Digital Transformation and Managerial Innovation in Shaping Generation Z's Adaptive Mindset

Hari Alvin Wijaya
Pamulang University
HariAlvinWijaya@gmail.com

Abstract

This study aims to examine the impact of digital transformation and innovative management on the adaptive mindset of Generation Z students in the context of preparing for contemporary work environments. Digital transformation acts as a crucial factor influencing learning modes, interactions, and students' capacity to adapt to accelerating technological evolution, while innovative management contributes to developing creative, flexible, and solution-oriented thinking skills in response to dynamic challenges. This study adopts a quantitative approach using a survey method involving 104 Generation Z student respondents who are actively engaged in academic activities and the use of digital technology. Data analysis techniques are conducted using SPSS software version 25 through a series of tests including validity testing, reliability testing, multiple linear regression analysis, as well as t-tests and F-tests. Research findings indicate that both digital transformation and innovative management have a positive and significant impact on students' adaptive mindset. Partially, digital transformation shows a more dominant effect on students' adaptive capacity compared to innovative management, while simultaneously both variables contribute 23.5% to the formation of an adaptive mindset. These results imply that proficiency in technology as well as the implementation of innovative management are key elements for Generation Z students to adapt to a modern digital-based work ecosystem. This research is expected to serve as a reference for higher education institutions in formulating technology- and innovation-based learning strategies to develop a generation that is adaptive, creative, and competitive in the Industry 5.0 era.

Keywords:
digital transformation, innovative management, adaptive mindset

Introduction

The rapid development of digital technology has fundamentally transformed the dynamics of education, communication, and the contemporary work environment. In the era of Industry 5.0, characterized by the integration of human creativity with artificial intelligence, individuals are expected to develop an adaptive mindset that enables quick and efficient responses to change. Generation Z, often referred to as "digital natives," is the first cohort to be fully raised within a digital ecosystem. Although this generation demonstrates superior technological competence, their ability to adjust cognitive orientation to the requirements of the modern work environment remains a significant subject of academic study. An adaptive mindset—defined as the capacity to maintain flexibility, continuously learn, and face uncertainty—is one of the key competencies in maintaining professional relevance in the digital era (Santoso & Hidayat, 2023).

Digital transformation has reshaped the way individuals approach learning processes, professional activities, and social interactions, with an emphasis on speed, innovation, and international connectivity. In the context of higher education, this transformation affects students' participation in academic activities as well as the development of competencies that align with the demands of the contemporary work environment. The application of digital technology, including distance learning platforms, virtual collaboration, and data-driven systems, provides significant opportunities for students to cultivate critical and autonomous thinking skills (Putra & Wahyudi, 2021). Nevertheless, mere mastery of digital technology is insufficient to build adaptive capacity. Without effective innovation management, students are at risk of digital fatigue or becoming trapped in passive consumer roles without the ability to generate new innovations. Therefore, adaptive capacity must be supported by innovative management practices that encourage students to think creatively and find solutions amid the rapidly changing dynamics.

Innovative management refers to an individual's capacity to generate, organize, and implement new ideas efficiently. For students, this concept involves the courage to experiment, accept risks in exploring new things, and develop creative ideas within the context of academic and organizational activities. As stated by Sari and Nugroho (2021), competencies in innovative management can strengthen problem-solving skills and enhance an individual's preparedness to face emerging challenges in the professional environment. The contemporary work environment, characterized by automation, digital collaboration, and flexible work models, requires students to develop high innovative capabilities to adapt and contribute maximally.

The interrelation between digital transformation, innovative management, and adaptive mindset among Generation Z students has not been widely explored, especially within the context of higher education in Indonesia. Most previous studies have only examined these variables separately, without exploring their interaction in shaping students' preparedness for the future work environment (Setiawan & Rahmawati, 2022). This study aims to address this gap by analyzing the impact of digital transformation and innovative management on the adaptive mindset of Generation Z students.

Theoretically, this study contributes to enriching the academic literature related to the development of an adaptive mindset in the digital age. Practically, the research findings are anticipated to provide recommendations for higher education institutions in designing effective pedagogical strategies and curricula to foster adaptive and innovative capacities, as well as preparing students to face the dynamics of the contemporary work environment. Thus, Generation Z is expected not only to act as technology consumers but also as agents of value creation and innovation in the midst of the digital transformation era.

