

# Enhancing Higher Education Transformation through Effective Change Management: The Role of Employee Agility

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## Abstract:

This study aims to explore the impact of digital competency on employee agility and employee performance in higher education institutions. The limited research investigating human resources in higher education highlights the urgency of this study. The specific role of digital competency in transforming higher education institutions, particularly in Indonesia, remains unclear. This study adopts a quantitative and causal research approach. The sample consists of faculty members from transformed higher education institutions, specifically Legal Entity State Universities (PTN-BH). Data were collected from 117 employees through structured questionnaires. Data analysis was conducted using structural equation modeling. The findings indicate that digital competency has a significant positive effect on employee agility but does not directly influence employee performance. The analysis reveals that employee agility fully mediates the effect of digital competency on employee performance, suggesting that agile and adaptable employees, driven by digital competency, can perform effectively. The practical implication of this study is that higher education institutions should focus on developing employee agility to maximize the positive impact of enhancing digital competency.

**Keywords:** Digital Competency, Employee Agility, Employee Performance, Higher Education Institutions.

## 1. Introduction

In the era of internationalization and rapid technological advancement, organizations are continuously required to adapt and undergo disruption, particularly in the field of education. Universities today face various dynamics that impact organizational activities. As institutions of higher education strive to become world-class universities, they undergo transformation involving changes in curriculum, teaching methods, organizational management, and various stakeholder-related aspects (Ezzeddine et al., 2023). Changes within universities are often driven by both external and internal factors. External factors include technological advancements and the ever-evolving labor market dynamics (Tiwow et al., 2023). Internal factors encompass the university's vision and mission, organizational culture, leadership, and human resources. Additionally, transformation in educational organizations is closely related to the implementation of innovations in teaching. Human resources play a crucial role in the transformation of higher education institutions. Faculty members and educational staff are encouraged to master technology and rapidly develop adaptability. The changes occurring within universities represent constructive disruption. Responding to changes in curriculum, teaching methods, and student needs is a critical aspect, making technological proficiency essential. Transformation and change management in higher education involve the ability to integrate digital technology into the learning process, update teaching materials, and conduct research supported by digitalization (Ter Beek et al., 2022). Faculty development through training and competency enhancement is necessary to improve the learning experience for students.

Digitalization has become a key factor in driving transformation in higher education institutions. The application of technology in teaching is a critical step in university transformation. The use of online learning platforms and digital collaboration can enhance accessibility and flexibility in the teaching and learning process. Digitalization offers opportunities for personalized learning, allowing students to learn at their own pace and through different strategies, with the aim of improving engagement and learning

outcomes. Digital competency supports the application of technology-based teaching methods, thus providing an engaging and efficient learning experience. The use of artificial intelligence in education is a significant aspect, leading to adaptive learning materials tailored to individual needs. Moreover, the integration of technology in teaching facilitates broader collaboration through collaborative platforms, enriching students' perspectives and experiences. Digitalization enables higher efficiency in managing learning resources, focusing more on improving educational quality. Institutions that successfully implement digitalization will gain a significant competitive advantage. Higher education institutions can create an innovative, inclusive, and sustainable educational ecosystem through employees' digital competencies.

Digital competency is associated with employee agility in higher education institutions. Digital competency is a key factor affecting employee performance and agility, including in academic settings. Employee agility refers to the ability of employees to quickly adapt to changes, heavily reliant on their level of digital competency. In the transformation of higher education, enhancing digital skills to remain relevant is crucial. Chong et al., (2022) indicates that universities implementing digital competency training programs exhibit higher levels of employee agility. This suggests that investment in developing digital skills can enhance employees' ability to adapt to rapid changes. Additionally, employee agility is closely related to innovation and creativity. Universities with staff possessing high digital competencies are more likely to create innovations to address transformational challenges. Changes and transformations such as curriculum updates, technological advancements, or government policies require digital competency and employee agility. Universities with employees who have high digital competency can transition more smoothly. Employees who have previously undergone digital training adapt more quickly compared to those who have not (Tokovska et al., 2022). Employee agility can also be seen in the ability to work in cross-disciplinary teams. In the university environment, inter-departmental collaboration is crucial for creating innovations and effective solutions. Agile employees can communicate and collaborate effectively across disciplines, forming solid teams. Employee agility also relates to the ability to learn independently. Employees motivated to continuously learn and develop new skills are better able to adapt to changes. Employee agility impacts not only the employees themselves but also the students. Agile employees can complete tasks amidst changes and challenges. Digital competency and employee agility contribute jointly to the success of higher education institutions.

