



The Mediating Role of Organizational Culture between Artificial Intelligence and Digital Transformation

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Abstract

The current study aims to identify the mediating role of organizational culture in the relationship between artificial intelligence (AI) and digital transformation in the General Directorate of Education in Najaf Governorate. AI was measured through systems and programs, equipment and infrastructure, and human resource capacity. Organizational culture was used as the mediating variable, measured through effects, beliefs and values, basic assumptions, cultural mindset, and cultural practices. Digital transformation was measured through the digital transformation of internal processes, the digital transformation of business models, the digital transformation of employee experience, and the digital transformation of customers. The study was conducted on 115 individuals working in the General Directorate of Education in Najaf Governorate. The study concluded that there is a statistically significant positive effect of AI on digital transformation, given the mediating role of organizational culture among employees in the General Directorate of Education in Najaf Governorate.

Keywords: Artificial Intelligence, Organizational Culture, Digital Transformation

Introduction

Digital transformation has become an organizational necessity in today's turbulent business environment, as pervasive digital technologies have forced organizations to undertake digital transformation initiatives to align with changing business dynamics and survive in the digital economy. Organizational culture has been found to influence an organization's digital transformation efforts, while the role of organizational culture in digital transformation has gained prominence in the literature. This study attempts to fill the literature gap by investigating the relationship between organizational culture, artificial intelligence, and digital transformation efforts (Dias, 2024:8) ^[18].

As these changes continue to unfold, it has become increasingly clear that technology is transforming not only the way we live, but also the way we work. From this perspective, several questions arise, including how the rapid development of automation and artificial intelligence technologies will continue to impact organizational culture, and the potential impacts on employee well-being, work happiness, and mental health as they become increasingly integrated into many organizational aspects. Ultimately, the dynamic interplay between organizational culture and technology is complex and multifaceted, positioning itself for long-term success in an increasingly unstable and uncertain environment. Organizational culture plays a critical role in the successful adoption and implementation of AI technologies. A culture that encourages innovation, flexibility, and openness to new technologies can significantly enhance the effectiveness of AI applications. When employees feel their input is valued in the adoption process, they are more likely to support and advocate for these changes. Leadership also plays a critical role in fostering a culture that embraces AI. Leaders must clearly and consistently communicate the value and potential of AI and align these new tools with the broader goals and values of the organization (Ying & Jin, 2024:171) ^[34].

The mediating role of organizational culture in the relationship between AI applications and digital transformation is a critical area of study. Understanding how organizational culture influences the adoption and effectiveness of AI technologies can provide valuable insights for organizations looking to leverage AI for competitive advantage (Osman *et al.*, 2023:1-3) ^[28].

Literature Review

First: The Concept of Artificial Intelligence

The history of artificial intelligence as an academic field dates back to the 1950s. The term "artificial intelligence" was first introduced during an interdisciplinary program offered at Dartmouth in 1956. The program aimed to study the possibility of machines mimicking human intelligence, and involved researchers from various fields, including management scientists, mathematicians, and philosophers. Despite early promises of practical utility, AI largely failed to materialize and faced numerous obstacles during the 1960s and 1970s (Santana & Díaz, 2023:1972) ^[31]. The biggest of these was the lack of computational power to do anything substantial. Research funding gradually dried up, and the field lost momentum. During the 1980s and 1990s, governments and corporations made significant investments in research related to expert systems, which led to renewed interest in artificial intelligence. Machine learning and neural networks began to flourish as practitioners incorporated statistics and probability into their applications (NGUYEN *et al.*, 2022:225) ^[25]. Meanwhile, the personal computing revolution has begun. Over the next decade, digital systems, sensors, and the internet will become more prevalent, providing all kinds of data for machine learning experts to use when training systems that digitally transform business models (Benbya *et al.*, 2020:2) ^[8]. Artificial intelligence (AI) is "a broad set of methods, algorithms, and techniques that make software 'intelligent' in a way that may appear human-like to an outside observer." "Human-like" machine intelligence derives from machines created to think like humans but also to behave rationally. AI is viewed as an innovative technology or the sum of various technological developments as a privilege of the private technology sector with little public regulation (Puaschunder, 2019:2) ^[29]. In this regard, employees build an attachment to their organizations. This connection is often referred to as "human resource." This idea is typically linked to individuals' identities and their attachment to their employer. Many researchers assume that the construct of governance is linked to socially acceptable behaviors, which typically emerge when employees are willing to accept the employer's values, norms, and goals. In other words, employees are committed to their employers (5: Camilleri *et al.*, 2023) ^[15]. These technologies are defined as "a set of interconnected technologies used to solve problems and perform tasks that, when performed by humans, require thought. Ideal interactions between AI systems and human skills support organizational effectiveness and employees. We also highlight how human-AI collaboration is impacting and changing the nature of work and the skills required for success in today's organizational landscape" (4: Berente *et al.*, 2021) ^[9]. Employees' roles toward the use of AI at work and their experiences, particularly through monitoring and control of platform-based work, are important. Established technology acceptance models recognize that employee attitudes are an important predictor of technology use. More positive attitudes are more likely to lead to efforts to improve skills and functional use of technology (7: Ågerfalk, 2020) ^[1]. By considering the interplay between organizational culture, AI-enabled leadership, employee training, team effectiveness, and employee engagement, companies can develop more effective AI integration strategies. These insights can inform decision-makers, guide them in adopting AI technologies strategically, and align AI initiatives with their broader organizational goals (Rožman *et al.*, 2023:7)

[30].

