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Digital Transformation and Innovation in The Digitalization Era To Improve Organizational Culture

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Abstract

The advancement of digital technology has significantly influenced various aspects of organizational operations in today's digitalization era. Digital transformation and innovation have emerged as critical concepts in fostering an organizational culture that is adaptive, innovative, and responsive to change. This study adopts a qualitative approach through a case study method and literature review as its theoretical foundation, aiming to explore the influence of digital transformation and innovation on organizational culture in depth. The findings reveal that digital transformation has a notable impact on organizational culture, with both positive and negative implications. On the positive side, it enhances performance through automation, accelerated data processing, and changes in work processes, thereby improving productivity and work quality key indicators of a strong organizational culture. Moreover, the integration of digital communication and collaboration tools enables employees to actively share ideas, collaborate in teams, and engage in virtual work environments. However, the study also identifies several challenges, including technological and infrastructure limitations, constrained resources, inadequate policy support, entrenched corporate culture, and resistance to change. Effective change management in digital transformation and cultural innovation requires strong leadership, targeted education and training, transparent communication, the mitigation of fear and resistance, as well as ongoing measurement and evaluation. Successful digital transformation depends on the synergy between technology, people, and a continuously evolving organizational culture.

Keywords: Digital Transformation, Innovation, Organizational Culture, Digitalization Era.

1. Background

State Companies are increasingly investing in digital transformation as they recognize its potential to optimize operations, increase efficiency, and seize growth opportunities (Blichfeldt & Faullant, 2021). This trend is not just a passing fad, but a strategic step towards achieving a competitive advantage in a constantly evolving business landscape (Farias & Cancino, 2021). From artificial intelligence applications to IoT integration, these steps have a transformative impact that is changing the way companies operate and their corporate culture. By investing in digitization, companies demonstrate their commitment to bridging the gap between technological advances and market demands, encouraging innovation, and creating an adaptive culture that is ready to face future challenges (Khin & Ho, 2019).

Digital transformation has completely transformed business processes across various industries. The rapid development of information and communication technology has created new opportunities and challenges for organizations in the digital era (Irtysheva, 2021). In the midst of this change, innovation is crucial to maintaining the sustainability and competitiveness of an organization. Data from the Association of Indonesian Internet Service Providers (APJII) shows that in 2020, internet penetration in Indonesia reached over 73%, indicating the increasing adoption of digital technology among the population. Additionally, a McKinsey Global Institute survey in 2020 revealed that around 87% of micro and small businesses in Indonesia have adopted digital technology in various aspects of their operations. The banking sector also demonstrates investment in digitalization, with significant growth in mobile and internet banking transactions according to data from Bank Indonesia. The e-commerce sector reflects investment in digital transformation as well, with a 25.1% increase in visitors to e-commerce sites in

Indonesia in 2020 according to the iPrice Group. However, digital transformation and innovation also deeply affect organizational culture, and a strong and adaptive culture is crucial in dealing with this rapid change. Previous studies on digital transformation and organizational culture innovation have made important contributions to understanding this phenomenon. Several previous studies have focused on aspects of the technological infrastructure needed for digital transformation, such as van Zeebroeck et al., (2021) who identified the importance of adopting advanced technology in dealing with digital change. Another study by Mahmood et al., (2019) explored the impact of digital transformation on operational efficiency and organizational performance. In addition, other studies have also highlighted the important role of change management in achieving successful digital transformation and cultural innovation. For example, the study by Jung et al., (2020) demonstrates the importance of strong leadership in supporting organizational change. In addition, research by Arghode et al., (2021) highlights the importance of effective communication in designing and implementing effective cultural change.

Despite the extensive research on digital transformation and organizational culture innovation, there are still gaps that require further exploration. One such gap is the lack of research that examines the impact of policies and regulations on digital transformation. Understanding the legal and regulatory factors that affect the success of digital change in an organizational context is essential. Additionally, while several studies have discussed change management in digital transformation, there is a need to explore best practices that can help individuals overcome their anxiety and reluctance to adopt new technologies. Such research can provide novel insights to organizations in managing this challenge. Further, little research has examined the role of organizational culture in digital transformation and the development of an adaptive culture. Therefore, additional research is needed to investigate the impact of organizational culture on digital transformation and its role in enabling successful digital change.

