The Impact of Digital Transformation on Organizational Knowledge Sharing: A Framework for Adaptive Performance

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ABSTRACT

The dynamic and uncertain modern work environment demands strong adaptive performance from individuals. This study to analyze the influence of information technology on adaptive performance by examining the mediating role of knowledge sharing. This research employs a quantitative causal-explanatory approach. Data were collected through a cross-sectional survey involving 80 undergraduate Management students at FEB Unesa who are participating in the MBKM program. Data were analyzed using Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach. The findings reveal that information technology has a significant positive direct effect on adaptive performance ($\beta = 0.641$, $p = 0.000$). It also positively affects knowledge sharing ($\beta = 0.826$, $p = 0.000$). However, the analysis indicates that knowledge sharing does not significantly affect adaptive performance aims ($\beta = 0.103$, $p = 0.501$). Furthermore, knowledge sharing does not mediate the relationship between information technology and adaptive performance ($\beta = 0.085$, $p = 0.511$). The study concludes that investing in information technology directly enhances both organizational resilience and adaptive capacity. Organizations and educational institutions should prioritize implementing strategic and high-quality information technology. This is a primary step in building adaptive capabilities. The role of knowledge sharing, although significant for other organizational functions, does not serve as a mediating mechanism between technology and adaptation in this context.

Keywords: Adaptive Performance, Knowledge Sharing, Information Technology

INTRODUCTION

The contemporary work environment is characterized by rapid change, high uncertainty, and complexity. This environment demands a critical capability known as adaptive performance from individuals (Joniaková et al., 2023). This concept refers to an individual's capacity to adjust their behavior, strategies, and cognitive processes effectively in response to dynamic and unpredictable work demands. In this context, university students, as the future workforce, should be adequately prepared to navigate these realities (Halmen et al., 2023). Therefore, this study will focus on how Information Technology (IT) serves as a catalyst for enhancing adaptive performance.

The rapid advancement of IT has fundamentally transformed how individuals access information, collaborate, and solve problems . IT not only enhances efficiency but also provides unparalleled access to vast knowledge resources (Mohamed et al., 2025). However, the mere availability of IT is insufficient. a structured mechanism, such as training programs or collaborative platforms, to transfer and internalize this knowledge is essential. This is where knowledge sharing the process of exchanging information, expertise, and experiences becomes a critical variable (Hu et al., 2025). Knowledge sharing facilitates collective learning and enriches insights. This, in turn, can strengthen an individual's adaptive capabilities.

Although the relationship between IT and individual performance has been widely studied, the mechanism that

explains how IT specifically enhances adaptive performance through the mediation of knowledge sharing requires further exploration, particularly in the context of Indonesian students (Arsanti et al., 2024). Therefore, this study aims to analyze two aspects: the direct influence of information technology utilization on adaptive performance and its indirect influence, which is mediated by knowledge sharing (Amin et al., 2025). This research focuses on undergraduate Management students at FEB Unesa who are participating in the MBKM program, this research provides empirical evidence on how educational institutions can strategically leverage IT and foster a knowledge sharing culture to cultivate graduates who are more resilient and adaptable.

Problem Statement

The contemporary work environment is characterized by rapid change, high complexity, and technological disruption, demanding strong Adaptive Performance from every individual (Prayogo et al., 2025). University students, as the future workforce, must cultivate this capability to successfully transition from academia to the professional world. While information technology (IT) is widely acknowledged as a key enabler for efficiency and collaboration, Understanding this relationship is crucial, particularly when considering the role of Knowledge Sharing as a potential mediator in a pre professional context, specifically among students, remains underexplored (Mohamed et al., 2025).

This study identifies a gap in understanding the mechanism linking IT to Adaptive Performance. Specifically, the role of Knowledge Sharing as a potential mediator in this relationship remains unclear and requires further investigation (Zamrudi et al., 2024). The research question is: To what extent does the use of IT directly influence the Adaptive Performance of Management students at FEB Unesa? Additionally, to what extent is this influence indirectly mediated through Knowledge Sharing practices? Without a thorough understanding of how this relational mechanism, educational institutions and organizations may fail to design effective interventions to maximize the potential of IT in enhancing the resilience and adaptive capacity of graduates in the increasingly turbulent modern workplace.

Urgency To Conduct Study

The urgency of this study is driven by several critical factors. Firstly, there is a pressing competency gap between university graduates and the demands of a dynamic labor market that prioritizes agility and adaptability (Luis et al., 2024). This study investigates the drivers of Adaptive Performance. It provides an empirical foundation for universities to align their curricula and pedagogical methods with industry needs. Secondly, the accelerated adoption of Industry 4.0 and post-pandemic digital transformation has made technological literacy and knowledge-sharing capabilities core competencies, rather than mere supplements (José & Miguel, 2024).