Second: Challenges of AI

Benbya *et al.*, 2020 ^[8], point out that there are several challenges, including:

1. The problem of deploying AI is one of the main concerns related to AI, and it relates to organizational change in organizations, as well as employee resistance at present.
2. It is relatively easy to develop an AI project, and its goal is only to prove that the technology is feasible in concept. On the other hand, deployment requires a variety of tasks and capabilities that may be lacking. These could include, for example, integration with existing technology structures and legacy infrastructure, changes in business processes and organizational culture, employee reskilling or upskilling, and critical data.
3. Organizational change management approaches: Deploying full-scale production tends to take much longer and cost much more.
4. Employees may be concerned about AI replacing them, which could lead employees to resist every change the organization makes. This is inherently unwelcome behavior in organizations.
5. Organizations may face many challenges, including those related to employees who lack sufficient skills or expertise in the field.

Third: Dimensions of Artificial Intelligence

Kareem & Naif (2024:85) ^[22] identified three dimensions of artificial intelligence:

1. Systems and software: This includes the underlying algorithms that drive artificial intelligence, such as machine learning, deep learning, and natural language processing. Organizations need to select and develop appropriate algorithms for their specific needs and platforms and tools that support the development, deployment, and management of AI applications (Alier *et al.*, 2025:1-2) ^[3]. However, developing cross-platform applications also presents challenges. Ensuring consistent performance and functionality across diverse systems can be complex, requiring careful design and testing. Developers must also navigate the diverse hardware capabilities and user interface guidelines of different platforms. Despite these challenges, development frameworks and tools continue to evolve. Improving the efficiency and effectiveness of multi-platform solutions. In conclusion, cross-platform software development represents a strategic approach to enhancing compatibility and accessibility across devices and systems (Boon *et al.*, 2025:173) ^[12].
2. Hardware and Infrastructure: AI infrastructure is a dynamic ecosystem that facilitates enhanced AI workflows. It provides rapid methods for efficient data collection, preprocessing, model training, validation, and deployment, leading to enhanced innovation and operational efficiency (Wang *et al.*, 2024:1) ^[32]. It doesn't stop there. Thanks to its ability to handle high computational demands and massive datasets, AI infrastructure enhances the speed and accuracy of decision-making in applications such as image recognition and natural language processing (McMillan & Varga, 2022:1-5) ^[24].
3. Human Resources Capacity: Organizations need to attract and retain skilled AI professionals, such as data scientists, machine learning engineers, and AI researchers, and invest in training and education programs to develop core AI assumptions among their existing workforce

(Chowdhury *et al.*, 2023:7) ^[16].

However, concerns about bias and job displacement must be addressed to ensure that the benefits of AI are realized without compromising ethical and social considerations. Ultimately, the success of AI in HR practices will depend on how effectively organizations balance the benefits of automation with the need for human empathy and judgment in HR practices (Gabsi, 2024:1-3) ^[20].

Third: The Concept of Organizational Culture

The concept of culture in organizations must be taught and shared. It emphasizes that organizational cultures are based on cognitive structures that help explain how workers think and make choices. Organizational culture is a way to hold the entire organization together. Defining organizational culture also provides a basis for assessing the differences between organizations operating within the same national culture and whether they can survive. The concept of culture is generally used in the understanding of organizations today (Orieno *et al.*, 2024:170) ^[27]. Organizational culture is complex, and although there is no single agreed-upon definition of organizational culture, it is often defined as "a set of shared assumptions, values, and beliefs that are reflected in its practices and goals and help its members understand organizational functions." Some might say that organizational culture is a system of shared beliefs held by organizational members, and these shared meanings distinguish the organization from other organizations. Organizations have shared behavioral patterns that employees use to achieve a goal, which are taught to new members and represent the implicit, intangible level of the organization (FREDRIKSE & SKJÆRVIK, 2021:3) ^[19]. Digital organizational culture relates to the values, expectations, beliefs, and collective understanding of how the organization manages itself in a digital context, leading to a new approach to collaboration within organizations. Equality in shared decision-making and the integration of information technology are essential requirements for developing a digital organizational culture that fosters positive employee attitudes, which includes integrating information technology with innovation and integrating employee mindsets with digital strategy. A key component of the new business model is the integration of emerging technologies into the organization (Jewapatarakul & Ueasangkomsate, 2024:3) ^[21]. Organizations that previously relied on traditional operational and communication methods are now embracing digital transformation to maintain competitiveness in today's hyper-connected environment. The introduction of digitalization has led to a significant shift in organizational culture, which encompasses the collective values, beliefs, attitudes, and rituals that define a company's identity. With the development of digital tools such as email, instant messaging, and video conferencing, traditional face-to-face meetings have given way to virtual communication. In terms of establishing human connections and fostering a sense of community within the organization, the emergence of rapid and efficient information exchange has brought both benefits and challenges. Another notable impact is collaboration (Deep, 2023:397).

