

Technology Readiness and Digital Competence as Determinants of Technology Adaptation

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ABSTRACT

Digital transformation requires students to possess adequate technological readiness and digital competence in order to adapt to rapidly evolving technologies. This study aims to analyze the partial and simultaneous effects of Technology Readiness and Digital Competence on students' Technology Adaptation. The study employed a quantitative approach with an associative research design. The population consisted of 90 first-semester students enrolled in the Digital Business Study Program, and total sampling was applied so that all members of the population were included as respondents. Primary data were collected through questionnaires using a Likert scale and analyzed using multiple linear regression. The results show that Technology Readiness has a positive and significant effect on Technology Adaptation, with a t-value of 4.092 and a significance level of $0.000 < 0.05$. Digital Competence also has a positive and significant effect on Technology Adaptation, with a t-value of 5.021 and a significance level of $0.000 < 0.05$. Simultaneously, Technology Readiness and Digital Competence significantly affect Technology Adaptation, as indicated by an F-value of 34.726 and a significance level of $0.000 < 0.05$. The model explains approximately 44.4% of the variation in Technology Adaptation, while the remaining variation is influenced by other factors outside the model. The standardized beta coefficients indicate that Digital Competence ($\beta = 0.468$) contributes relatively more strongly than Technology Readiness ($\beta = 0.381$). Therefore, technological readiness supported by strong digital competence is an important factor in enhancing students' ability to adapt to technological developments.

A. INTRODUCTION

Digital transformation has become a global development that significantly affects many sectors, particularly higher education and business. The rapid growth of technologies such as artificial intelligence, big data, cloud computing, the Internet of Things, and various digital platforms has changed the way organizations conduct business activities, make decisions, and create value for customers. These developments have increased the demand for human resources who not only understand business concepts but are also capable of adapting to and using technology effectively. Higher education institutions therefore face the challenge of preparing graduates with digital capabilities that are relevant to industry needs. This issue is particularly important for Digital Business study programs, where students are expected to combine business knowledge with technological capabilities in order to respond to a continuously changing business environment.

Digital Business students occupy an important position because they interact directly with technological developments during their learning process and preparation for employment. Digital proficiency has become a fundamental competency, as modern business activities increasingly depend on the ability to use digital applications, manage information, conduct marketing through digital platforms, utilize data for decision making, and develop

technology-based innovations. However, frequent exposure to technology does not necessarily mean that all students have the same capacity to adapt. Some students are able to understand and apply new technologies quickly, while others may experience difficulties due to limited confidence, insufficient digital skills, or challenges in keeping up with rapid technological change. This situation suggests that Technology Adaptation is influenced not only by exposure to digital tools but also by an individual's readiness and competence in using them.

Technology Readiness provides a useful perspective for understanding how individuals respond to technological change. Parasuraman (2000) conceptualizes this construct as a person's general inclination to embrace and utilize new technologies, which is influenced by psychological characteristics rather than technical ability alone. The construct incorporates encouraging dimensions, such as optimism toward technology and a willingness to experiment with innovation, as well as restraining dimensions represented by discomfort and insecurity. This framework was subsequently developed further by Parasuraman and Colby (2015) through the Technology Readiness Index (TRI), which emphasizes that readiness is shaped by individuals' beliefs, motivation, confidence, and perceived barriers when interacting with technology. For students enrolled in Digital Business programs, such readiness is particularly important because their academic activities continuously expose them to emerging digital tools and systems. Students who are psychologically more prepared for technological change are therefore expected to show greater initiative in exploring unfamiliar applications, developing new technological skills, and adjusting their learning practices to changing digital environments.

Psychological preparedness alone, however, may not be sufficient to support effective adaptation to technology. Students also require Digital Competence, which reflects a broader capacity to work with digital technologies in an effective, responsible, critical, and secure manner. Rather than being limited to operational skills, digital competence encompasses the ability to locate and evaluate information, communicate and collaborate through digital environments, develop digital content, protect users and data, and address problems through technological solutions. These areas are incorporated within the Digital Competence Framework (DigComp) developed by the European Commission. Such competencies are particularly relevant to Digital Business students because contemporary business practices increasingly require them to process digital information, communicate through online platforms, create technology-supported solutions, and use digital systems in addressing practical business problems. Consequently, a stronger level of digital competence can provide students with the practical capabilities needed to respond more effectively to continuing technological developments.