This research is urgently needed to ensure that students are proficient in using IT. They should also be able to strategically leverage it to learn, collaborate, and adapt effectively (Hassan et al., 2025). Thirdly, by testing Knowledge Sharing as a mediating variable, this study moves beyond simple direct relationships to uncover how and why IT can enhance adaptive performance (Suseno et al., 2024). The findings will provide practical recommendations for organizations and educational institutions to foster a technology-enabled knowledge-sharing culture (Paulino et al., 2024). This culture will ultimately yield a workforce that is more resilient, innovative, and competitive in the global arena (Huang et al., 2023).

Research Questions

1. How does information technology influence knowledge sharing among undergraduate students in the Management Department, Faculty of Economics and Business, Universitas Negeri Surabaya (FEB Unesa)?

2. How does knowledge sharing influence adaptive performance among undergraduate students in the Management Department, FEB Unesa?

3. How does information technology influence adaptive performance among undergraduate students in the Management Department, FEB Unesa?

4. Does knowledge sharing mediate the relationship between information technology and adaptive performance among undergraduate students in the Management Department, FEB Unesa?

Research Objectives

1. To examine the influence of information technology on knowledge sharing among undergraduate students in the Management Department, FEB Unesa.

2. To analyze the effect of knowledge sharing on adaptive performance among undergraduate students in the Management Department, FEB Unesa.

3. To investigate the direct effect of information technology on adaptive performance among undergraduate students in the Management Department, FEB Unesa.

4. To determine the mediating role of knowledge sharing in the relationship between information technology and adaptive performance among undergraduate students in the Management Department, FEB Unesa.

LITERATURE REVIEW

Adaptive Performance Theory

Adaptive performance is increasingly crucial in today's dynamic and complex work environments (Pradhan & Jena, 2017). define adaptive performance as an individual's ability to flexibly respond to unexpected changes, overcome difficulties, and maintain or improve performance in new situations . Adaptivity is vital for organizational success, especially as job requirements shift and workplaces become more uncertain and competitive. (Kim & Yoon, 2025) The central indicators of adaptive performance are: Ability to overcome difficult situations and setbacks. Ease of adjusting to changes in work environments. These indicators reactivity during emergencies, handling work stress, creativity, training effort, and interpersonal adaptability.

Information Technology

Information technology (IT) comprises computer and network systems used to process, manage, and communicate information (Kabachenko et al., 2022). IT has dramatically transformed businesses and education by boosting efficiency, accuracy, and flexibility. In the era of Industry 4.0, IT accelerates digitalization, smart manufacturing, and data-driven decision making. Key IT indicators include: Computer use, Internet use, Use of social media applications, IT competency.

The study highlighted IT impact on timely and relevant information delivery for decision-makers, The study also emphasized the shift to remote work and digital collaboration during the pandemic (Wu et al., 2023). Organizational investments in IT infrastructure and training enhance individual and collective productivity (Nakash & Bouhnik, 2023). This allows employees to solve problems more quickly and gain broader access to expertise.

Knowledge Sharing

Knowledge sharing is the process of transferring or disseminating information, skills, and expertise. This process occurs among individuals. It also occurs among teams and organizations (Fierro & Benalil, 2024). It can be described as both a social and strategic process that underpins learning, innovation, and competitive advantage. The core indicators of knowledge sharing include: Sharing intention, Sharing content, and Sharing channel (Pian et al., 2019) .

Knowledge sharing happens through formal mechanisms (such as knowledge management systems, online platforms, and meetings) and informal networks (like project teams and communities of practice). Effective sharing relies on the establishment of trust among participants, intrinsic motivation to share knowledge, and the development of reciprocal relationships that encourage open communication (Jabid et al., 2023).