Fourth: The Importance of Organizational Culture

Organizational culture is an important concept for several reasons. First, understanding organizational culture can be beneficial for applicants. They may have a better idea of

whether they would like to work for a particular company. Second, understanding organizational culture can aid in training new employees. Third, understanding organizational culture can help leaders identify potential sources of problems within the organization. Further implications of organizational culture can be explained as follows: (Aij & Joosten, 2016:17)

1. Organizational culture motivates employees to embrace new innovations, good product quality, and creative thinking.
2. Responding to customer needs and providing exceptional customer service is essential to an organization.
3. Organizational culture helps address global competition, technological trends, and a changing environment.
4. Organizational culture teaches all members of an organization how to behave toward stakeholders through organizational behavior.
5. A strong organizational culture provides many benefits to any organization. For example, it fosters high employee morale and creates a competitive environment within the organization.
6. Employees are loyal to the company and provide unparalleled customer service.

Fifth: Dimensions of Organizational Culture

FREDRIKSE & SKJÆRVIK, 2021:4), Dias ^[18], 2024:19, and Baojing *et al.*, 2025:6 indicate that the dimensions are as follows:

1. Effects: What you see, hear, and feel when you are in an organization. This is the easiest dimension to observe when you enter an organization. Effects provide a context for employees to understand what is expected within the organization. This can be Language, behavior, and physical symbols such as statements, meetings, inspection reports, clothing codes, personal protective equipment, posters, and bulletins.
2. Shared Beliefs and Values: These are the ideals, goals, values, aspirations, ideologies, and rationales shared by most members within an organization. These are the values that are supposed to create an image of the organization. Values develop through the influences of cultural and social contexts. Shared values within an organization's environment are standards for what individuals consider right or wrong. Values serve an important function in guiding the norms or expected behavior within an organization.
3. Fundamental Assumptions: Fundamental assumptions refer to beliefs about the organizational environment that are taken seriously. They are the source of values in the culture and what drives actions within the organization. Assumptions are unconscious thoughts, beliefs, perceptions, and feelings. Employees share beliefs and values as they work together. Employees observe successful problem-solving and accomplishments based on their beliefs and values, and discard those that do not work within the organizational context. These beliefs and values become ingrained over time, becoming part of the subconscious and becoming non-negotiable.
4. Cultural Mindset: A key element of effective digital transformation is developing an open and flexible organizational culture. This perspective fosters acceptance of new concepts, innovation, critical analysis, and reassessment of established knowledge and

practices. A culture defined by "flexibility, creativity, entrepreneurship, and risk-taking" has been recognized as the most reliable indicator of innovation. This open mindset naturally evolves into a digital culture, defined as "an organizational culture that endorses the principles and conventions for using digital technology." Extending the concept of organizational culture to the digital realm, it can be argued that in a digital workplace, the culture must evolve to include digital behaviors for long-term sustainability.

5. **Cultural Practices:** Specific practices that facilitate digital transformation refer to a cultural mindset. First, it is essential to establish a strong orientation toward innovation, which includes "fostering a culture of innovation" and "promoting awareness of digital concepts and entrepreneurship." This innovation-focused culture improves an organization's ability to identify opportunities early and detect weak signals from the market. Second, it is essential to establish a culture of continuous learning and collaboration. This includes fostering "innovation and teamwork and encouraging" employees to participate in training sessions in an effort to learn new knowledge. These practices encourage the acquisition of skills and knowledge essential for the successful implementation of digital transformation.

Sixth: The Concept of Digital Transformation

Digital transformation refers to the process of integrating digital technology into all aspects of business, leading to fundamental changes in how the business operates and delivers value to customers. Transformation enables Digital transformation enables organizations to create consistent and personalized customer experiences, enhancing customer loyalty and retention. Furthermore, digital technologies such as automation have the potential to streamline processes, reduce the time spent on manual tasks, and eliminate the possibility of human error. Digital transformation is the process of using digital technologies to fundamentally change the way a company operates and delivers value to its customers. This can mean using new technologies such as cloud computing, artificial intelligence, and big data analytics (Alshammari *et al.*, 2024:457). Digital transformation is a broad term that refers to the process of integrating digital technologies into all aspects of business and society. This includes changes in the way organizations operate, how they interact with customers, and even the way we think (Baiyere *et al.*, 2025:6). Digital transformation represents a game-changing innovation in corporate operations. Cloud computing, artificial intelligence, and data analytics are examples of technological breakthroughs that can help companies gain a competitive advantage. These technologies allow companies to increase their agility, stimulate innovation, and prioritize customer-centric approaches. Integrating these technologies goes beyond mere adoption. The current change in business process paradigm includes improved processes, restructuring frameworks, and methods. Creative ways to engage with customers. The concept of digital transformation requires investigating how these revolutionary core technologies act as a driving force for success and have been widely adopted as a dominant trend across many sectors within organizations (Deep, 2023:396). Here, digital transformation is widely viewed as a driver of change in all contexts, particularly in business, and impacts all aspects of human life based on the use of technologies. A distinction must be made between the concepts of digital transformation and digitization. Digital transformation refers to changes arising from digital technologies, while

digitization refers to the conversion of information from analog to digital form and the automation of processes through information technology. The term "transformation" encompasses the ability to understand and take the required actions when organizations encounter new technologies; it should not be confused with simple change (Kraus *et al.*, 2021:4).

