074	5,648	0,000	H5 Accepted
Leadership -> Digital Literacy -> Digital Transformations	0,396	0,404	0,059	6,758	0,000	H6 Accepted
Leadership -> Organizational Culture -> Digital Transformations	0,201	0,210	0,059	3,409	0,001	H7 Accepted

### **The Influence of Digital Literacy on Digital Transformation**

The results of testing the hypothesis of the digital literacy variable on digital transformation received a p-value of 0.000 ( $p < 0.05$ ) and a t-statistic of 7,885 ( $p > 1.96$ ), showing that digital literacy has an influence on digital transformation (table 5). Hypothesis 5 has been accepted. Digital literacy, defined as the ability to access, comprehend, and apply digital technology and information, is critical to the success of digital transformation (Putri, 2023).

According to (Torukwein David-West, 2022) research on educators, digital literacy comprises the human capacity to understand and use diverse digital tools and platforms. Digital literacy is a necessary prerequisite for efficiently utilising digital technologies (Nikou et al., 2022). Employees and stakeholders will struggle to adapt to new digital tools and platforms if they lack digital literacy (S. Gupta, 2018).

Previous research strongly supports the notion that digital literacy is a crucial necessity for effectively utilizing digital technology in both public (Ramdhan, 2023) and multi-dimensional organizations (Cetindamar Kozanoglu & Abedin, 2021b).

### **The Influence of Leadership on Digital Transformation through Digital Literacy**

The results of testing the leadership variable on digital transformation with the mediation variable digital literacy yielded a p-value of 0.000 ( $p < 0.05$ ) and a t-statistic of 6,758 ( $p > 1.96$ ), indicating that leadership influences digital transformation through digital literacy (table 5). Hypothesis 6 has been accepted. Through digital literacy, leadership has a positive and significant influence on digital transformation.

Leadership plays a critical role in driving the success of the digital transformation process, and one critical aspect of this influence is maintaining digital literacy in an organizational context through the application of new cultural principles (Schiuma et al., 2021), as well as media education and continuous use of digital media (Yassen et al., 2023).

### **The Influence of Leadership on Organizational Culture through Digital Literacy**

The results of testing the leadership variable on organizational culture with the mediation variable digital literacy yielded a p-value of 0.001 ( $p < 0.05$ ) and a t-statistic of 3,405 ( $p > 1.96$ ), indicating that leadership has an influence on organizational culture via digital literacy (table 5). Hypothesis 7 has been accepted. Through digital literacy, leadership has a positive and significant impact on organizational culture.

In today's digital world, when the concept of digital literacy is crucial, the role of leadership in building organizational culture is critical. According to Cortellazzo et al., (2019), leaders play an essential role in shaping digital culture. They must make connections with diverse stakeholders distributed across multiple areas. Furthermore, leaders must prioritize the facilitation of collaborative activities in a complicated context while remaining mindful of critical ethical concerns. Leadership is critical in driving organizational digital transformation and developing a learning culture within the organization through the promotion of digital literacy (Hargitai & Bencsik, 2023).

The impact of leadership on organizational culture through digital literacy is linked to the creation of an environment that values technology advancements, knowledge acquisition, collaborative efforts, inventive thinking, and adaptability (Cabrera et al., 2008). By

embracing and encouraging digital literacy, leaders may develop an organizational culture that is responsive to the fast-changing digital context. This proactive approach allows organisations to effectively navigate and develop in the digital age (Cortellazzo et al., 2019).

## CONCLUSION

This research concluded: 1). Leadership has a negative and significant impact on digital transformation, particularly leadership empowerment does not have a significant effect and exhibits a negative association to willingness to use digitalization; 2). A company's culture is heavily shaped and impacted by its leadership. Effective leadership is required for the implementation of information technology and the enhancement of corporate culture; 3). Leadership plays a critical role in influencing the development of digital literacy among individuals and organizations; 4). Organizational culture has a huge impact on digital transformation. 5). Digital literacy, or the ability to navigate, understand, and use digital technology and information, is critical to the success of digital transformation; 6). Leadership influences digital transformation positively and significantly through digital literacy; 7). Leadership influences organizational culture positively and significantly through digital literacy.

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