Modern organizations need to adapt quickly to changes. Some previous studies show that digital competency and employee agility affect employee performance, while others present differing results, indicating inconsistencies in the research. Sillat et al., (2021) shows that organizations with high levels of digital competency are more successful in implementing changes and innovations. Employees can leverage technology to improve operational efficiency and create value within higher education institutions. In addition to digital competency, employee agility also plays a crucial role in the organizational adaptation process. According to Syahchari et al., (2021) employees with high levels of agility contribute more in uncertain and dynamic situations. This highlights the need for organizations to focus on developing employee agility to remain relevant amid changes in higher education. However, despite numerous studies indicating a positive relationship between digital competency, employee agility, and employee performance, some research presents differing results. For example, Tiwow et al., (2023) found that not all employees can adapt well to new technologies, which can hinder performance. This suggests that other factors need to be considered when evaluating employee performance in dynamic environments.

A study by Jackson (2019) indicates that employees with strong digital skills can complete tasks more efficiently and effectively. This is particularly evident in the use of digital collaboration tools in higher education institutions, which enable teams to communicate more effectively, reduce the time spent in face-to-face meetings, and enhance productivity in both teaching and research. Organizations that invest in digital competency training tend to have employees who are more skilled and better prepared to face dynamic challenges. Investment in digital competency development not only improves employee performance but also aids in employee retention. Not all employees have the same technological background. Research by Zaineldeen et al., (2020) shows that factors such as age, education, and work experience can influence the level of acceptance of new technologies. Organizations need to adopt an inclusive approach to digital competency training to ensure that all employees, regardless of their diverse backgrounds, have the

opportunity to learn and adapt.

Employee agility is an increasingly important concept in the context of modern organizations. Agile employees have the ability to quickly adapt to new changes and challenges. According to Syahchari et al., (2021) employees with high agility can better respond to market changes, which positively impacts both individual and organizational performance. This is highly relevant amidst organizational dynamics that face rapid and unexpected disruptions. Employees in organizations that encourage innovation and openness to new ideas can quickly adapt to changes. A work environment that fosters innovation and openness allows employees to develop creative solutions to emerging challenges and respond to changes more effectively. This aligns with the concept that employee agility is a crucial factor in determining employee performance in higher education institutions. When employees exhibit agility in their work, they can adapt and adjust to changes in a dynamic academic environment, such as curriculum changes, the adoption of technology in the learning process, or shifts in higher education policies and regulations (Li et al., 2023). Moreover, employee agility encourages faculty to continually learn and develop skills in line with personal growth needs, thereby maintaining and enhancing performance amidst the transformation of higher education. The strong performance of agile employees also positively impacts the achievement of strategic goals for higher education institutions, such as improving educational quality, expanding research collaborations, and strengthening partnerships with industry and other institutions.

Employee agility is an important aspect for both employees and organizations in adapting to changing demands. Higher education institutions that successfully facilitate and develop employee agility will be better equipped to face global challenges, maintain competitiveness, and continue to evolve in meeting the needs of students, industry, and society at large (Otache & Inekwe, 2022). Organizations with agile employees tend to be more successful in navigating changes. Organizations with high agility experience faster progress compared to those with lower agility (Khoiruddin et al., 2023). This suggests that employee agility is not only about individual capabilities but also about how organizations can create environments that support and facilitate agility. Ezzeddine et al., (2023) indicates that not all employees feel comfortable with changes, especially if they lack the necessary skills. Despite numerous studies showing a positive relationship between digital competency, employee agility, and performance, there are also inconsistencies in the findings. Some studies suggest that increased digital competency does not always lead to improved employee performance. For example, Lee (2021) found that in some cases, employees with high digital skills experienced confusion and stress when facing new technologies, negatively impacting their performance.

These inconsistencies suggest that the relationship between digital competency, agility, and employee performance is not always linear. Factors such as organizational culture, management support, and work experience also influence the outcomes (Zanella et al., 2021). One relevant case is organizations implementing new technologies without providing adequate training. Although employees have access to technology, they may not use it effectively, resulting in decreased performance. This highlights the need for digital competency and employee agility to be supported by appropriate training and development systems. Additionally, research indicates that psychological factors such as motivation and self-confidence can affect employees' ability to adapt to changes. Individuals with high levels of self-confidence are more likely to face challenges and stress effectively. PTHBH, as a type of higher education institution in Indonesia, represents the implementation of dynamics in the evolving higher education landscape. The transformation of PTHBH includes various aspects, including structural changes, digital technology integration, and adjustments in academic policies and management (Cahyonowati et al., 2021). These changes aim to enhance competitiveness amidst increasingly stringent university quality competition.