Seventh: Dimensions of Digital Transformation

Westerman *et al.*, 2014:1-3 and Bonnet & Westerman, 2020:1) identified four basic dimensions of digital transformation:

1. Digital Transformation of Internal Processes

This transformation involves automating the organization's core processes, i.e., transforming them from manual to digital. This includes connected processes, i.e., those involving the flow of data and information between different departments, and dynamic processes that adapt to changes in the business environment. Furthermore, this transformation relies on decision-making based on available data and its analysis, which helps improve efficiency and productivity and reduce errors (Nicoletti & Appolloni, 2025:91).

2. Digital Transformation of Business Models

This aims to: Transforming the service industry to provide added value. This includes three key elements: digitally transforming business models, i.e., transforming traditional models into digital models to leverage modern technology; creating entirely new digital business models based on digital technology; and globalizing services, i.e., expanding services to global markets using digital tools (Böttcher *et al.*, 2024:738).

3. Digitally transforming the employee experience

Experience has shown that employees can be the greatest inhibitors or enablers of digital transformation success. Therefore, some organizations have begun to focus on the employee experience as closely as they do on the customer service experience. There are three key elements to digitally transforming the employee experience: capability development, i.e., developing employees' skills in using digital technologies; readiness, i.e., preparing employees for the changes that will occur as a result of digital transformation (Yoma *et al.*, 2025:603).

4. Digitally transforming the customer experience

The digital transformation of the customer experience is a vital foundation for organizations' success in the current digital age. This transformation includes three key elements: customer experience design, digitizing the customer journey, and digital touchpoints. Through these elements, organizations can control and continuously improve the digital transformation of the customer experience. Digital transformation aims to create a seamless and personalized customer experience that meets customer needs and expectations at every touchpoint. This transformation contributes to building strong customer relationships and increasing customer loyalty, leading to a sustainable competitive advantage (Bonnet & Westerman, 2020:1).

Research Methodology

First: The Problem of the Study

The term "e-transformation" has gained significant research interest in administrative circles. Digital transformation tools

and processes have become an integral part of the administrative system, aiming to improve administrative efficiency, develop communication methods, and provide better services. However, the most important question remains: How does this artificial intelligence affect digital transformation? Organizations are responsible for implementing and applying these new technologies. Therefore, this study aims to explore the mediating role of organizational culture in the relationship between artificial intelligence and digital transformation in the General Directorate of Education in Najaf Governorate. This study distinguishes itself by highlighting the unique experience of the General Directorate of Education in Najaf Governorate, as the state strives to achieve comprehensive digital transformation. The importance of this study lies in its ability to fill a significant research gap, as most existing studies focus on general aspects of artificial intelligence in education, such as the digital skills gap or the overall impact on administrative institutions, without delving into digital transformation.

All directorates face unique challenges in implementing artificial intelligence, including limited financial resources, inadequate infrastructure, and potential resistance to change within the prevailing organizational culture. Therefore, understanding the impact of these challenges is an urgent necessity to ensure the success of the implementation of artificial intelligence. The General Directorate of Education in Najaf Governorate serves as an ideal model for this study, as the directorate actively participates in artificial intelligence initiatives, including the implementation of modern administrative systems, the use of e-learning platforms, and the development of digital communication channels. Based on previous research efforts on the various relationships between the study variables, the researchers were able to formulate the study problem in the following question: What is the degree of impact of artificial intelligence, with its dimensions represented by: systems and programs, equipment and infrastructure, and the human resources' ability to digitally transform, with its dimensions represented by the digital transformation of internal operations, the digital transformation of business models, and the digital transformation of employee experiences and customers, through the mediating role of organizational culture, with its dimensions represented by: influences, beliefs and values, basic assumptions, cultural mindset, and cultural practices?

Second: The Importance of the Study

1. The current study adds new variables that contribute to enriching knowledge in the field of business administration. It also provides significant benefits to administrators, researchers, and students in these fields, in addition to many fields related to the study variables, as researchers have received insufficient and limited attention to these variables.

2. The current study contributes to the development of a theoretical model that illustrates how organizational culture influences the relationship between artificial intelligence and digital transformation. This helps deepen the theoretical understanding of how these variables influence each other.
3. The study deepens the understanding of artificial intelligence and provides insights into how it influences organizational culture within the General Directorate of Education in Najaf Governorate, contributing to the implementation of digital transformation within the directorate.
4. The researchers expect that the results of the current study will help officials in the surveyed directorate gain a deeper understanding of how to enhance artificial intelligence and digital transformation through the organizational culture process.

Third: Study Objectives

The study aims to achieve the following:

1. Highlight the importance of artificial intelligence and the importance of transitioning from traditional to electronic work.
2. Highlight the concepts of artificial intelligence, organizational culture, and digital transformation.
3. Explore the nature of the relationship between artificial intelligence, organizational culture, and digital transformation.
4. Benefit from the results and employ them to achieve the desired development and improvement of the institution under study.
5. Develop a set of practical recommendations for artificial intelligence technologies through the organizational culture process, effectively leading to digital transformation within the administrative apparatus of the General Directorate of Education in Najaf Governorate. This will also provide scientific and practical implications that will benefit officials in the directorate under study and researchers in a deeper understanding of the variables in the current study.

Fourth: The hypothetical study plan:

The hypothetical plan in Figure (1) includes three sets of variables, as follows:

- 1) The independent variable: (artificial intelligence): including (systems and programs, equipment and infrastructure, and human resource capabilities)
- 2) The mediating variable: (organizational culture): including (effects, adopted beliefs and values, basic assumptions, cultural mindset, and cultural practices)
- 3) The dependent variable: (digital transformation): including (digital transformation of internal processes, digital transformation of business models, digital transformation of employee experience, and digital transformation of customer engagement).