Theoretical Framework

Digital transformation refers to the process of fundamental change that involves the integration of digital technology into various dimensions of human life, including education and the workplace. This process is not limited to the mere use of digital devices but also involves the transformation of cognitive orientation, organizational culture, and modes of interaction in achieving objectives (Putra & Wahyudi, 2021). In the context of Generation Z students, digital transformation has a substantial impact on learning approaches, thinking processes, and the capacity to adapt to rapidly changing environments. Students are expected to use technology productively, enhance operational efficiency, and adapt to the evolving work environment that increasingly relies on technology.

Furthermore, innovative management serves as a vital component in the process of developing an adaptive mindset. This concept is defined as the ability of individuals or organizations to generate innovative ideas, implement strategic renewals, and manage creativity in order to achieve a competitive advantage (Sari & Nugroho, 2021). Students who possess innovative management competence generally exhibit an open mindset, a willingness to take risks, and readiness to adopt new approaches to overcome challenges. In the modern work era, these abilities are crucial to enable individuals to survive amidst technological transformations and unstable global fluctuations.

An adaptive mindset refers to a way of thinking that facilitates individual flexibility, openness to new learning, and the ability to adjust to ongoing changes (Santoso & Hidayat, 2023). This mindset holds significant importance for Generation Z students, as it can enhance their capacity to overcome work environment challenges that demand creativity, interdisciplinary collaboration, and critical thinking skills. Through an adaptive mindset, students can be better prepared to face the pressures of change and transform obstacles into opportunities for personal growth.

The relationship between digital transformation, innovative management, and an adaptive mindset demonstrates a significant interdependence. Digital transformation serves as the main catalyst in triggering behavioral and thought pattern changes in Generation Z, while innovative management acts as an internal driver that encourages students to continuously innovate and adapt to technological advancements. Thus, these two elements work synergistically in shaping an adaptive mindset, which is key to success in the contemporary workplace (Setiawan & Rahmawati, 2022).

The conceptual framework of this research can be described as follows: Digital Transformation (X1) and Innovative Management (X2) function as independent variables that influence Adaptive Mindset (Y) as the dependent variable. Digital transformation encourages students to learn autonomously, utilize technology productively, and adapt to innovative work models. On the other hand, innovative management develops the capacity for creative and flexible thinking in overcoming challenges. Both variables are expected to have a positive impact, both partially and simultaneously, on the adaptive mindset of Generation Z students.

Conceptually, the relationship between variables can be illustrated through the following model:

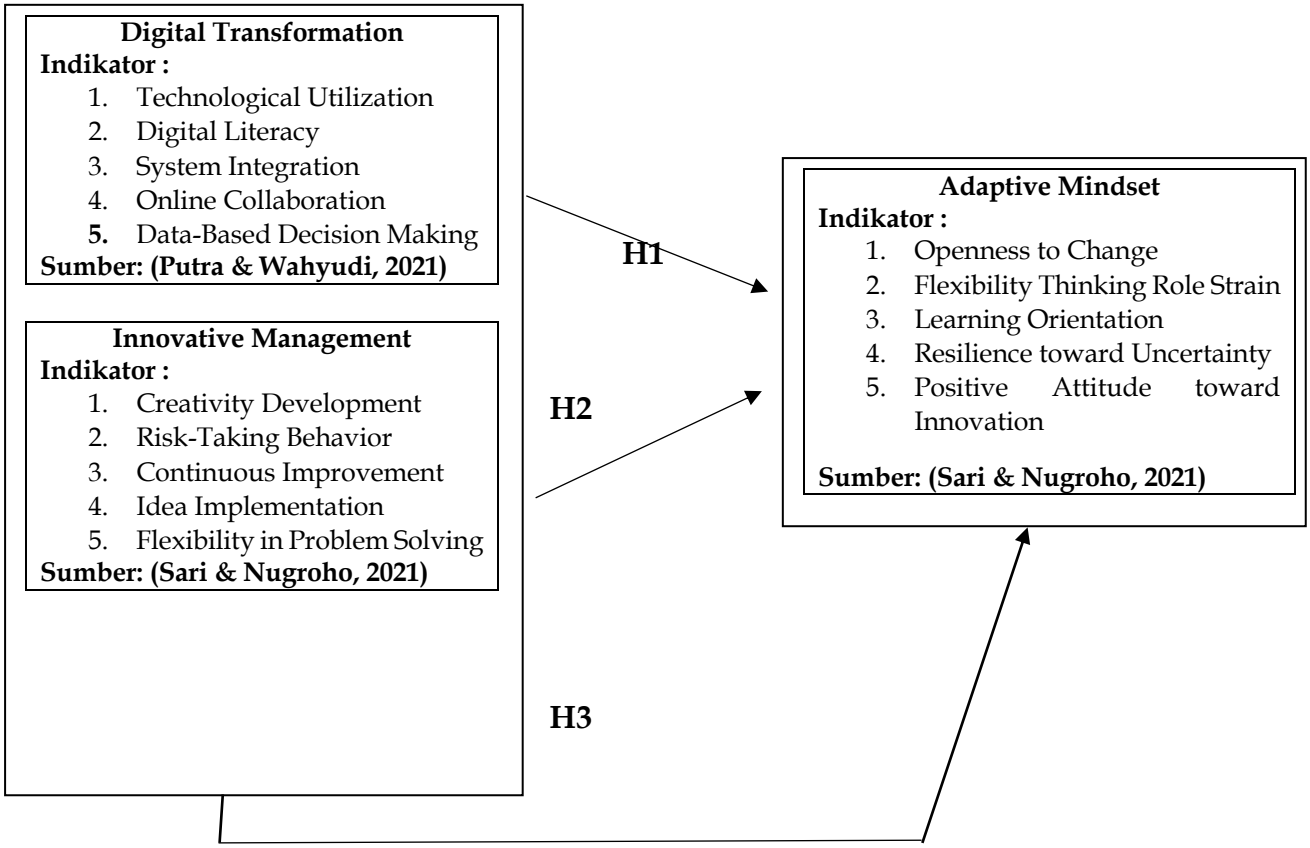

Figure 1: Research Model
Source: Literature Review

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

H1: Digital transformation has a positive and significant effect on the adaptive mindset of Generation Z students in the context of facing a contemporary work environment.
H2: Innovative management has a positive and significant effect on the adaptive mindset of Generation Z students in the context of facing a contemporary work environment.
H3: Digital transformation and innovative management simultaneously have a significant effect on the adaptive mindset of Generation Z students in the context of facing a contemporary work environment.

Thus, this theory and conceptual framework assert that students' success in overcoming the challenges of the contemporary work environment is not solely determined by technological proficiency, but also by the capacity to manage

innovation and cultivate an adaptive mindset that aligns with the imperatives of the current era.

Method

This study adopts a quantitative approach with a survey method to examine the impact of digital transformation and innovative management on the adaptive mindset of Generation Z students in the context of facing contemporary work environments. This approach was chosen for its ability to objectively measure the relationships between variables through numerical data that can be statistically processed.

The study population consisted of Generation Z students aged 18–25 who are actively involved in academic and technological activities. The sampling technique used purposive sampling, with a total of 104 students as respondents who met specific criteria, such as having experience in digital learning or participation in innovation-based activities.

The entire research process adheres to the principles of research ethics, ensures the confidentiality of respondents' identities, and guarantees voluntary participation. With this approach, the study is expected to produce empirical insights into the contribution of digital transformation and innovative management in shaping the adaptive mindset of Generation Z students, enabling them to prepare for the challenges of a contemporary work environment that is entirely digital and dynamic.

Results

This study aims to examine the impact of digital transformation and innovative management on the adaptive mindset of Generation Z students in the context of preparing for contemporary work environments. The analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 25 software, through a series of testing stages including validity tests, reliability tests, and multiple linear regression analysis.

Table 1. Simple Regression Test of Digital Transformation (X_2) Against Role Conflic Variable (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	24.539	3.359		7.306	.000
	X1	.387	.082	.424	4.724	.000

a. Dependent Variable: Y

From the output results, it can be seen that the constant of variable X is 24,539, while the coefficient of the variable is 0,387. As we know, the equation for a simple regression test is: $Y = \alpha + \beta X$

Where Y = Role Conflict Variable α = Constant
X = Digital Transformation Variable β = Coefficient Variable
Therefore, from the output above, it can be presented in the equation:
Y = 24,539 + 0,387 X1
From the equation above, it can be analyzed as follows:
a. The constant is 24,539 units and has a positive value,
which means that if variable X1 is considered constant, then
the value of Y is 24,539 units.
b. The coefficient of variable X1 is 0,387 and has a positive value.
This indicates that for every increase in variable X1, variable Y will experience
an increase of 0,387 units