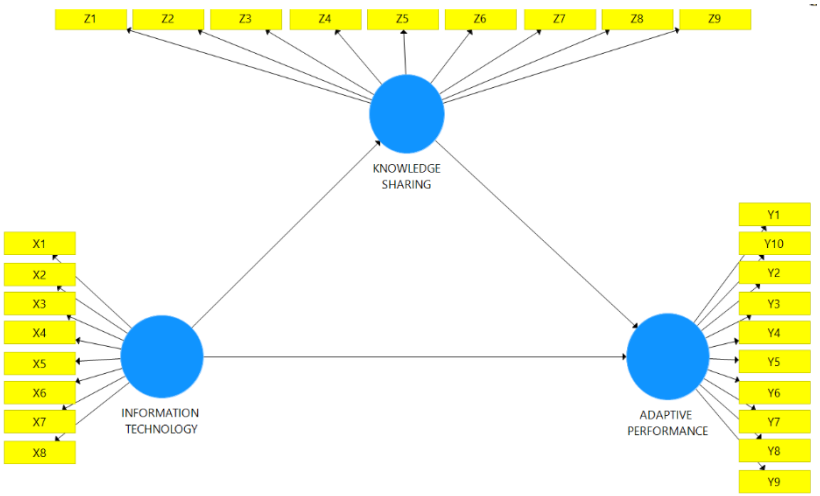

Figure 1: Research Model

RESEARCH METHODOLOGY

This study employed a quantitative research design with a causal-explanatory approach to investigate the causal relationships between the constructs of Information Technology, Knowledge Sharing, and Adaptive Performance. The study utilized a cross-sectional survey design, collecting data at a single point in time to test the proposed hypotheses (Creswell & Creswell, 2018). The analytical framework was based on the Structural Equation Modeling (SEM) technique using the Partial Least Squares (PLS) approach. PLS-SEM was selected for its robustness and minimal assumptions regarding data distribution, making it particularly suitable for predictive applications and studies with smaller sample sizes, such as this one (Ghozali, 2014). The model posited Information Technology as an exogenous variable, Adaptive Performance as an endogenous variable, and Knowledge Sharing as a mediating variable.

Population and Sampling

Population: The target population for this research was undergraduate (S1) Management students from the Faculty of Economics and Business (FEB) at Universitas Negeri Surabaya (Unesa) who were enrolled in the Merdeka Belajar Kampus Merdeka (MBKM) or Independent Learning program.

Sampling Technique: A non-probability purposive sampling method was employed. This technique was chosen to ensure that respondents had relevant experience (Ghozali, 2014), specifically participation in the MBKM program, which provided a context where adaptive performance and knowledge sharing were likely to occur.

Sample Size: The final sample consisted of 80 respondents. (Ahmed, 2024) This sample size comfortably exceeds the common heuristic in multivariate analysis, particularly PLS-SEM.

Hypothesis

1. H1 : It is hypothesized that information technology significantly affects adaptive performance among S1 Management FEB Unesa students?

2. H2 : It is hypothesized that information technology significantly influences knowledge sharing among S1 Management FEB Unesa students?

3. H3 :It is hypothesized that knowledge sharing positively affects adaptive performance among S1 Management FEB Unesa students?

4. H4 : It is hypothesized that information technology positively affects adaptive performance through knowledge sharing among S1 Management FEB Unesa students

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RESULTS AND DISCUSSION

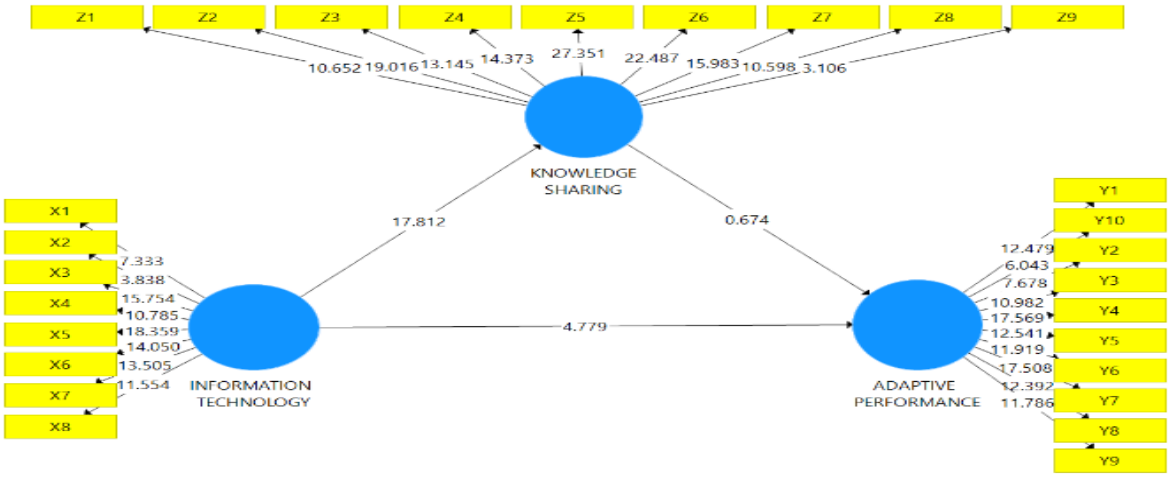

Figure 2: Measurement Bootstraping Model

Table 1: Direct Effects

Hypothesis	Variable		Variable	Original Sample / β	T Statistic	Sig.
H1	Information Technology	→	Adaptive Performance	0.641	4.779	0.000
H2	Information Technology	→	Knowledge Sharing	0.826	17.812	0.000
H3	Knowledge Sharing	→	Adaptive Performance	0.103	0.674	0.501

