The Influence Of Networking Abilities On Students' Digital Transformation Abilities

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Article Info	Abstract
	The rapid development of digital technology has driven significant digital transformation across various sectors, including higher education. Digital transformation is not confined solely to technology adoption—it fundamentally involves alterations in how students think, collaborate, innovate, and develop competencies essential for their academic and professional growth. In this evolving landscape, students are expected to acquire digital transformation skills, which encompass adaptability in leveraging digital technologies to enhance academic performance, creativity, and readiness for the workforce. A critical factor that influences students' digital transformation skills is their networking abilities. Networking skills refer to an individual's capacity to build, manage, and utilize social and professional networks effectively to access information and resources. Unfortunately, many students utilize technology predominantly for communication and entertainment, rather than for fostering their competency development. This gap highlights the untapped potential of student networks, which remain underutilized in academic contexts. This study aims to analyze the impact of networking skills on students' digital transformation skills. The study employed empirical data collection methods, with initial analyses presenting statistically significant results that affirm the relationship between students' network capability and their digital transformation skills. For instance, the test results showed a t-value of 3.98 with 38 degrees of freedom and a significance value of 0.000 ($p < 0.05$), indicating a substantial difference between experimental and control groups. Consequently, the null hypothesis (H_0) was rejected, while the alternative hypothesis (H_1) was accepted, underscoring that enhanced network capability contributes positively to students' digital transformation capabilitiesUltimately, this study hopes to contribute theoretically to the understanding of digital transformation at the individual level and provide practical recommendations for universities to devise effective student learning and development strategies.

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1. INTRODUCTION

The rapid development of digital technology has driven digital transformation across various sectors, including higher education. Digital transformation is not only about the use of information technology, but also encompasses changes in ways of thinking, collaborating, and innovating in the learning process and developing student competencies (Daire, 2024). In the context of higher education, students are required to have digital transformation capability, namely the adaptive ability

to utilize digital technology strategically to improve academic performance, creativity, and readiness to face an increasingly digital world of work (Avedzi, 2025).

The contemporary educational landscape is significantly shaped by the rapid advancement of digital technologies and the pivot towards digital transformation across various sectors. This transformation is not only a necessity for industries but increasingly vital for educational systems, particularly in higher education institutions. As students prepare for future workplaces characterized by digitalization, their ability to adapt and harness digital tools—termed digital transformation capability—becomes paramount. One crucial factor influencing this capability is network capability, which encompasses the ability to establish and maintain relationships with various stakeholders, including peers, mentors, and industry professionals. Despite the increasing interest in this area, there is a notable gap in empirical research specifically addressing how network capability affects the digital transformation capability of students.

One important factor that has the potential to influence students' digital transformation capability is network capability. Network capability refers to an individual's ability to build, manage, and utilize social and professional networks to obtain relevant information, knowledge, and resources (Huda, 2024). In the digital age, networks are formed not only through conventional means, but also through digital platforms, social media, and online communities, which enable the rapid and cross-border exchange of ideas. Students with strong networking capabilities tend to have easier access to the latest information, collaboration opportunities, and technology-based learning (Sobaih et al., 2021).

The lack of research in this field reveals significant implications for both educators and students. Students with limited network capabilities may struggle to effectively engage with digital tools and platforms, which could hinder their academic performance and employability in a digital-first world. Furthermore, inadequate digital transformation capabilities can contribute to broader educational inequities as students with stronger networks may have better access to resources, information, and support systems, ultimately impacting their learning outcomes (Li et al., 2024). A study highlighted that the effectiveness of independent learning strategies can be influenced by social and network contexts, underscoring the critical role social dynamics play in educational success (Sulistiyono & Widuroyekti, 2020).

Understanding the mechanisms through which network capability influences digital transformation capability involves exploring several dimensions of interaction and collaboration. Network capability enables students to access diverse resources, information, and mentorship opportunities that enhance their digital skills. For example, strong networks can provide students with exposure to collaborative projects and internships in technologically advanced environments, fostering their ability to adapt to digital innovations (Hidayat et al., 2024). Additionally, engaging in academic and professional networks can stimulate creativity and motivation, further promoting digital literacy and transformation skills among students (Li et al., 2024).