Table 2. Simple Regression Test of Innovative Management (X_2) Against Role Conflic Variable (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	23.255	3.835		6.064	.000
	X2	.411	.092	.404	4.463	.000

a. Dependent Variable: Y

From the output results, it can be seen that the constant
of variable X2 is 023,255, while the coefficient of the variable is 0,411. As we know,
the equation for a simple regression test is: Y = α + β X

Where Y = Role Conflict Variable α = Constant
X2 = Innovative Management Variable β = Coefficient Variable

Therefore, from the output above, it can be presented in the equation:
Y = 023,255 + 0,411 X2

From the equation above, it can be analyzed as follows:
a. The constant is 023,255 units and has a positive value,
which means that if variable X2 is considered constant, then
the value of Y is 023,255 units.
b. The coefficient of variable X2 is 0,411 and has a positive value.
This indicates that for every increase in variable X2, variable Y will experience
an increase of 0,411 units.

Table 3. Multiple Linear Regression Test of X1 and X2 Against Y

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	17.914	4.071		4.401	.000
	Transformasi Digital	.276	.089	.302	3.084	.003
	Manajemen Inovatif	.270	.099	.266	2.715	.008

a. Dependent Variable: Mindset Adaptif Mahasiswa

Based on the table above, the constant value is 17,914. Meanwhile, the coefficient of variable X1 is 0,276 and variable X2 is 0,270. So, the simple linear regression equation is Y = 17,914 + 0,276X1 + 0,270X2 + e.

Table 4. Results of Simultaneous F-Test of Digital Transformation (X_1) and Innovative Management (X_2) on Adaptive Mindset (Y)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1091.008	2	545.504	15.544	.000[b]
	Residual	3544.530	101	35.094		
	Total	4635.538	103			

a. Dependent Variable: Mindset Adaptif Mahasiswa
b. Predictors: (Constant), Manajemen Inovatif , Transformasi Digital

Based on the table above, it can be seen that the significant value for Digital Transformation (X1) and Innovative Management (X2) on Adaptive Mindset (Y) is 0.000 < 0.05. And the calculated f value of 15.544 > the table f value of 3.08. This proves that Ho3 is rejected and Ha3 is accepted. This means that Digital Transformation (X1) and Innovative Management (X2) significantly influence Adaptive Mindset (Y).

Table 5. Results of the t-test between Digital Transformation (X_1) and Adaptive Mindset (Y)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	24.539	3.359		7.306	.000
	X1	.387	.082	.424	4.724	.000

a. Dependent Variable: Y

Based on the table above, the calculated t-value is greater than the t-table value (4.724 > 1.660) with a significance level of 0.000 < 0.05. This indicates that H_1 is accepted, which means that Digital Transformation (X_1) has a positive and significant partial effect on Adaptive Mindset (Y). Thus, the higher the level of digital transformation implementation, the higher the students' ability to adapt to changes and challenges in the modern workforce.

Table 6. Results of the t-test between Innovative Management (X_2) and Adaptive Mindset (Y)

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	23.255	3.835		6.064	.000
	X2	.411	.092	.404	4.463	.000

a. Dependent Variable: Y

Based on the table above, the calculated t-value is greater than the t-table value (4.463 > 1.660) with a significance level of 0.000 < 0.05. This indicates that H_1 is accepted, which means that Innovative Management (X_2) has a positive and significant partial effect on Adaptive Mindset (Y). Thus, the higher the level of digital transformation implementation, the higher the students' ability to adapt to changes and challenges in the modern workforce.

Table 7. Model Summary (Coefficient of Determination)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.485[a]	.235	.220	5.924

a. Predictors: (Constant), Manajemen Inovatif , Transformasi Digital

b. Dependent Variable: Mindset Adaptif Mahasiswa

Based on the table above, the R Square coefficient (R2) value is 0.235 or 23.5%, so the conclusion is that the influence of the Effective Communication variable on Role Conflict is 0.235 or 23.

Discussion

This research reveals that digital transformation has a positive and significant impact on the adaptive mindset of Generation Z students in the context of preparing to face contemporary work environments. This indicates that the increased intensity of the application and understanding of digital technology by students correlates with their ability to adapt to changing dynamics. These findings align with the study by Putra and Wahyudi (2021), which emphasizes the crucial role of digital transformation in shaping an open and flexible thinking orientation among students. Students who actively integrate digital technology into learning processes and organizational activities tend to exhibit a stronger tendency to think critically, creatively, and respondively to changing contexts.