Based on the above discussion, further research is needed to explore and understand the impact of digital competency, agility, and employee performance. There remains inconsistency in research concerning the role of digital competency and employee agility in influencing employee performance in transforming higher education institutions. This study introduces new context by focusing on higher education institutions undergoing legal status transformation, which necessitates employee adaptation. Further research is required to investigate the influence of digital competency and employee agility on employee performance in transforming higher education institutions. In facing rapid changes, modern organizations need to develop digital competencies and employee agility as part of their adaptation strategy for higher education.

## 2. Materials and Methods

This study employs a quantitative approach aimed at testing causal relationships between the variables under investigation. The quantitative approach was chosen because it allows researchers to measure, analyze, and interpret data objectively to understand the impact of one variable on another. The type of research conducted is causal research, which aims to identify the effect of independent variables on dependent variables. In this context, the independent variables are digital competency and employee agility, while the dependent variable is employee performance. The research object is higher education institutions with the status of Legal Entity State Universities (PTNBH) undergoing organizational transformation. PTNBH institutions were selected because they are in a phase of significant change, making it relevant to examine the impact of digital competency and employee agility on employee performance. The sampling technique used is purposive sampling, with the sample consisting of 117 faculty members from PTNBH institutions. Data collection was carried out using a questionnaire designed based on a Likert scale ranging from 1 to 5. This questionnaire was designed to measure digital competency, employee agility, and employee performance. The collected data were analyzed using Structural Equation Modeling (SEM) with the aid of SmartPLS software. SEM was chosen because it can simultaneously test causal relationships between complex variables and handle latent variables and their indicators (Ghozali & Latan, 2015). The data analysis process includes testing the measurement model to assess the validity and reliability of constructs, and testing the structural model to evaluate relationships between variables and test research hypotheses.

## 3. Results

The research findings can be explained by detailing that there are inner and outer models. This study presents the outer model as shown in Table 1.

Table 1. Outer Model Result

Variable	Indicator	Loading Factor	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
<b>Digital Competency</b>	DC1	0.884	0.955	0.964	0.815
	DC2	0.856			
	DC3	0.916			
	DC4	0.911			
	DC5	0.935			
	DC6	0.913			
<b>Employee Agility</b>	EA1	0.930	0.965	0.971	0.825
	EA2	0.895			
	EA3	0.932			
	EA4	0.913			
	EA5	0.881			
	EA6	0.893			
	EA7	0.915			
<b>Employee Performance</b>	EP1	0.953	0.963	0.972	0.873
	EP2	0.839			
	EP3	0.969			
	EP4	0.956			
	EP5	0.950			

Table 1 outlines that the results of the loading factor test show values  $\geq 0.7$ , indicating that the validity of each indicator meets the criteria. Additionally, the validity test results are reinforced by the Average Variance Extracted (AVE) values, which are  $\geq 0.5$ . The reliability test results, as shown in Table 1, are

represented by Cronbach's Alpha and Composite Reliability values  $\geq 0.7$ , indicating that the variables under study meet the reliability criteria.

Table 2. Model Fit

Model Fit	Value
SRMR	0.054
d_ULS	0.491
d_G	1.014
Chi-Square	586.535
NFI	0.907

Table 2 shows the model fit of the study, with an SRMR value of less than 0.08 and an NFI value greater than 0.9, indicating that the model in this study meets the fit criteria. Table 3 presents the R Square results of the study.

Table 3. R-squared test result

	R Square	R Square Adjusted
Employee Agility	0.804	0.802
Employee Performance	0.906	0.904

Table 3 has shown that the variables of employee agility and employee performance are able to explain this study well, with an R Square value in the range of 0.8-1.00, indicating a very strong relationship. R Square shows the percentage of the dependent variable's variation that can be predicted from the independent variables in a regression model. This study used 500 iterations and a standard error of 5%, with the results of the inner model displayed in Table 4, Table 5, and Figure 1.