Direct Effects:

H1: Information Technology → Adaptive Performance: There is strong empirical evidence regarding the significant influence of Information Technology on enhancing Adaptive Performance within organizations [26], [27] . Substantively, the magnitude of the standardized path coefficient of 0.641 indicates that an increase of one standard deviation in the implementation and utilization of information technology will enhance the organization's adaptive capacity by 64.1%. This considerable effect reflects how digital transformation has become a critical enabler for organizational resilience in the face of an increasingly dynamic and uncertain business environment (Zhang et al., 2025).

H2: Information Technology → Knowledge Sharing: Information Technology positively influences Knowledge Sharing, as supported by robust empirical evidence (Davison et al., 2012). The standardized path coefficient of 0.826 indicates a substantial and positive relationship between the two variables. A t-statistic value of 17.812 and a p-value of 0.000 confirm that this relationship is statistically significant. These findings reveal that information technology serves as critical infrastructure facilitating the knowledge-sharing process within organizations. The effective implementation of information systems significantly enhances the organization's capacity to capture, store, and distribute knowledge (Dubey, 2025).

H3: Knowledge Sharing → Adaptive Performance: Is rejected, as the path coefficient of 0.103 is statistically non-significant (t=0.674, p=0.501). This finding indicates that Knowledge Sharing lacks a meaningful direct influence on Adaptive Performance within this model (Pramudito et al., 2024). The finding suggests that the mere circulation of knowledge is insufficient by itself to enhance adaptive capabilities. Instead, Knowledge Sharing's role appears to be more indirect. It likely serves as a mediator between other organizational factors and adaptive outcomes. This result underscores the complexity of organizational adaptation, emphasizing that knowledge must not only be shared but also effectively applied to be beneficial.

Table 2 : Indirect Effect

Hypothesis	Variable		Variable		Variable	Original Sample / β	T Statistic	Sig.
H4	Information Technology	→	Knowledge Sharing	→	Adaptive Performance	0.085	0.658	0.511

Mediating Effect:

H4: Information Technology → Knowledge Sharing → Adaptive Performance: Hypothesis 4, which proposed that Knowledge Sharing mediates the relationship between Information Technology and Adaptive Performance, must be rejected based on the statistical analysis [32]. The indirect effect shows a very small coefficient of 0.085, which proves to be statistically non-significant with a t-statistic of 0.658 and a p-value of 0.511. This indicates that Knowledge Sharing does not function as a significant mediator in transmitting technology's influence on adaptive outcomes within this model . Therefore, while Information Technology directly enhances Adaptive Performance, this effect does not operate through the mechanism of knowledge sharing as it was theorized (Kim & Yoon, 2025). This finding reveals a more straightforward relationship between technology and adaptation. Therefore, organizations should focus on technology's direct implementation rather than relying on knowledge sharing as an intermediary pathway..

CONCLUSION

1. Information Technology directly and significantly enhances Adaptive Performance. This finding confirms that investing in information technology is a highly effective strategy for directly building organizational resilience and adaptive capability.

2. Information Technology directly and significantly enhances Knowledge Sharing. This result proves that technology functions as critical infrastructure and a catalyst that empowers knowledge-sharing processes within an organization.

3. Knowledge Sharing does not have a direct effect on Adaptive Performance. This reveals that the mere sharing of knowledge is insufficient for improving adaptive capabilities. The value of knowledge lies in its application, not just its dissemination.

4. Knowledge Sharing does not mediate the relationship between Information Technology and Adaptive Performance. The relationship between technology and adaptation is direct and does not rely on the intermediary mechanism of Knowledge Sharing as initially theorized.

Organizations need to prioritize the implementation of strategic and high-quality information technology as a primary step in enhancing adaptive capacity. This is crucial to ensure that organizations can rapidly adapt to changes in the environment. Knowledge sharing plays an important role in various organizational functions. However, The effectiveness of information technology in enhancing organizational resilience increases when it is applied directly and with a specific focus. Therefore, emphasizing the appropriate application of technology can strengthen the organization's competitive edge. Furthermore, investment in quality information technology can also drive innovation and operational efficiency. As a result, organizations should leverage information technology as a tool to achieve their strategic objectives. Overall, a cohesive strategy that integrates information technology with knowledge sharing is essential. This approach will significantly contribute to the sustainability and growth of the organization.

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