Earlier research has approached technology engagement from several complementary perspectives. Horrigan (2016), for example, relates digital readiness to the combination of users' technological skills, confidence, and level of comfort when interacting with digital tools. In an educational context, Hatlevik and Christophersen (2013) associate digital competence with learners' capacity to make meaningful and effective use of digital resources. Scherer et al. (2019) further demonstrate that individuals' beliefs regarding technology, including perceptions of usefulness and ease of use, are closely connected with technology acceptance in learning environments. Similarly, Nikou and Economides (2019) underline the contribution of both personal characteristics and technology-related considerations to users' willingness to adopt digital applications. More specifically, Sudaryanto et al. (2023) investigated Technology Readiness and Digital Competence alongside perceived usefulness and perceived ease of use in explaining students' adoption of artificial intelligence. Collectively, these studies suggest that responses to new technology cannot be explained by a single factor; rather, they emerge from the interaction between psychological preparedness, practical digital capabilities, and users' evaluations of the technology they encounter. Despite the growing body of research on Technology Readiness, Digital Competence, and technology acceptance, several gaps remain. Much of the existing literature has focused on specific technologies, such as e-learning systems, artificial intelligence, or particular information systems. Studies that combine

Technology Readiness and Digital Competence to explain broader Technology Adaptation among Digital Business students remain relatively limited. This context is important because Digital Business students are not merely technology users; they are also being prepared to apply, manage, and potentially develop digital technologies within business settings. Examining these factors can therefore provide a broader understanding of how students prepare themselves for continuing technological change.

Based on these considerations, this study aims to examine the effects of Technology Readiness and Digital Competence on the Technology Adaptation of Digital Business students. The study is expected to contribute theoretically to the discussion of technology adaptation behavior and to provide practical insights for higher education institutions, particularly Digital Business study programs, in designing strategies that strengthen students' readiness and digital capabilities in response to an increasingly dynamic technological environment.

B. THEORETICAL STUDY

Technology Readiness

Technology Readiness describes the extent to which a person is mentally and psychologically prepared to engage with technological change. Parasuraman (2000) introduced this concept to explain why individuals differ in their willingness to approach, accept, and use new technologies. The construct is not confined to technical capability, because it also captures the beliefs, attitudes, and perceptions that shape a person's response to the opportunities and risks associated with technology. Parasuraman and Colby (2015) later elaborated this concept through the Technology Readiness Index (TRI), which organizes readiness into four dimensions: optimism, innovativeness, discomfort, and insecurity. Optimism reflects a positive expectation that technology can make activities more efficient and beneficial, whereas innovativeness represents a tendency to experiment with and adopt emerging technologies earlier than others. By contrast, discomfort is associated with feelings of unease or difficulty when dealing with technological systems, while insecurity reflects doubts concerning their reliability, safety, and trustworthiness.

Technology Readiness is particularly relevant because rapid technological change requires continuous adjustment. Students with higher levels of readiness are generally more open to digital innovation, more confident when experimenting with new technologies, and more capable of integrating technology into academic and business-related activities. Conversely, students with lower Technology Readiness may face greater difficulty in responding to technological change. Therefore, Technology Readiness is expected to have a positive relationship with students' ability to adapt to technological developments.

Digital Competence

Digital Competence can be understood as a person's capacity to use digital technologies in a purposeful, critical, secure, and responsible manner to accomplish particular objectives. The concept is broader than simply knowing how to operate digital devices. Within the Digital Competence Framework (DigComp), the European Commission outlines several core areas that represent this capability, including information and data literacy, communication and collaboration through digital media, the creation of digital content, digital safety, and problem-solving in technology-based contexts (Vuorikari et al., 2022).

Ferrari (2013) describes digital competence as a combination of knowledge, skills, and attitudes that enables individuals to use digital technology appropriately across different contexts. Individuals with strong digital competence are not only able to operate digital tools, but are also capable of evaluating digital information, recognizing potential risks, and using technology to develop effective solutions. In higher education, Digital Competence has become increasingly important because both learning activities and professional practices are becoming more dependent on digital technologies. Hatlevik and Christophersen (2013) indicate that digital competence is associated with individuals' ability to engage with and make effective use of digital resources in learning contexts.



Digital Competence has particular importance because technology is closely integrated into modern business activities, including digital marketing, e-commerce, data analysis, and the development of technology-based business models. Students with stronger digital competence are generally better positioned to understand how technologies work, manage difficulties that arise during their use, and utilize digital platforms more effectively. Therefore, a higher level of Digital Competence is expected to support students' ability to adapt to ongoing technological developments.

