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## Digital Competence and Lecturer Performance: The Roles of Digital Teaching Innovation and Organizational Support

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### **Abstract**

*The massive digital transformation has fundamentally altered the higher education landscape, compelling lecturers to adapt by integrating advanced technologies into their daily teaching practices. A primary challenge faced by Private Universities, particularly in developing regions, is ensuring that the digital competence possessed by lecturers is effectively translated into relevant and high-quality teaching performance. This study aims to empirically examine an integrative model linking digital competence to lecturer performance, mediated by digital teaching innovation and moderated by the role of organizational support. Employing a quantitative explanatory research design, data were collected from 210 lecturers across various Private Universities in Kendari City through structured questionnaires. Data analysis was conducted using the Structural Equation Modeling method based on Partial Least Squares (SEM-PLS) to test the proposed hypotheses. The results provide empirical evidence that digital competence exerts a positive and significant influence on both teaching innovation and lecturer performance. Specifically, digital teaching innovation proves to be a vital mediator that bridges the gap between individual technical capabilities and tangible classroom outcomes. Furthermore, a crucial finding of this study is that organizational support positively moderates (strengthens) the relationship between digital competence and performance. This indicates that lecturer performance reaches its optimal level only when individual competencies are backed by an institutional environment that provides adequate facilities and supportive policies.*

*Keywords: Digital Competence, Lecturer Performance, Digital Teaching Innovation, Organizational Support*

### **1. Introduction**

The modern higher education landscape is undergoing a profound transformation driven by the integration of digital technologies [1]. In this era, the ability of educators to integrate technology into teaching practices is no longer just an added value, but a key element that determines the success of lecturer performance and student learning outcomes. The discourse on digital competence is increasingly urgent given the significant skills gap in teacher education, where the level of digital readiness is often considered inadequate to face the challenges of contemporary education [2]. This urgency is further emphasized by the post-COVID-19 pandemic situation that forces educational institutions to adapt to a technology-based teaching environment, requiring lecturers to have high resilience and adaptability [3]

The popularity of the concept of digital competence is inseparable from its impact on the self-efficacy of lecturers' instructional self-efficacy. The effective use of digital tools has been shown to be directly related to improving the quality of teaching [4]. Therefore, the current research focus is not only on infrastructure procurement, but on the development of human capacity (lecturers) as the main agents of change. Given the central role of lecturers in creating a productive learning experience for students [5], research on the factors that shape lecturers' performance in the digital ecosystem is crucial for the sustainability of higher education institutions.

The *Digital Competence* variable is the main foundation in this study. Recent literature, including the *European Digital Competence Framework for Educators* (DigCompEdu), confirms that these competencies include data literacy, communication, content creation, and problem-solving that lecturers must possess to improve performance in the classroom [6, 7]. Lecturers with high digital skills are able to facilitate a better informal learning environment, which has a positive impact on student engagement [8]. However, digital competence is not the only factor; its development must be accompanied by *Digital Teaching Innovation*. Studies show that innovation is not just the use of tools, but rather the integration of a digital mindset that incorporates technical, cognitive, and socio-

emotional dimensions into pedagogy [9]. This teaching innovation is crucial because conventional methods often fail to meet the needs of students.

On the other hand, the *Organizational Support variable* plays a vital role in ensuring the successful implementation of these competencies. The literature confirms that the digital competence of lecturers does not work in a vacuum; Its effectiveness is highly dependent on a supportive environment. Supportive management practices and organizational culture significantly affect the success of digital transformation and lecturer performance [10]. This support includes continuous professional training, the provision of infrastructure, and policies that encourage a culture of digital literacy [11]. Without adequate organizational support, the potential of individual digital competencies often does not convert into optimal organizational performance.

Although the relationship between digital competence and lecturer performance has been extensively researched, there is a theoretical gap related to the inconsistency of the resulting impact. Some studies show that ICT training and digital competencies improve learning outcomes [12], but other studies indicate that many educators still experience significant difficulties and lack confidence in implementing technology, especially during sudden transitions such as during the pandemic [13]. This creates a "black box" in the literature: why is the ownership of digital competencies not always linear with improved teaching performance? Common solutions often offered in advance are limited to basic technical training or standard curriculum development [14, 15], but this approach often ignores internal process mechanisms (innovation) and more complex contextual (support) factors.

In addition, many studies tend to view digital competence as a single independent variable that directly affects performance. In fact, the literature hints that simply having digital tools is not enough without an organization's strategic approach to integrating them [16]. There are not many research models that comprehensively combine the mediating role of innovative behavior of lecturers and the role of moderation of organizational support in one integrated framework. This shortcoming suggests the need for a deeper exploration of how competencies translate into real practice and what conditions strengthen those relationships.