Research has shown that network capability can facilitate not only access to information but also emotional and social support, which are crucial during periods of learning and adaptation to new technologies (Veronika & Sugiarti, 2021). This connection suggests that students who cultivate robust network capabilities are better positioned to navigate the complexities of digital transformation in their academic pursuits (Triansyah & Sumiyarini, 2024).

Numerous studies have acknowledged the relationship between network capabilities and various competencies within educational contexts. For instance, Sulistiyono and Widuroyekti's research emphasized the importance of independent learning frameworks that integrate social support mechanisms, which can be enhanced through network capability (Sulistiyono & Widuroyekti, 2020). This research aims to fill that gap by providing detailed insights and empirical evidence on how different dimensions of network capability directly affect students' abilities to innovate and adapt in increasingly digital environments (Li et al., 2024).

Addressing the identified gap calls for deliberate interventions aimed at enhancing students' network capabilities as a pathway to improving their digital transformation potential. These interventions could include structured networking opportunities through collaborative projects, workshops on digital skills integrated with social learning components, and mentorship programs that foster connections between students and industry professionals (Hasnawati et al., 2023). By integrating these strategies into educational frameworks, institutions can cultivate an environment that not only emphasizes the importance of digital competencies but also leverages the power of networks to enhance learning outcomes (Fadlilah et al., 2021).

In conclusion, understanding and enhancing the interplay between network capability and digital transformation capability among students is essential for preparing them for the challenges of the digital age. By strategically addressing this intersection, educational stakeholders can significantly improve the learning experiences and outcomes for students, ultimately contributing to their success in a rapidly evolving digital world.

2. METHOD

This study used a quantitative approach with a quasi-experimental nonequivalent control group design. This design involved one experimental group and one control group to compare students' digital transformation capabilities after being given the treatment.

The research subjects were 40 students in the Informatics Management Study Program. The sampling technique used was total sampling, so all students served as the research sample.

The research subjects were divided into two groups, namely: (1) Experimental Group, namely students who received treatment in the form of strengthening network capability through collaborative activities and the use of digital networks; and (2) Control Group, namely students who participated in the learning process without network capability strengthening treatment. Group division is carried out non-randomly by taking into account the equality of the initial characteristics of the students.

The variables in this study consist of: (1) Network Capability (independent/treatment variable); and (2) Digital Transformation Capability (dependent variable).

The research instrument was a closed-ended questionnaire developed based on network capability and digital transformation capability indicators using a 5-point Likert scale. The instrument was tested for validity and reliability before being used in the study.

Data were collected by distributing questionnaires to all respondents after the treatment was administered to the experimental group. The control group followed the learning process as usual without any special intervention.

Data analysis was performed using descriptive and inferential statistics. To test the differences in digital transformation capability between the experimental and control groups, an Independent Samples t-test was used.

3. RESULTS AND DISCUSSION
Results
a. Data Description

This study involved 40 Informatics Management students divided into two groups: an experimental group (n = 20) and a control group (n = 20). The variable analyzed was students' digital transformation capability after the experimental group received treatment in the form of network capability enhancement.

Descriptive statistical analysis results show a difference in average digital transformation capability scores between the two groups. The experimental group had a higher average score than the control group.

Table 1. Descriptive Statistics of Digital Transformation Capability

Kelompok	N	Mean	Standar	Deviasi
Eksperimen	20	82,45	6,32	
Kontrol	20	74,10	7,15	

These results show that students in the experimental group have better digital transformation skills than students in the control group.

b. Prerequisite Analysis Test

Before conducting a hypothesis test, the data is first tested for analysis prerequisites, which include a normality test and a homogeneity test.

Table 2. Homogeneous test Results

Test	Group	p-value	Result
Shapiro-Wilk Test	Experimental	0.200	Normally Distributed ($p > 0.05$)
Shapiro-Wilk Test	Control	0.163	Normally Distributed ($p > 0.05$)
Levene's Test for Homogeneity	Both Groups	0.412	Homogeneous Variance ($p > 0.05$)

So it can be concluded that the variance of the two groups is homogeneous. Once these prerequisites are met, the analysis is continued using the Independent Samples t-test.

c. Hypothesis Testing

Hypothesis testing was conducted to determine the differences in digital transformation capability between the experimental and control groups. The results of the Independent Samples t-test are presented in Table 3.

Table 3. Results of the Independent Samples t-test

Variabel	t	df	Sig. (2-tailed)
Digital Transformation Capability	3,98	38	0,000

The test results showed a significance value of 0.000 ($p < 0.05$), which means there was a significant difference between the experimental and control groups. Thus, H_0 was rejected and H_1 was accepted.