Technology Adaptation

Technology Adaptation can be viewed as an individual's capacity to respond to technological change by learning, understanding, and incorporating new technologies into daily activities. Rogers (2003), through the Diffusion of Innovation theory, explains that the adoption process is shaped by several characteristics of an innovation, including its relative advantage, compatibility with users' needs, complexity, trialability, and observability. In digital contexts, however, adaptation is not determined by technical capability alone. A person's willingness to accept change and continue learning unfamiliar technologies also plays an important role. From the perspective of the Technology Acceptance Model, Davis (1989) argues that acceptance is strongly influenced by how useful and easy to use a technology is perceived to be. When users consider a technology beneficial and manageable, they are generally more inclined to adopt and apply it.

For students in Digital Business programs, the ability to adapt to technology is especially relevant because they are preparing to work in environments where technological change occurs continuously. Their level of adaptation can be seen in how well they learn unfamiliar digital tools, integrate applications into academic activities, use technology to address business-related problems, and remain responsive to emerging digital innovations.

For Digital Business students, Technology Adaptation is particularly important because they are being prepared to enter a dynamic and technology-driven business environment. Their ability to adapt can be reflected in how effectively they learn new technologies, use digital applications, apply technology to solve business-related problems, and keep up with emerging digital innovations.

The Effect of Technology Readiness on Technology Adaptation

Technology Readiness is closely related to an individual's ability to adjust to technological change. Individuals with a higher level of readiness toward technology tend to show more positive attitudes, greater openness to innovation, and stronger confidence when using new technologies. Parasuraman and Colby (2015) explain that Technology Readiness reflects how individuals are psychologically prepared to respond to and engage with technological developments. Previous studies have also linked Technology Readiness with the acceptance and use of technology. Lin and Hsieh (2011) discuss individual responses in the context of technology-based services, while Sudaryanto et al. (2023) examine Technology Readiness as one of the factors considered in technology adoption. These findings support the view that readiness toward technology can influence how individuals respond to new digital systems and technological change. In the context of Digital Business students, those with higher Technology Readiness are expected to be more capable of adjusting to new digital technologies used in academic and business-related activities. Therefore, the following hypothesis is proposed:

H1: Technology Readiness has a positive and significant effect on the Technology Adaptation of Digital Business students.

The Effect of Digital Competence on Technology Adaptation

Digital Competence plays an important role in shaping an individual's ability to use and adjust to technological developments. Individuals with stronger digital competence are generally better able to understand how technology functions, deal with technical challenges, and apply digital tools to achieve specific goals. Nikou and Economides (2019) indicate that individual and technology-related factors are relevant to the acceptance and use of digital

technology in educational settings. In addition, van Laar et al. (2020) emphasize that digital skills are essential for helping individuals respond to changes brought about by technological development. For Digital Business students, Technology Adaptation is closely related to the level of digital competence they possess because technology is a central part of their field of study. Students with stronger digital competence are expected to be more capable of understanding, using, and adjusting to new technologies in both academic and business-related activities.

Based on this reasoning, the following hypothesis is proposed:

H2: Digital Competence has a positive and significant effect on the Technology Adaptation of Digital Business students.

The Effect of Technology Readiness and Digital Competence on Technology Adaptation

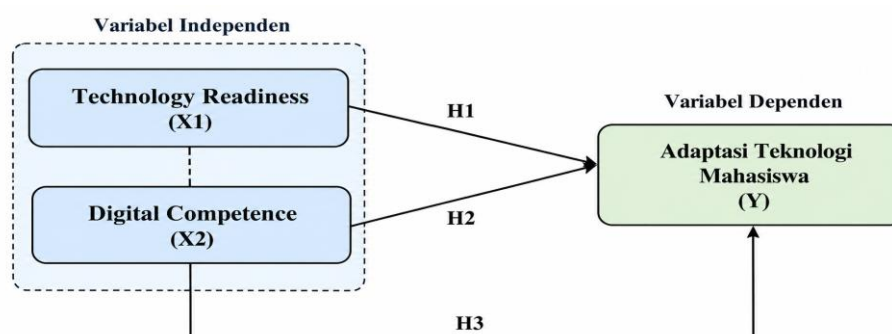
Students' ability to adapt to technological change is shaped not only by their willingness to accept new technologies, but also by their capacity to use those technologies effectively. Technology Readiness reflects an individual's psychological preparedness to engage with technological developments, whereas Digital Competence refers to the knowledge and skills required to use digital technologies productively, safely, and appropriately. Parasuraman and Colby (2015) explain that individuals with higher levels of technology readiness tend to be more receptive to technological innovation. At the same time, such readiness needs to be supported by adequate digital competence so that technology can be applied effectively in different situations (Vuorikari et al., 2022).