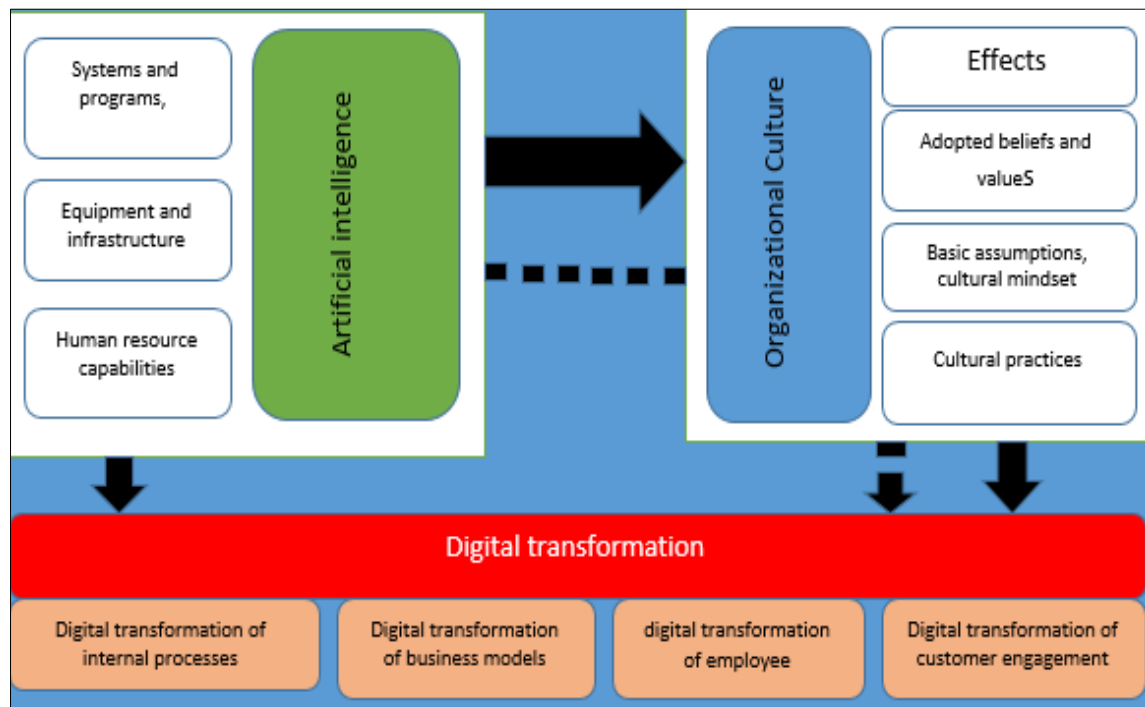


Fig 1: The Hypothetical Framework for the Study

Fifth: Study Hypotheses

- Main Hypothesis 1: There is a significant correlation between artificial intelligence and digital transformation.
- Main Hypothesis 2: There is a significant correlation between organizational culture and digital transformation.
- Main Hypothesis 3: There is a significant correlation between artificial intelligence and organizational culture.
- Main Hypothesis 4: There is a significant influence between artificial intelligence and digital transformation.
- Main Hypothesis 5: There is a significant influence between organizational culture and digital transformation.
- Main Hypothesis 6: There is a significant influence between artificial intelligence and organizational culture.
- Main Hypothesis 7: There is a significant influence between artificial intelligence and digital transformation through the mediating role of organizational culture.

Data Analysis and Statistical Methods

1. Correlation Analysis between Study Variables

This section focuses on testing the three hypotheses related to correlation relationships. The significance of the relationship will be tested using the correlation coefficient test and the significance test (P). These are as follows:

First Main Hypothesis: There is a significant correlation between artificial intelligence and digital transformation.

From a review of the data in Table (1), it becomes clear that there is a significant and positive correlation between the two variables, reaching (0.654). This relationship is significant based on the calculated (P) value, as its value was less than the study's adopted significance level of (0.05). At the sub-level, the relationships were significant and positive, based on the calculated (P) value, as its value was less than the study's adopted significance level of (0.05). Here, the statistical decision is that the hypothesis is confirmed.

Table 1: Results of the Correlation between Artificial Intelligence and Digital Transformation and its Dimensions

v	Y1	Y2	Y3	Y4	Y
X1	.278**	.444**	.524**	.600**	.547**
Sig.	.009	.000	.000	.000	.000
X2	.468**	.604**	.537**	.415**	.598**
Sig.	.000	.000	.000	.000	.000
X3	.370**	.417**	.328**	.257*	.404**
Sig.	.000	.000	.002	.016	.000
X	.481**	.625**	.584**	.526**	.654**
Sig.	.000	.000	.000	.000	.000

The second main hypothesis: There is a significant correlation between organizational culture and digital transformation. Reviewing the table's data reveals a significant and positive correlation between the two variables, reaching 0.731. This relationship is significant based on the calculated P value, which was lower than the study's significance level of 0.05. At the sub-level, the relationship was significant and positive, based on the calculated P value, which was lower than the study's significance level of 0.05. Here, the statistical conclusion is that the hypothesis is confirmed.