Discussion

In this study, the primary focus is to analyze the influence of networking skills on students' digital transformation capabilities. With the rapid development of digital technology, digital transformation in education, particularly higher education, has become inevitable (Tresna & Sijabat, 2023). In this context, students' ability to build, manage, and utilize social and professional networks is crucial to support their learning process and prepare them for entering the digital workforce.

Networking skills refer to an individual's ability to utilize the various information resources available within their social networks. Students with strong networking skills tend to be more effective in accessing the latest knowledge, which significantly impacts their ability to adapt to changes in the digital workplace (Khairunisa & Sabaria, 2023). However, this study shows that while the potential for using these networks exists, not all students are able to utilize them to their full potential. This is relevant to previous research that revealed that many students still use technology solely as a means of communication or entertainment, without considering it as a means to improve their academic and professional competencies (Zakaria, 2023).

This condition creates a gap between potential and reality, where many students are unable to optimize their networks for strategic purposes. Many students face challenges in utilizing technology not only for communication but also for learning and innovation. This indicates an urgent need to bridge the gap between knowledge and practice in networking skills among students (Anindya et al., 2023).

A number of previous studies have focused more on the organizational context and the impact of digital transformation in the industrial sector, which means that the lack of research at the individual level, especially for students, remains a major challenge (Gotama & Rindrayani, 2022). In fact, students act as future workers, playing a crucial role in the higher education ecosystem in the digital economy era. Therefore, developing both academic and practical skills must be considered a priority (Lestari et al., 2024).

The results of this study emphasize the importance of integrating networking skills into higher education curricula to enhance students' digital transformation capabilities. Universities need to design and implement learning strategies that not only rely on theory but also provide real-world practice in building and maintaining relevant social networks. This is crucial for preparing students to better face the challenges of an increasingly complex and digitally shifting workplace (Pakpahan & Nikmah, 2023).

In response to this need, educational institutions need to provide adequate training and development to enable students to optimally utilize technology in professional contexts. By emphasizing networking skills and strategic digital use, students are expected to become not only technology users but also innovators capable of creating value in the current and future workplace (Fernando & Handoyo, 2022).

Overall, this research makes a significant contribution to understanding the influence of networking capabilities on students' digital transformation abilities, which are key to success in the digital age. This understanding is expected to facilitate the development of better educational policies and practices in higher education institutions.

4. CONCLUSION

The results of this study indicate that students who received network capability enhancement treatment had significantly higher digital transformation capability than students who did not receive the treatment. This finding indicates that students' ability to build and utilize networks plays a crucial role in supporting the digital transformation process, particularly in the context of learning and competency development in higher education.

The results of the study showed a significant difference in digital transformation capability between students in the experimental and control groups. Students who received treatment in the form of network capability enhancement demonstrated higher digital transformation capabilities compared to students who did not receive treatment. This finding indicates that network capability plays a crucial role in supporting students' digital transformation process.

Theoretically, network capability enables individuals to access a wider range of information, knowledge, and digital resources through social and professional networks. Students with strong network capability tend to be more active in collaborating, sharing knowledge, and strategically utilizing digital technology. This directly impacts their ability to adopt and integrate digital technology into their learning processes, thereby strengthening their digital transformation capability.

The results of this study also reinforce the view that digital transformation at the individual level is determined not only by technological mastery but also by social and relational skills. Through strong networks, students can gain more contextual learning experiences, including the use of digital platforms, online discussions, and cross-community collaborative work. This encourages students to be more adaptive and innovative in facing the demands of learning in the digital age.

In the context of higher education, these findings have important practical implications. Universities need to design learning strategies that focus not only on improving digital technical skills but also on developing students' network capabilities. Activities such as project-based learning, student collaboration, leveraging digital communities, and engaging with professional networks can be effective tools for fostering students' sustainable digital transformation.

However, this study has limitations, including a relatively limited sample size and the use of a quasi-experimental design without full randomization. Therefore, future research is recommended to involve a larger number of respondents, use a more robust experimental design, and include other variables such as digital literacy, self-efficacy, or learning motivation as mediating or moderating variables. This will allow for a more comprehensive understanding of the factors influencing students' digital transformation capability.

5. ACKNOWLEDGMENTS

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