This research aims to understand how digital transformation and innovation affect organizational culture in the digitalization era. Its goal is to explore the role of digital transformation and innovation in shaping an adaptive, innovative, and future-oriented organizational culture. By understanding how digital transformation, innovation, and organizational culture are interrelated, this research aims to provide valuable insights to organizations in dealing with changes in the digitalization era. The research will focus on organizations in various sectors, including manufacturing, services, finance, technology, and others that have undergone digital transformation and implemented innovation in their organizational culture. The research will consider aspects such as cultural change, technology adoption, innovation strategy, and organizational performance.

2. Research Method

This study uses a qualitative approach with a case study method and literature review as a theoretical basis. In this study, a qualitative approach is used to understand the phenomenon of digital transformation and innovation in enhancing organizational culture in depth. A qualitative approach is used because the main focus is on understanding the context, meaning, and interpretation of changes in organizational culture brought about by digital transformation and innovation. The case study method was chosen as the main approach in this study because this method allows researchers to investigate complex phenomena in real contexts. The case studies will focus on organizations that have undergone digital transformation and are implementing innovation in their organizational culture. Selection of cases will be made based on criteria that are relevant to the phenomenon to be studied. The initial step of this research is to conduct a literature review to build a strong theoretical foundation. The literature review will cover the concepts of digital transformation, innovation, and organizational culture. Relevant literature sources, such as scientific journals, books, research reports, and scientific articles will be used to understand the theoretical framework that supports this research. The data obtained from various sources will be analyzed qualitatively. The analysis is carried out using a thematic approach, in which the data will be organized, categorized and analyzed based on emerging themes. These analytical steps will help identify patterns, relationships, and implications of changes in organizational culture due to digital transformation and innovation. To ensure the validity and reliability of the research, triangulation is used by comparing data from various sources so that this will enable a deeper understanding of organizational culture and the changes that occur.

3. Result and Discussion

The process of transforming from traditional technology to digital technology is called digitalization, which is crucial in enhancing the efficiency, productivity, and resilience of organizations. This involves utilizing information and communication technology (ICT) to achieve these goals. In a business context, digitization can include the adoption and integration of digital technology solutions such as cloud computing, data management, analytics, and artificial intelligence. Additionally, it involves transitioning from manual and analog activities to digital and automatic processes.

Innovation is a vital concept for organizations to gain a competitive edge. This involves creating and implementing new ideas, products, processes, or business models that add value. Innovation can occur in various

areas, such as products, services, operations, and strategy. In an organizational context, innovation can stem from internal research and development, collaboration with partners and customers, or exploration of market trends and industry insights. Innovation can lead to significant changes in an organization's operations, stakeholder interactions, and achievement of business objectives.

Discussion

The Effect of Digital Transformation on Organizational Culture

The process of digital transformation goes beyond just technological changes and also involves changes in organizational culture. This process encourages innovation and creativity among members of the organization, empowering them to take risks, develop new solutions, and approach challenges with a more exploratory mindset. Digital transformation also shapes collaboration through digital tools and platforms, connecting teams and departments to promote more open and integrated work.

Continuous learning is also an essential part of digital transformation, requiring members of the organization to continuously improve their knowledge and skills while sharing that knowledge with others. However, digital transformation can also have both positive and negative impacts on organizational culture. On the positive side, it can increase productivity, quality of work, and engagement among members. It also encourages innovation and flexibility, enabling organizations to adapt to change.

On the other hand, digital transformation can create uncertainty and anxiety among employees, and data-related risks must be addressed to ensure privacy and security. Digital skills inequalities may also emerge, necessitating training programs to align technology with organizational culture. Understanding these impacts is crucial in building a responsive and ethical organizational culture in the digital era.

In order to successfully navigate changes in organizational culture due to digital transformation, there are several strategies that can be employed. These strategies include open communication and employee participation, training and skills development, inspirational leadership, a culture of continuous learning and adaptability, recognition and appreciation of employee efforts, and effective change management (Mahmood et al., 2019).