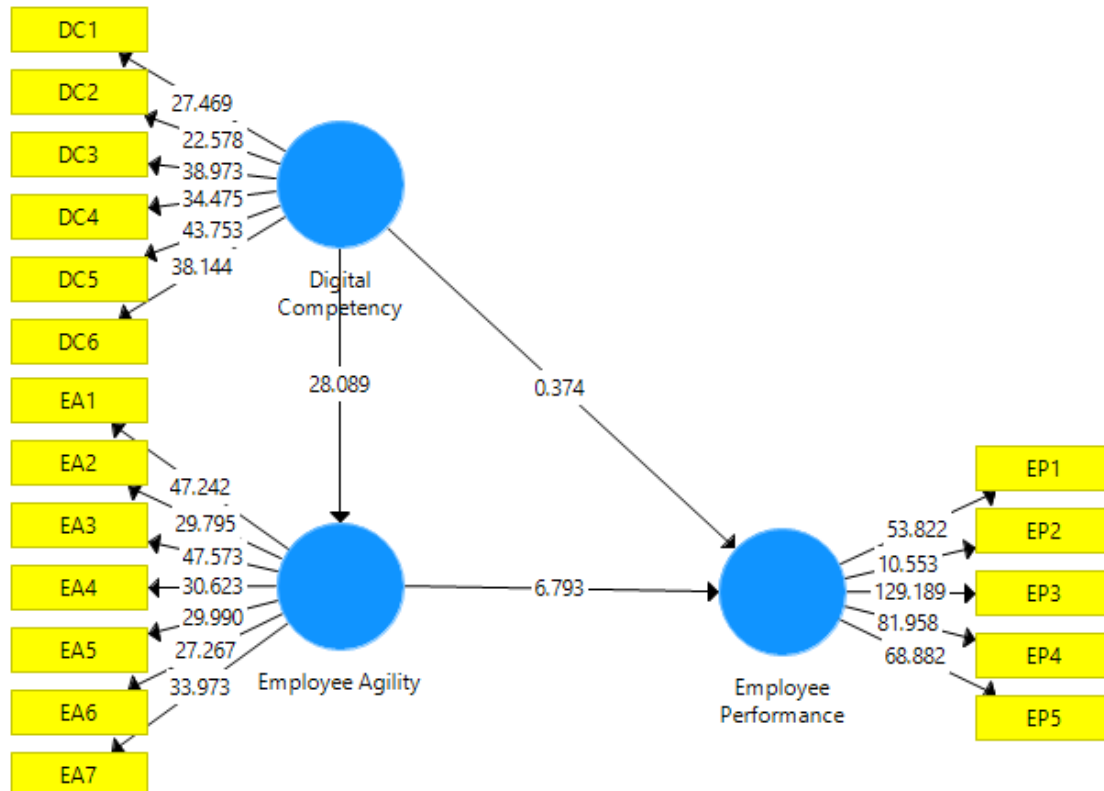


Figure 1. Research Framework

Table 4. Direct Effect Result

	Original	Sample	Standard	T Statistics	P
	Value	Mean	Deviation	( O/STDEV )	Values

	Sample (O)	(M)	(STDEV)		
Digital Competency → Employee Agility	0.897	0.9	0.032	28.089	0.000
Digital Competency → Employee Performance	0.059	0.043	0.158	0.374	0.708
Employee Agility → Employee Performance	1.005	0.989	0.148	6.793	0.000

Table 5. Indirect Effect Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Digital Competency → Employee Agility → Employee Performance	0.901	0.888	0.13	6.918	0.000

Tables 4 and 5 present the results of the direct and indirect effect tests. The findings indicate that digital competency has a direct impact on employee agility but does not directly affect employee performance. Furthermore, the results demonstrate that employee agility fully mediates the relationship between digital competency and employee performance.

#### 4. Discussion

The results of this study indicate that digital competency plays a crucial role in enhancing employee agility in higher education institutions. According to Holler et al., (2023) digital competency enables employees to adapt quickly to dynamic work environments, which is essential in the ever-evolving higher education sector. Information and Communication Technology (ICT) increasingly dominates the educational landscape, making the ability to adapt to digital tools and platforms critically important. The findings suggest that employees believe digital skills will be key to future work. Employees with high digital competency are better positioned to contribute to environments that require collaboration and innovation in higher education. For example, using Learning Management Systems (LMS) such as Moodle and Blackboard requires a solid understanding of digital technology to be effectively utilized in the teaching process (Theresiawati et al., 2020). Cloud-based information systems have facilitated more efficient collaboration among faculty members. Adequate digital skills enhance access to information and resources, improving responsiveness to student needs and curriculum changes. This indicates that digital competency not only increases work efficiency but also accelerates decision-making processes in higher education institutions. Mehrvarz et al., (2021) reveals that employees with strong digital skills are more proactive in seeking innovative solutions to problems, such as developing new programs that align with the evolving job market. Digital competency acts as a primary driver in creating agile employees who can adapt swiftly.