Table 2: Results of the correlation between organizational culture and digital transformation and its dimensions

v	Y1	Y2	Y3	Y4	Y
M1	.496**	.548**	.345**	.360**	.513**
Sig.	.000	.000	.001	.001	.000
M2	.489**	.535**	.433**	.386**	.542**
Sig.	.000	.000	.000	.000	.000
M3	.510**	.462**	.354**	.322**	.483**
Sig.	.000	.000	.001	.002	.000
M4	.577**	.637**	.580**	.610**	.708**
Sig.	.000	.000	.000	.000	.000
M5	.626**	.466**	.442**	.341**	.548**
Sig.	.000	.000	.000	.001	.000
M	.711**	.691**	.565**	.525**	.731**
Sig.	.000	.000	.000	.000	.000

The third main hypothesis: There is a significant correlation between artificial intelligence and organizational culture. From a review of the data in Table (3), it is clear that there is a significant and positive correlation between the two variables, amounting to (0.663). This relationship is significant based on the calculated (P) value, which was smaller than the study's adopted significance level of (0.05). At the sub-level, the relationships were significant and positive, based on the calculated (P) value, which was smaller than the study's adopted significance level of (0.05). Here, the statistical decision is to verify the hypothesis.

Table 4: Results of the correlation between artificial intelligence and organizational culture and its dimensions

v	M1	M2	M3	M4	M5	M
X1	.314**	.371**	.261*	.423**	.429**	.471**
Sig.	.003	.000	.014	.000	.000	.000
X2	.365**	.344**	.581**	.453**	.277**	.538**
Sig.	.000	.001	.000	.000	.009	.000
X3	.373**	.406**	.411**	.457**	.415**	.543**
Sig.	.000	.000	.000	.000	.000	.000
X	.450**	.476**	.544**	.568**	.472**	.663**
Sig.	.000	.000	.000	.000	.000	.000

2. Analysis of Influence Relationships

This section includes testing the main influence hypotheses, relying on the regression coefficients between the main variables and their constituent sub-dimensions. The significance value will be tested based on the calculated (f) value and comparing it to the tabulated (f) value, which is acceptable if the calculated value is greater than the tabulated value. In addition, the significance level (P-Value) indicates that the hypotheses are acceptable when the P-Value is less than 0.05. Fourth Main Hypothesis: There is a significant influence relationship between artificial intelligence and digital transformation.

From the results of Table (5), it is clear that there is a significant influence relationship. The regression equations indicate that the alpha coefficient recorded a value of (1.264) and the beta coefficient recorded a value of (0.688). The values of the regression equation and the beta coefficient indicate that a one-fold change in the artificial intelligence dimension leads to an increase in the dependent variable (digital transformation) by

Table 5: Based on the above, regression equations can be formulated

D.V	P	F	R ²	Regression coefficients		X
				β	α	
Y	0.000	36.145	0.300	0.515	2.015	X1
	0.000	47.054	0.357	0.469	2.223	X2
	0.002	16.748	0.163	0.310	2.871	X3
	0.000	64.378	0.428	0.688	1.264	X
The critical F-value at a significance level of 0.05 is 3.96.						
The critical F-value at a significance level of 0.01 is 6.95.						

Table 6: Summary of equations for the impact of artificial intelligence on digital transformation

$Y = \alpha_2 + \beta_2 X_2$ $Y = 0.000 + 0.000 X_2$	$Y = \alpha_1 + \beta_1 X_1$ $Y = 0.000 + 0.000 X$
$Y = \alpha_4 + \beta_1 X$ $Y = 0.000 + 0.000 X$	$y = \alpha_3 + \beta_2 X_3$ $y = 0.000 + 0.000 X_3$

Fifth Main Hypothesis: There is a significant relationship between organizational culture and digital transformation. Following the results of Table (7), it is clear that there is a significant relationship. The regression equations indicate that the alpha coefficient recorded a value of (0.949) and the beta coefficient recorded a value of (0.769). The values of the regression equation and the beta coefficient indicate that a one-fold change in the organizational culture dimension leads to an increase in the dependent variable, digital transformation, by (0.769). In general, it is clear that organizational culture has a significant impact on digital transformation, as the calculated (F) value was greater than its tabular value at a significance level of (0.05) and (0.01). Furthermore, the digital transformation of the employee experience model is able to explain (53.4%) of the variances occurring in the dependent variable, according to the value of the coefficient of determination, which reached (0.534).

Table 7: Analysis of the impact of organizational culture and its dimensions on digital transformation.

D.V	P	F	R ²	Regression coefficients		IV
				β	α	
Y	0.000	30.741	0.263	0.491	2.058	M1
	0.000	35.748	0.294	0.419	2.433	M2
	0.000	26.103	0.233	0.332	2.819	M3
	0.000	86.130	0.501	0.607	1.709	M4
	0.000	36.977	0.301	0.422	2.435	M5
	0.000	98.741	0.534	0.769	0.949	M

The critical F-value at a 0.05 significance level = 3.96

The critical F-value at a 0.01 significance level = 6.95

Based on the above, we can formulate regression equations as shown in Table (7).