Previous studies have also highlighted the importance of individual readiness, digital capabilities, and perceptions of technology in explaining technology acceptance and use. Nikou and Economides (2019) indicate that individual and technology-related factors contribute to the acceptance of digital technology in educational settings. Sudaryanto et al. (2023) further examined Technology Readiness and Digital Competence, together with perceived usefulness and ease of use, in relation to students' adoption of artificial intelligence technology. Taken together, these perspectives suggest that students who are psychologically prepared to engage with technological change and who possess adequate digital skills are more likely to manage technological demands effectively. Therefore, this study proposes that Technology Readiness and Digital Competence jointly contribute to the Technology Adaptation of Digital Business students. Based on this reasoning, the following hypothesis is formulated: H3: Technology Readiness and Digital Competence simultaneously have a positive and significant effect on the Technology Adaptation of Digital Business students.

Research Framework

Drawing on the theoretical foundation and findings from previous studies, this research proposes that students' Technology Adaptation is influenced by two key factors: Technology Readiness and Digital Competence. Technology Readiness reflects students' psychological preparedness to accept and respond to new technologies, while Digital Competence represents their ability to use digital technologies effectively in academic and practical contexts.

The proposed research framework is illustrated as follows:



Based on the proposed research framework, the hypotheses are formulated as follows:

H1: Technology Readiness has a positive and significant effect on the Technology Adaptation of Digital Business students.

H2: Digital Competence has a positive and significant effect on the Technology Adaptation of Digital Business students.

H3: Technology Readiness and Digital Competence simultaneously have a positive and significant effect on the Technology Adaptation of Digital Business students.

C. RESEARCH METHODS

This research used a quantitative associative design to investigate the relationship between Technology Readiness, Digital Competence, and Technology Adaptation. The participants were first-semester students enrolled in the Digital Business Study Program at Politeknik Manufaktur Negeri Bangka Belitung in 2026. This group was selected because they were still in the initial stage of adapting to university-level learning and to the increasing use of digital technologies in academic activities. Three variables were examined in the study. Technology Readiness (X1) represented students' psychological inclination to engage with technology and was reflected through optimism, innovativeness, discomfort, and insecurity. Digital Competence (X2) referred to students' capability to use digital technology effectively, critically, securely, and productively, including skills related to information and data literacy, digital communication and collaboration, content creation, safety, and problem solving. Technology Adaptation (Y) described students' capacity to learn, use, and adjust to developments in digital technology.

The study involved the entire population of 90 first-semester Digital Business students, so all members of the population were included as respondents. Data were obtained directly through questionnaires developed from the indicators of each research variable and measured using a Likert-type scale. The analysis combined descriptive and inferential statistical procedures. Before testing the hypotheses, the questionnaire items were evaluated for validity and reliability. Multiple linear regression was then applied to assess the contribution of Technology Readiness and Digital Competence to Technology Adaptation. Partial effects were examined using t-tests, while the simultaneous influence of the two independent variables was assessed through an F-test. In addition, the coefficient of determination (R^2) was used to estimate how much variation in Technology Adaptation could be explained by the predictors included in the model.

D. RESULTS AND DISCUSSION

Results of the Research Instrument Testing

Validity Tes

Variabel	Indikator	r hitung	r tabel (n=90, $\alpha=0,05$)	Keterangan
Technology Readiness (X1)	TR1	0,612	0,207	Valid
	TR2	0,587	0,207	Valid
	TR3	0,655	0,207	Valid
	TR4	0,541	0,207	Valid
	TR5	0,603	0,207	Valid
Digital Competence (X2)	DC1	0,628	0,207	Valid
	DC2	0,671	0,207	Valid
	DC3	0,533	0,207	Valid
	DC4	0,594	0,207	Valid
	DC5	0,619	0,207	Valid
Adaptasi Teknologi (Y)	AT1	0,566	0,207	Valid
	AT2	0,621	0,207	Valid
	AT3	0,684	0,207	Valid
	AT4	0,598	0,207	Valid
	AT5	0,547	0,207	Valid

The validity analysis showed that every item used to measure Technology Readiness, Digital Competence, and Technology Adaptation met the required validity criterion. Each calculated r-value exceeded the critical r-value of 0.207 at the 5% significance level, indicating that all questionnaire items were valid and appropriate for further analysis.