It is crucial for organizations to communicate transparently and involve employees in the planning and execution of changes related to digital transformation. This can help reduce resistance and foster a sense of commitment to cultural change. Additionally, providing relevant training and development programs can ensure that employees possess the necessary skills to adapt to digital changes, including technology skills, digital business understanding, and adaptability to new technologies.

Leaders within organizations play a critical role in inspiring and leading cultural change. They must demonstrate a commitment to digital transformation by setting an example and promoting acceptance of change. It is also important for leaders to provide support and listen to employees' aspirations in order to cultivate an inclusive and collaborative culture. Organizations must prioritize continuous and adaptive learning, encouraging employees to continuously learn, experiment, and share knowledge and experiences. Developing high adaptability capabilities is also essential in order to effectively manage ongoing changes in the digital era.

Recognizing and appreciating the efforts and contributions of employees is crucial in fostering a positive and motivated work environment during cultural changes brought about by digital transformation (Meske & Junglas, 2020). This can take the form of praise, incentives, or opportunities for career development. Such recognition can build employee motivation and commitment to innovation and adaptation. Finally, organizations need to adopt a structured approach to managing cultural changes resulting from digital transformation. Methods such as the ADKAR model or the Prosci approach can help identify, communicate, and implement change effectively.

Successful Implementation of Digital Transformation and Innovation in Organizational Culture

Amazon has successfully implemented digital transformation and cultural innovation by revolutionizing the online shopping experience with cutting-edge technology solutions. This includes constantly innovating with new products and services, such as the popular Amazon Prime subscription service that offers fast delivery and access to digital content. Amazon utilizes advanced technologies like artificial intelligence (AI), data analytics, and the Internet of Things (IoT) to increase efficiency, customize product offerings, and provide customers with a personalized experience. Amazon's corporate culture fosters innovation and experimentation by giving employees the flexibility to try new ideas and collaborate across teams.

Other companies have also successfully implemented digital transformation and innovation in their organizational cultures. Starbucks has utilized an AI tool called Deep Brew to select strategic store locations and optimize menus. Unilever has increased its number of individual consumers by investing in software development and production efficiency with the help of robots. Caterpillar is transforming itself by leveraging AI and digital twin technology to predict maintenance and automate operations. Even legacy companies like IKEA have embraced digital transformation by offering an omnichannel shopping experience and utilizing augmented reality technology.

The successful implementation of digital transformation in organizational culture involves careful and strategic steps, such as those presented in a table by Ananda (2021).

Table 1 Strategic steps in digital transformation of organizational culture

Strategy Steps	Definition
1. Clear Vision and Strategy	Define a clear digital transformation vision and strategy for the organization
2. Communication and Engagement	Communicate the digital transformation vision and strategy effectively to all members of the organization
3. Formation of the Transformation Team	Assemble a transformation team composed of diverse organizational members who are technologically savvy and understand the goals of the transformation
4. Training and development	Identify skills needed in the digital age and provide relevant training programmes
5. Culture of Innovation and Collaboration	Encourage employees to share ideas, involve various stakeholders in the decision-making process, and encourage new experiments and trials in achieving business goals
6. Measurement and Evaluation	Set relevant key performance indicators (KPIs) and measure the progress of digital transformation
7. Awareness and Maintenance	Develop an ongoing awareness and understanding of the importance of digital transformation and cultural innovation

Source: Ananda, 2021

By taking deliberate steps and showing unwavering commitment, organizations can achieve success in digital transformation and cultural innovation. Drawing inspiration and guidance from past successful case studies can be tremendously helpful for organizations undergoing digital transformation.

The Impact of Digital Transformation and Innovation on Organizational Performance

The utilization of digital transformation and cultural innovation can greatly improve organizational efficiency and productivity. This includes the automation of business processes, integration of systems and data, and promoting employee engagement and collaboration (Mahmood et al., 2019). Implementing technologies like artificial intelligence (AI) and process robotic automation (RPA) allow organizations to automate repetitive tasks, reducing workloads and improving execution time and accuracy. An integrated system and data environment eliminates duplication of work, enabling faster and more accurate access to information for decision-making. Incorporating digital-based communication and collaboration tools promotes active employee involvement in sharing ideas, working in teams and virtually, thereby speeding up information flow, expanding accessibility, and driving more effective collaboration.