Table 8: Summary of equations for the impact of organizational culture on digital transformation

$Y = \alpha_2 + \beta_2 M_2$ $Y = 0.000 + 0.000 X_2$	$Y = \alpha_1 + \beta_1 M_1$ $Y = 0.000 + 0.000 X$
$Y = \alpha_4 + \beta_1 M_4$ $Y = 0.000 + 0.000 X_4$	$Y = \alpha_3 + \beta_2 M_3$ $Y = 0.000 + 0.000 X_3$
$Y = \alpha + \beta M$ $Y = 0.000 + 0.000 X$	$Y = \alpha_5 + \beta_5 M_5$ $Y = 0.000 + 0.000 X_5$

The sixth main hypothesis: There is a significant relationship between artificial intelligence and organizational culture. Following the results of Table (10), it is clear that there is a significant relationship. The regression equations indicate that the alpha coefficient recorded a value of (1.408) and the beta coefficient recorded a value of (0.662). The values of the regression equation and the beta coefficient indicate that a one-fold change in the artificial intelligence dimension leads to an increase in organizational culture by (0.662). In general, it is clear that artificial intelligence has a significant impact on organizational culture, as the calculated (F) value was greater than its tabular value at a significance level of (0.05) and (0.01). Furthermore, the digital transformation of the employee experience model is capable of explaining (44%) of the variances occurring in the dependent variable, according to the value of the coefficient of determination, which reached (0.440).

Table 9: Analysis of the impact of artificial intelligence and its dimensions on organizational culture

D.V	P	F	R ²	Regression coefficients		IV
				β	α	
M	0.000	24.461	0.221	0.421	2.454	X1
	0.000	35.124	0.290	0.402	2.545	X2
	0.001	36.021	0.295	0.397	2.528	X3
	0.000	67.480	0.440	0.662	1.408	X
The critical F-value at a significance level of 0.05 is 3.96.						
The critical F-value at a significance level of 0.01 is 6.95.						

Based on the above, regression equations can be formulated, as shown in Table (9).

Table 10: Summary of equations for the impact of artificial intelligence on organizational culture

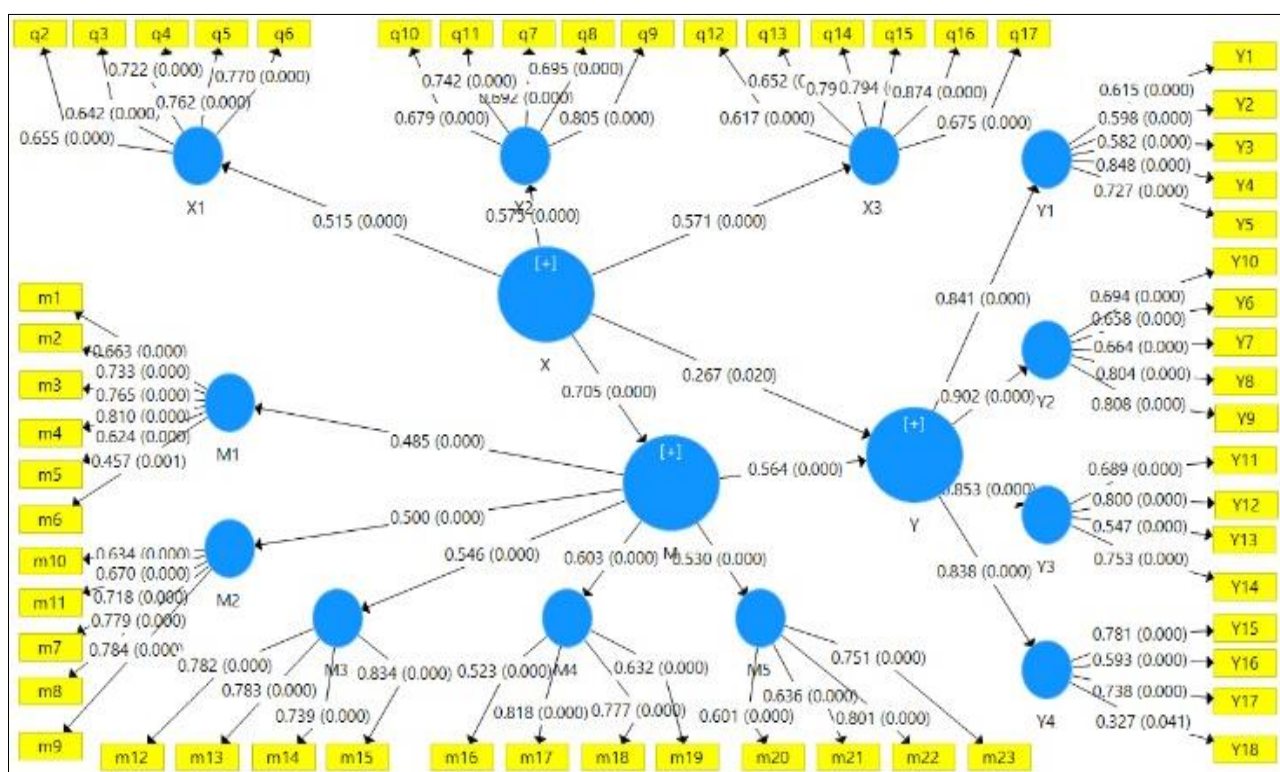
$M = \alpha_2 + \beta_2 X_2$ $M = 0.000 + 0.000 X_2$	$M = \alpha_1 + \beta_1 X_1$ $M = 0.000 + 0.000 X_1$
$M = \alpha_4 + \beta_1 X$ $M = 0.000 + 0.000 X$	$M = \alpha_3 + \beta_2 X_3$ $M = 0.000 + 0.000 X_3$

3. Analysis of Indirect Relationships

The seventh research hypothesis (artificial intelligence has a significant indirect impact on digital transformation through

organizational culture) indicated that the researcher relied on path analysis based on the factor model to test the hypotheses of indirect relationships for mediated influence using the factorial approach, as it is best for measuring multiple influential relationships, as follows: From the analysis results shown in Table (11) and Figure (5), it is clear that there is a direct influence of the artificial intelligence variable on digital transformation, amounting to (0.267), and that this relationship is significant, as the significance level value recorded an acceptable value and less than (0.05). There is also a direct influence of the organizational culture variable on digital transformation, amounting to (0.564), and this relationship is significant, as the significance level value recorded an acceptable value and less than (0.05).