Reliability Test Results

Variabel	Cronbach's Alpha	Nilai Kritis	Keterangan
<i>Technology Readiness (X1)</i>	0,842	0,60	Reliabel
<i>Digital Competence (X2)</i>	0,876	0,60	Reliabel
<i>Adaptasi Teknologi (Y)</i>	0,815	0,60	Reliabel

The reliability test results show that all research variables have Cronbach's Alpha values above 0.60. Technology Readiness obtained a value of 0.842, Digital Competence reached 0.876, and Technology Adaptation recorded 0.815. These results indicate that all instruments demonstrate acceptable internal consistency and are therefore considered reliable for use in the data collection process.

Multiple Linear Regression Analysis

Coefficientsa

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	8,764	2,146		4,084	0,000
<i>Technology Readiness (X1)</i>	0,356	0,087	0,381	4,092	0,000
<i>Digital Competence (X2)</i>	0,472	0,094	0,468	5,021	0,000

1. The Effect of Technology Readiness (X1) on Technology Adaptation (Y)

a. t-value (4.092)

The calculated t-value of 4.092 represents the partial test of the effect of Technology Readiness (X1) on Technology Adaptation (Y). With a sample of 90 respondents and two independent variables, the t-table value at a 5% significance level is approximately 1.988. Since the calculated t-value of 4.092 is greater than the t-table value of 1.988, Technology Readiness has a statistically significant effect on Technology Adaptation.

b. Significance value (0.000)

The significance value of 0.000 is lower than 0.05. This indicates that there is a statistically significant effect of Technology Readiness on Technology Adaptation. In other words, students who are more prepared to accept and use technology tend to have a stronger ability to adjust to technological developments.

c. Hypothesis interpretation

H0 states that Technology Readiness does not have a significant effect on Technology Adaptation, while H1 states that Technology Readiness has a positive and significant effect on Technology Adaptation. Based on the calculated t-value of 4.092 and the significance value of $0.000 < 0.05$, H0 is rejected and H1 is accepted. Therefore, Technology Readiness has a positive and significant effect on students' Technology Adaptation.

2. The Effect of Digital Competence (X2) on Technology Adaptation (Y)

a. t-value (5.021)

The calculated t-value of 5.021 represents the partial test of the effect of Digital Competence (X2) on Technology Adaptation (Y). Since the calculated t-value of 5.021



is greater than the t-table value of 1.988, Digital Competence has a statistically significant effect on Technology Adaptation.

b. Significance value (0.000)

The significance value of 0.000 is lower than 0.05. This result indicates that there is a statistically significant relationship between Digital Competence and Technology Adaptation. In other words, students with stronger digital competence tend to be better able to understand, use, and adjust to technological developments.

c. Hypothesis interpretation

H0 states that Digital Competence does not have a significant effect on Technology Adaptation, while H2 states that Digital Competence has a positive and significant effect on Technology Adaptation. Based on the calculated t-value of 5.021 and the significance value of $0.000 < 0.05$, H0 is rejected and H2 is accepted. Therefore, Digital Competence has a positive and significant effect on students' Technology Adaptation.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	512,684	2	256,342	34,726	0,000
Residual	642,316	87	7,383		
Total	1.155,000	89			

Based on the F-test results from the regression analysis involving Technology Readiness (X1) and Digital Competence (X2) on Technology Adaptation (Y), the following results were obtained:

1. Calculated F-value (34.726)

The calculated F-value of 34.726 indicates the overall test used to determine whether Technology Readiness (X1) and Digital Competence (X2) jointly influence Technology Adaptation (Y). Since the calculated F-value exceeds the critical F-value, the regression model can be considered statistically significant.

2. F-table value (3.101)

With 90 respondents, two independent variables, and a significance level of 5%, the degrees of freedom are $df_1 = 2$ and $df_2 = 87$. Based on these values, the F-table value is approximately 3.101. Because the calculated F-value of 34.726 is greater than the F-table value of 3.101, Technology Readiness and Digital Competence simultaneously have a significant effect on Technology Adaptation.