Furthermore, the research results also indicate that innovative management has a positive and significant impact on students' adaptive thinking patterns. This means

that improving students' ability to manage innovative ideas, make creative decisions, and adopt innovative approaches contributes to the enhancement of their adaptability levels. These findings support the research of Sari and Nugroho (2021), which found that innovative capacity encourages individuals to think dynamically and be open to transformation. In the context of higher education, the implementation of innovative management facilitates students not only as consumers of technology but also as creative agents who generate solutions relevant to the demands of the modern workforce.

The results of simultaneous testing indicate that digital transformation and innovative management together have a significant impact on adaptive mindset. This indicates that the two variables are synergistic in shaping students' readiness to face a workforce characterized by uncertainty and rapid change. Digital transformation provides a technology-based learning platform and ecosystem, while innovative management fosters creative, analytical, and reflective thinking skills. The integration of both creates individuals who are more flexible, resilient, and able to adapt to organizational dynamics and technological advancements in the workplace.

These findings also reinforce the perspective of Setiawan and Rahmawati (2022), who emphasize that individual success in the digital era does not solely depend on technological competence, but also on the capacity to continuously learn and adapt. Generation Z students who are accustomed to technology tend to internalize changes more quickly, yet without an adaptive mindset and innovative abilities, they will face difficulties in dealing with complex challenges in the workplace. Therefore, educational institutions need to build a learning ecosystem that encourages the development of adaptive and innovative thinking skills through collaborative approaches, technology-based projects, and creativity training.

Overall, this study asserts that Generation Z students' readiness to face the modern workforce is determined not only by their mastery of digital technology but also by their ability to manage innovation and think adaptively. An adaptive mindset serves as a crucial link between academic knowledge and practical competencies in the professional field. Thus, universities play a strategic role in encouraging students to continuously develop digital and innovative competencies to adapt to the increasingly fast and dynamic changes of the times.

Conclusion

Based on the findings of the research that has been conducted, it can be concluded that digital transformation and innovative management have a positive and significant impact on the adaptive mindset of Generation Z students in the context of preparing for the contemporary work environment. The analysis shows that an increased intensity of digital transformation implementation correlates with students' ability to adapt to the dynamics of change and the rapid evolution of the work ecosystem. Digital transformation encourages students to be more open to technological innovation, think critically, and adjust to learning systems and workplaces that

increasingly rely on digital platforms. The effective utilization of information and communication technology has been proven to enhance cognitive flexibility, problem-solving capacity, and preparedness in facing emerging challenges. Thus, Generation Z students who actively adopt technology are not only passive consumers, but are also able to use it as an instrument to innovate and develop personal competencies. This finding reinforces the view that digital competence is a crucial foundation for shaping an adaptive mindset in the era of Industry 5.0.

Moreover, this study emphasizes that innovative management plays a crucial role in strengthening students' adaptive mindset. Students who are able to manage creative ideas, think innovatively, and dare to make progressive decisions tend to demonstrate superior adaptability in handling new situations. The research findings indicate that both variables — digital transformation and innovative management — simultaneously have a significant impact on the adaptive mindset, with a determination coefficient of 0.235. This implies that 23.5%of the variation in students' adaptive mindset can be explained by these two factors. This condition affirms that Generation Z students' readiness to face the modern workforce relies not solely on technological competence but also on innovative skills and a mindset oriented toward transformation. Therefore, higher education institutions have a strategic role in instilling adaptive and innovative values through technology-based learning, collaborative activities, and creativity development programs. By optimizing digital transformation and strengthening innovative management capacity, students are expected to become an adaptive, innovative, and competitive generation in navigating changes and challenges in the modern, digital-driven workforce.

References

Putra, A. R., & Wahyudi, T. (2021). Digital transformation and learning adaptation among Gen Z students in higher education. Journal of Digital Education, 5(2), 77–85.

Sari, D. P., & Nugroho, B. A. (2021). Innovative management as a driver of adaptive mindset in young professionals. Indonesian Journal of Management Studies, 4(1), 45–56.

Santoso, A., & Hidayat, F. (2023). Adaptive mindset and innovation behavior among Generation Z in the digital era. Journal of Behavioral Management, 8(1), 60–72.

Setiawan, R., & Rahmawati, L. (2022). The impact of digital transformation on students' adaptability in modern workplaces. Journal of Human Capital Development, 7(3), 112–125.

Kurniawan, D., & Pratama, S. (2024). Digital skills, innovation, and adaptive mindset: The readiness of Generation Z entering the workforce. Journal of Business and Digital Transformation, 3(1), 22–3