These findings align with Oanh et al., (2023), who note that employees with good digital competency tend to be more flexible and able to adapt to changes. This suggests that digital competence functions not only as a tool but also as a factor influencing employees' attitudes and behaviors in facing new challenges. Increased productivity in higher education can be observed from employees' ability to complete tasks more quickly and with higher quality. Digital competency training for faculty and staff leads to significant improvements in adapting teaching methods to be more interactive and technology-based. Digital training makes employees more agile in the teaching process and can provide a better learning experience for students. Hoang et al., (2022) found that employees with strong digital skills are more likely to collaborate on innovative projects, which strengthens teamwork and collaboration within organizations. Collaboration is crucial for creating an innovative learning environment that responds effectively to student needs. Astuti, (2021) indicate that employees equipped with adequate digital skills are more capable of innovating and creating new solutions, which means they can develop new programs that meet student and industry needs.

The study found that digital competency does not directly impact employee performance in higher education. This is consistent with research by Temelkova (2020), which shows that although digital

competency is important, other factors such as motivation and organizational support also play a role in determining employee performance. Further, Almulla (2022) show that employees with high digital competency tend to be more productive. Yet, this study reveals that without mediating elements such as employee agility, this impact is not significant. Employee performance in higher education is more influenced by the ability to adapt and respond to changes in the work environment. Employees with high agility in adapting to new technologies demonstrate better performance compared to those with digital competency alone without strong adaptability. Digital skills are crucial for workplace success; however, without the ability to adapt and innovate, these skills become less relevant. This study emphasizes that digital competency and employee performance cannot be separated from the broader context, including factors affecting employee agility.

The study finds that employee agility fully mediates the effect of digital competency on employee performance. This aligns with Falloon (2020), who emphasize the importance of flexibility and adaptability in employee performance. The ability to adapt to curriculum changes or teaching methods is essential for improving performance in higher education. When faculty are trained to enhance digital skills but lack employee agility, the positive impact on performance is not evident. Employees with high agility can complete tasks more quickly and with higher quality, showing that employee agility plays a crucial role in determining employee performance. Digital competency can be considered as a necessary foundation for achieving good performance, but without employee agility, this foundation is insufficient. Employees possessing both factors are more capable of completing tasks and achieving organizational goals. Sillat et al., (2021) indicates that employees who feel capable of adapting to changes are more engaged and productive. Employee agility not only functions as a mediator but also as a primary driver in enhancing employee performance.

This study demonstrates that employee agility has a significant positive impact on employee performance in higher education institutions. Employee agility enables employees to rapidly adapt to changes and challenges in the workplace, which has become increasingly crucial in higher education institutions adopting Industry 4.0 technologies. Employees with high levels of agility are better equipped to handle unexpected situations and contribute more effectively to organizational goals. The ability to adapt is linked to improved work performance (Yasmin et al., 2023). Many faculty members are transitioning from traditional teaching methods to digital platforms as a means of diversifying learning. Mohana et al., (2022) reveals that faculty who quickly adapt to new technologies show improved performance evaluations, indicating that employee agility contributes to the success of organizations undergoing transformation. When employees feel more capable of adapting and facing challenges, they are more likely to remain committed to the organization. Employee agility also contributes to innovation in teaching and research. Faculty members who possess adaptability are more open to new methods and creative ideas, enhancing the quality of education and the learning process. This study supports previous findings that employee agility is crucial for achieving organizational goals in an ever-changing environment (Tiwow et al., 2023).

## **5. Conclusion**

This study indicates that digital competency positively influences employee agility in higher education institutions but does not directly impact employee performance. Further analysis reveals that employee agility fully mediates the relationship between digital competency and employee performance. This underscores the importance of employee agility as a linking factor between digital competency and improved performance in higher education settings. The findings have significant implications for higher education institutions in designing employee training and development programs. Institutions should integrate digital competency training with employee agility training to create a more adaptive and productive work environment. For instance, training programs that combine digital skills with the development of soft skills such as leadership and collaboration can enhance employees' ability to quickly adapt to changes. Additionally, institutions need to foster an organizational culture that supports innovation and adaptation. This can be achieved by promoting interdepartmental collaboration and providing employees with opportunities to experiment with new technologies.

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