This research offers a mechanism to solve this problem by placing *Digital Teaching Innovation* as a mediation variable. The core concept is that lecturers' digital competencies serve as a catalyst that enables the creation of teaching innovations such as *digital storytelling* or other interactive methods which in turn improve the quality of teaching and student motivation [17, 18]. This model suggests that innovation serves as a crucial link that transforms technical competence into effective teaching performance, which is supported by previous findings indicating that the development of digital-based educational materials encourages deeper lecturer engagement and improves performance [19]

Furthermore, this study reinforces the proposed solution model by integrating organizational support as a moderating variable. Prior research indicates that faculty members with access to supportive resources tend to demonstrate higher instructional effectiveness, reflecting the importance of institutional facilitation in optimizing teaching outcomes [20]. This mechanism suggests that the influence of digital competence on lecturer performance becomes stronger when institutions provide a conducive environment, including initiatives such as peer mentoring, continuous professional development, and sufficient technological infrastructure [21, 22]. By emphasizing the interaction between individual capabilities namely digital competence and innovation and external support systems, this approach offers a more holistic understanding of the factors that drive superior lecturer performance.

This research was conducted within the context of private university (PTS) lecturers in Kendari City. The selection of this location is based on the unique challenges faced by private institutions in developing regions, where the pressure to bridge the digital divide is high, yet resources are often more limited compared to larger public universities. In light of findings that highlight the importance of resource accessibility in enhancing lecturer adaptability, the Kendari context presents a relevant setting to examine the extent to which organizational support can contribute to modernizing lecturer performance amidst regional and national competition. The urgency to close the digital skills gap is particularly pronounced in this environment, further reinforcing the practical significance of studying this population.

The primary aim of this study was to analyze the influence of digital competence on lecturer performance, both directly and indirectly through the mediating role of digital teaching innovation. In addition, the study examined the moderating effect of organizational support on these relationships. The research seeks to demonstrate that teaching innovation serves as a key mechanism through which digital competence is translated into performance, while organizational support is essential to fully leverage lecturers' digital potential. From a theoretical

perspective, this study contributes to the education management literature by presenting an integrated empirical model that brings together individual competence, innovative behavior, and contextual support. From a practical standpoint, the findings offer strategic insights for private university leaders in Kendari City, emphasizing the need to go beyond technical training and invest in cultivating a culture of innovation and strong institutional support systems to enhance educational quality in the digital era.

## 2. Research Methods

This study applies a quantitative approach with a causal explanatory design to empirically test the relationship between variables in the proposed research model. The context of the study was focused on Private Universities (PTS) in Kendari City, where the research sample consisted of 210 lecturers selected through representative sampling techniques to ensure population representation. Primary data collection was carried out through the distribution of a closed questionnaire designed in a structured manner to measure respondents' perceptions of the variables of Digital Competence, Digital Teaching Innovation, Organizational Support, and Lecturer Performance, where each instrument indicator was measured using a 5-point Likert Scale with a range ranging from a score of 1 (Strongly Disagree) to a score of 5 (Strongly Agree). The collected data was then analyzed using variation-based Structural Equation Modeling (SEM-PLS) multivariate analysis techniques with the help of relevant statistical software (such as SmartPLS), which was selected for its advantages in handling complex structural models involving simultaneous testing of mediation pathways and moderation effects, as well as its robustness in predicting relationships between latent constructs even with size Relatively limited samples and data distribution that does not have to be perfectly normal, through two main evaluation stages, namely the evaluation of the measurement model (outer model) for validity and reliability, and the evaluation of the structural model (inner model) for hypothesis testing.

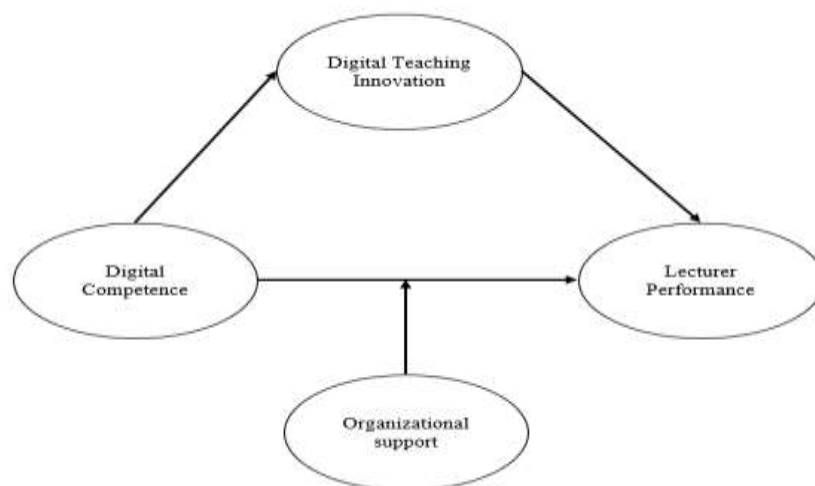


Figure. Conceptual Framework

## 3. Results and Discussions

### Results

The demographic profile of the respondents (N=210) describes the characteristics of lecturers who are dominated by men (56.19%) compared to women (43.81%), with the majority of education levels holding a Master's degree (S2) of 85.71% and a small percentage of holding a Doctoral (S3) degree of 14.29%. In terms of age, the structure of this teaching workforce is in a very mature productive phase, where the age group of 30–39 years dominates by 51.90%, followed by the age group of 40–49 years (28.10%). This composition indicates that Private Universities in Kendari City are supported by human resources who have adequate academic qualifications and are in the prime age who tend to be more adaptive to the adoption of new technology, a crucial modality in the context of digital competency development.