There is also a direct influence of the artificial intelligence variable on organizational culture, amounting to (0.705), and this relationship is significant, as the significance level value recorded an acceptable value and less than (0.05). Regarding the intermediate relationship, there was a medium effect relationship for the organizational culture variable between artificial intelligence and digital transformation, which amounted to (0.397), and this relationship is a significant relationship, as the significance level value recorded an acceptable and smaller value (0.05).

**Fig 5:** Model of the impact of artificial intelligence on digital transformation through the mediating variable of organizational culture**Table 11:** Results of the relationship between the impact of artificial intelligence on digital transformation through the mediating variable of organizational culture

R	d	M	SD	t	p
X → Y	0.267	0.256	0.114	2.332	0.020
M → Y	0.564	0.560	0.109	5.180	0.000
X → M	0.705	0.743	0.055	12.73	0.000
X → M → Y	0.397	0.441	0.084	4.671	0.000

Research Findings

Based on the results, we can compare the direct and indirect effects, as the direct effect of the artificial intelligence variable on digital transformation is (0.267), while the indirect effect of the artificial intelligence variable on digital transformation through organizational culture is (0.397). Therefore, it is clear that the mediating relationship between artificial intelligence and digital transformation through the mediating variable, organizational culture, is greater than the direct relationship between artificial intelligence and digital

transformation, and hence the hypothesis of the mediating effect has been achieved.

Discussion

Artificial intelligence (AI) is a fundamental driver of digital transformation, directly impacting all aspects of it. The effectiveness of AI-based systems and programs determines the success of an organization's digital transformation. A robust technological infrastructure is a prerequisite for effective AI implementation. A qualified workforce is the critical factor in harnessing AI's potential for digital transformation.

Digital transformation has far-reaching implications that go beyond the mere adoption of new technologies. It also extends to social, economic, and cultural aspects. This requires a deep understanding of these implications and effective management to avoid any negative repercussions that could hinder the transformation process. The beliefs and values an organization embraces play a pivotal role in determining its readiness and ability to embrace digital transformation. Organizations that instill values of innovation, flexibility, and continuous learning are better able to adapt to digital changes. Updating these assumptions and adapting them to the changing digital reality contributes to sound and informed decision-making.

The prevailing cultural mindset is a crucial factor in the success of digital transformation. A mindset that encourages experimentation and calculated risk-taking opens the door to the adoption and effective implementation of new digital technologies. Cultural practices support knowledge sharing and collaboration across teams and enhance the use of digital tools in daily work, contributing to building a strong and sustainable digital culture.

The results demonstrated a positive impact of artificial intelligence on achieving digital transformation. The results demonstrated that the impact of artificial intelligence on digital transformation increases and improves significantly when organizational culture is used as a mediating variable.

Research Limitations

1. An organization's needs must be clearly defined before beginning to develop or implement AI systems, to ensure maximum benefit. It is also essential to periodically evaluate AI systems to ensure they continue to meet the organization's needs and keep pace with technological developments.
2. Implementing AI applications requires a robust and advanced technological infrastructure. Therefore, the organization must invest in updating its infrastructure to meet these requirements. The organization must also ensure that its technological infrastructure is scalable and expandable to meet future needs.
3. To ensure the success of digital transformation, organizations must pay close attention to managing the impact of this transformation by conducting a comprehensive assessment of these impacts and developing plans to mitigate the negatives and enhance the positives.
4. Qualifying and training employees to use AI technologies is one of the most important factors for the success of any digital transformation initiative. Therefore, the organization must provide specialized training programs for employees. These training programs must include the technical and practical

aspects of AI technologies, as well as ethical and legal aspects.

5. Organizations must work to instill values and beliefs that support digital transformation by developing a clear vision for the transformation and providing the necessary training and development for employees.
6. The need to update the basic assumptions upon which the organization is based, through periodic reviews of these assumptions and relying on data and analysis in decision-making.
7. Organizations must work to develop a cultural mindset that encourages experimentation and learning from mistakes, by providing opportunities for experimentation and encouraging collaboration and knowledge sharing.
8. Organizations need to change prevailing cultural practices by integrating digital tools into daily operations and providing the necessary training and support for employees to adopt these new practices.
9. Increased attention should be given to developing and properly utilizing organizational culture to support digital transformation.
10. The need for work and training to build leaders who embrace the elements of artificial intelligence, enabling them to be empowered and able to grasp all aspects that contribute to achieving digital transformation.
11. In light of the current circumstances and rapid changes, the reality of the situation requires organizations to adopt organizational culture as an important necessity through which the organization can achieve digital transformation.

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