3. Significance value (0.000)

The test produced a significance value of 0.000. Since this value is lower than 0.05, the regression model is statistically significant. This result indicates that Technology Readiness and Digital Competence, when considered together, significantly influence students' Technology Adaptation.

4. Interpretation

H0 states that Technology Readiness (X1) and Digital Competence (X2) do not simultaneously have a significant effect on Technology Adaptation (Y), whereas H3 states that both variables jointly have a positive and significant effect on Technology Adaptation. The results show that the calculated F-value of 34.726 is greater than the F-table value of 3.101, while the significance value of 0.000 is below 0.05. Therefore, H0 is rejected and H3 is accepted. This means that Technology Readiness and Digital Competence jointly contribute significantly to students' ability to adapt to technological developments.

Discussion

The findings indicate that the instruments used to measure Technology Readiness, Digital Competence, and Technology Adaptation met the required measurement standards. The validity test showed that all questionnaire items had significance values below 0.05, indicating that each item was valid. The reliability test also confirmed satisfactory internal consistency, with Cronbach's Alpha values of 0.842 for Technology Readiness, 0.876 for Digital Competence, and 0.815 for Technology Adaptation. Since all coefficients exceeded the

minimum threshold of 0.60, the instruments were considered reliable for measuring their respective constructs.

The multiple linear regression analysis produced the equation $Y = 8.764 + 0.356X_1 + 0.472X_2$. This equation indicates that both Technology Readiness and Digital Competence are positively associated with Technology Adaptation. The regression coefficient of 0.356 for Technology Readiness means that, when other variables are held constant, an increase in Technology Readiness is followed by an increase in Technology Adaptation. Likewise, the coefficient of 0.472 for Digital Competence shows that students with stronger digital competence tend to demonstrate a higher level of adaptation to technological developments.

The Influence of Technology Readiness on Technology Adaptation

The first hypothesis test confirmed a significant positive relationship between Technology Readiness and Technology Adaptation. The obtained t-statistic of 4.092 exceeded the critical t-value of 1.988, while the significance level was 0.000, which is below the 0.05 threshold. These results provide support for H1 and indicate that students who are better prepared to engage with technology tend to adapt more effectively to technological change. This result is consistent with the concept of Technology Readiness proposed by Parasuraman and Colby, which emphasizes that an individual's willingness to embrace and use new technologies is influenced by psychological factors, including beliefs, motivation, and perceived barriers. The construct comprises four dimensions: optimism, innovativeness, discomfort, and insecurity. Higher optimism and innovativeness are generally associated with greater openness to exploring new technologies, whereas discomfort and insecurity can limit an individual's willingness to engage with technological developments.

This result is particularly relevant for first-semester students, who are still adjusting to a higher education environment that increasingly relies on digital technologies. Students with stronger technology readiness are likely to feel more confident when learning new applications, using digital learning systems, and responding to technological changes in academic activities. This is consistent with the research framework, which assumes that students with higher levels of technology readiness tend to be more open to innovation and more capable of adapting to technological developments. The standardized beta coefficient for Technology Readiness was 0.381, indicating a positive contribution of this variable to Technology Adaptation. This suggests that readiness for technology is not only related to technical ability, but also to an individual's attitude toward technological change. Therefore, strengthening students' confidence, openness, and readiness to engage with new technologies may play an important role in supporting their adaptation to technology in higher education.

The Influence of Digital Competence on Technology Adaptation

The second hypothesis test provides evidence that Digital Competence significantly and positively influences Technology Adaptation. The calculated t-value of 5.021 was greater than the critical value of 1.988, and the significance level of 0.000 was below the 0.05 criterion. These findings support H2 and indicate that students with stronger digital capabilities are generally better prepared to learn, use, and adjust to new technologies. Digital Competence in this context extends beyond basic operational skills. It also involves the ability to handle information and data, communicate and collaborate through digital platforms, produce digital content, maintain security in digital environments, and use technology to solve problems. These competencies are consistent with the main areas described in the DigComp framework and help explain why digitally competent students are more capable of responding to technological change.