Digital transformation and cultural innovation also provide positive impacts on customer service, giving organizations a competitive advantage (Opazo-Basáez et al., 2021). This includes a better customer experience, accessibility and availability of services, and improved monitoring and tracking. Through the adoption of digital technologies such as mobile applications, chatbots, and AI-based personalization, organizations can provide better customer experience. Transformation enables organizations to expand the availability and accessibility of their services, reaching customers in various geographic locations and providing 24/7 service. By leveraging advanced data analytics, organizations can identify market trends, customer behavior, and evolving needs to adapt their strategy and improve their services.

Digital transformation and cultural innovation also directly impact customer satisfaction and loyalty (Balci, 2021). Transformation enables organizations to collect and analyze customer data, providing a better understanding of customer preferences and needs. This allows for more personalized and relevant service and offering, increasing customer satisfaction and strengthening the bond between the organization and the customer. Innovation enables organizations to become more responsive to changing customer needs and expectations. In the ever-changing digital era, organizations that can quickly adapt their products, services, and processes will maintain high customer satisfaction. Digital transformation opens up opportunities to create seamless and integrated customer experiences across multiple channels, ensuring consistency and connectivity between physical and digital channels, making it easier for customers to interact with the organization, and increasing trust and loyalty.

Challenges and Obstacles in Digital Transformation and Organizational Culture Innovation

To successfully undergo digital transformation, organizations encounter various challenges related to technology and infrastructure (Mahmood et al., 2019). Reliable infrastructure and scalability are crucial for implementing new technologies and cultural changes. However, there may be obstacles to infrastructure availability and stability, such as a slow network or limited capacity, which can slow down the digital transformation process. Additionally, integrating new technologies with existing systems and applications can present technical issues that require careful attention. Lastly, significant investment in hardware, software and infrastructure is required for digital transformation implementation. Limited resources may pose financial constraints and make it difficult to allocate the necessary resources. Overcoming these challenges is essential for organizations to create a strong technology foundation to support digital transformation.

Apart from technological and infrastructure constraints, the next challenge is organizational and individual change, where these challenges include policies and regulations, corporate culture, as well as uncertainty and response to change (Zhang et al., 2021). The next challenge and obstacle is organizational and individual change, which includes policies and regulations, corporate culture, as well as uncertainty and response to change. Finally, change management in digital transformation and cultural innovation involves strong leadership, education and training, effective communication, aversion and fear, as well as measurement and evaluation. To tackle these challenges and obstacles, organizations need a mature and comprehensive strategy to address the necessary changes. By understanding and addressing technology and infrastructure constraints, managing organizational and individual change, and implementing effective change management, organizations can optimize the potential of their digital transformation and cultural innovation, and achieve success in an evolving digital era.

4. Conclusion

The research conducted has identified several challenges and obstacles in digital transformation and organizational culture innovation. Such challenges include technological and infrastructure constraints, limited resources, policies and regulations, corporate culture, and uncertainty and response to change. Successful change management in digital transformation and cultural innovation requires strong leadership, education and training, effective communication, aversion and fear, and measurement and evaluation. These findings have significant implications for organizations facing digital transformation and cultural innovation. Firstly, organizations need to ensure reliable infrastructure and technology and allocate sufficient resources for a successful transformation. Secondly, policies and regulations must support changes in organizational culture to enable the adoption of digital solutions. Thirdly, strong leadership and effective communication are necessary to inspire and motivate employees. Fourthly, intensive education and training will prepare employees to deal with changes and develop digital skills. Lastly, periodic measurement and evaluation are vital to identify successes and make necessary adjustments. Further research can be conducted to understand the role and influence of policies and regulations in digital transformation and cultural innovation, identify best practices in change management, examine the influence of organizational culture on digital transformation, and understand the factors that influence the success of digital transformation such as leadership, employee participation, and management support.

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