For students in the Digital Business Study Program, these competencies are especially important because both learning activities and modern business practices increasingly rely on digital technologies. Students are expected not only to use technology, but also to understand how it can support information access, communication, data analysis, problem solving, and business activities. The findings of this study also indicate that students with higher levels of digital competence are generally better able to understand the functions of technology and



overcome difficulties that may arise during its use. The standardized beta coefficient for Digital Competence was 0.468, which is higher than the beta coefficient for Technology Readiness, which was 0.381. This suggests that Digital Competence makes a relatively stronger contribution to Technology Adaptation in the regression model. The result can be explained by the fact that successful adaptation to technology requires not only psychological readiness to accept technological change, but also practical knowledge and skills that enable individuals to use technology effectively.

The Influence of Technology Readiness and Digital Competence on Technology Adaptation

The simultaneous test results show that Technology Readiness and Digital Competence jointly have a significant effect on Technology Adaptation. The F-test produced an F-value of 34.726, which is higher than the F-table value of 3.101, with a significance level of $0.000 < 0.05$. Therefore, H3 is accepted. This result indicates that technological readiness and digital competence together play an important role in shaping students' ability to adjust to technological developments. Technology Adaptation is therefore not influenced by a single factor. Students' psychological readiness to accept new technologies needs to be supported by sufficient digital skills to use those technologies effectively. Technology Readiness provides the foundation in the form of openness, confidence, and willingness to engage with new technologies, while Digital Competence equips students with the practical skills required to operate and utilize technology effectively.

This finding can also be related to the concept of Technology Adaptation, which in this study refers to an individual's ability to accept, understand, use, and adjust to technological developments. Adaptation requires not only a positive attitude toward technology but also the ability to learn and integrate new technologies into daily activities. This perspective is consistent with the principles of Diffusion of Innovation and the Technology Acceptance Model, particularly regarding perceived usefulness, ease of use, and individual responses to technological innovation. The results suggest that students' ability to adapt to technology emerges from the interaction between psychological readiness and digital competence. Students who are open to new technologies but lack adequate digital skills may still experience difficulties in using them effectively. In contrast, strong digital skills are likely to be more useful when accompanied by a willingness to accept, explore, and apply new technologies. Therefore, efforts to improve students' Technology Adaptation should not focus solely on technical skills, but should also strengthen confidence, readiness, and openness toward technological change.

These findings imply that higher education institutions should provide support from the beginning of students' studies through early exposure to educational technologies, the development of digital literacy and digital competence, and learning activities that allow students to explore and apply new technologies directly. Through this approach, students are expected not only to become technology users, but also to develop the capacity to respond effectively to continuous technological change.

E. CONCLUSION AND SUGGESTIONS

Conclusion

Based on the findings regarding the influence of Technology Readiness and Digital Competence on Technology Adaptation, the following conclusions can be drawn:

1. Technology Readiness has a positive and significant effect on students' Technology Adaptation. This indicates that students who are more prepared to accept, use, and respond to technological developments tend to demonstrate a stronger ability to adjust to new technologies.
2. Digital Competence has a positive and significant effect on students' Technology Adaptation. This suggests that students' ability to use digital technology effectively, critically, safely, and productively plays an important role in helping them respond to and keep pace with technological change.

3. Technology Readiness and Digital Competence simultaneously have a significant effect on students' Technology Adaptation. This means that the ability to adapt to technological developments is shaped not only by an individual's readiness to accept technology, but also by the level of digital competence they possess.
4. Based on the beta coefficients obtained from the regression analysis, Digital Competence contributes more strongly to Technology Adaptation than Technology Readiness. This finding highlights the importance of strengthening students' digital capabilities in supporting their adjustment to continuous technological developments.

Suggestions

Based on the findings of this study, several recommendations can be proposed as follows:

1. For higher education institutions, particularly Digital Business study programs, it is recommended to strengthen learning programs that support students' technological readiness and digital competence from the beginning of their studies. Activities such as practical technology training, introduction to relevant digital applications, project-based learning, and the effective use of digital learning platforms may help students adapt more quickly to technology-based learning environments.
2. For students, it is recommended to continuously improve their ability to use various digital technologies, not only in terms of technical skills but also in managing information, communicating through digital media, maintaining digital security, and solving problems with the support of technology.
3. For managers of Digital Business study programs, the findings of this study may be used as a reference in designing orientation activities and competency development programs for first-semester students, particularly those related to technological readiness and the improvement of digital skills.
4. For future researchers, further studies may include additional variables that potentially influence Technology Adaptation, such as self-efficacy, learning motivation, environmental support, or prior experience in using technology. Future studies may also involve broader research objects by including students from different study programs or higher education institutions so that the findings can have wider applicability.

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