From the aspect of professional experience and academic position, data shows that the majority of lecturers are in the early to intermediate stage of career development. This can be seen from the working period which is

dominated by the range of 5-9 years (33.33%) and less than 5 years (31.90%), as well as the status of functional positions, most of which are still at the level of Expert Assistant (60.48%) and Lecturer (31.90%). Only a handful of respondents have reached the level of Head Lector (0.95%) or have a service period of more than 20 years (4.76%). This profile implies that despite having great potential for growth, these lecturers urgently need strong and targeted organizational support to accelerate the transformation of their functional positions and optimize teaching performance through continuous digital innovation.

Table 1. Measurement Model

Variables	Items	Factor Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Digital Competence (DC)	DC1	0,947	0,929	0,955	0,875
	DC2	0,932			
	DC3	0,928			
Digital Teaching Innovation (DTI)	DTI1	0,912	0,963	0,971	0,871
	DTI2	0,931			
	DTI3	0,955			
	DTI4	0,927			
	DTI5	0,941			
Lecturer Performance (LP)	LP1	0,948	0,934	0,958	0,883
	LP2	0,938			
	LP3	0,933			
Organizational Support (OS)	OS1	0,916	0,944	0,957	0,818
	OS2	0,897			
	OS3	0,919			
	OS4	0,887			
	OS5	0,901			

Based on the results of the measurement model analysis presented in Table 1, the convergent validity test showed very satisfactory results for the entire research construct. This is evidenced by the factor loading value for each indicator item that moves in the range of 0.887 to 0.955, where all of these values far exceed the required standard threshold, which is  $> 0.70$ . The convergent validity was further strengthened by the Average Variance Extracted (AVE) values in the variables Digital Competence, Digital Teaching Innovation, Lecturer Performance, and Organizational Support, all of which were above the critical value of 0.50, with a value range of 0.818 to 0.883. These results indicate that the research instrument has solid validity, where each latent variable is able to accurately explain more than 80% of the variance of its constituent indicators.

Furthermore, the evaluation of the reliability of the instrument showed a very high level of internal consistency. As seen in the table, Cronbach's Alpha values for all variables are in the range of 0.929 to 0.963, while the Composite Reliability values range from 0.955 to 0.971. Considering that all of these values are far above the rule of thumb value of 0.70, it can be concluded that the measuring tool used in this study is very reliable and consistent in measuring respondents' perception of the variables studied. With the fulfillment of the validity and reliability requirements of this external model, the research model is declared fit to proceed to the stage of structural model testing or hypothesis testing.

Table 2. Discriminant validity of constructs

	1	2	3	4
1 Organizational Support				
2 Digital Competence	0,397			
3 Lecturer Performance	0,364	0,792		
4 Digital Teaching Innovation	0,438	0,833	0,832	

Discriminant validity testing is performed to ensure that each latent construct in the research model is unique and captures phenomena that are different from other constructs. Based on the data presented in Table 3, a correlation matrix between the research variables can be seen. The highest correlation value was identified in the relationship between Digital Competence and Digital Teaching Innovation of 0.833, and the relationship between Digital

Teaching Innovation and Lecturer Performance of 0.832. Despite showing a close relationship, the values are still below the Average Variance Extracted (AVE) square root value of each variable (for reference, the square root of AVE). This indicates that even though these variables are interrelated in the model, they still have statistically clear distinctions or differences. The Organizational Support variable also showed excellent discriminant validity with low correlation values for other variables (range 0.364 – 0.438), which confirms that perceptions of organizational support are completely separate from individual competence and performance. With the fulfillment of this criterion of discriminant validity, it can be concluded that the research instrument does not experience the problem of multicollinearity between constructs, and the structural model is worthy of further testing.

Table 3. R Square and Q<sup>2</sup>

	R Square	Q <sup>2</sup>
Digital Teaching Innovation	0,600	0,8756
Lecturer Performance	0,689	

The evaluation of the structural model shows that this research framework has a very strong explainability and predictive ability in photographing phenomena in the field. Based on the results of the analysis, this model was able to explain 68.9% of the variation that occurred in Lecturer Performance, indicating that the combination of digital competence, innovation, and organizational support made a substantial contribution, while the rest was influenced by other factors outside of the study. In addition, the model is also able to explain 60% of the formation of Digital Teaching Innovation behavior in lecturers. The robustness of this model is further strengthened with a predictive relevance value of 0.8756 which is far above zero, confirming that this model is not only statistically valid but also has high accuracy in predicting lecturer performance patterns in the Kendari City Private Universities.

Table 4. Results of Hypothesis Test

Connection	Original Sample	Standard Deviation	P Values
Digital Competence -> Digital Teaching Innovation	0,775	0,048	0,000
Digital Competence -> Lecturer Performance	0,304	0,097	0,002
Digital Teaching Innovation -> Lecturer Performance	0,470	0,100	0,000
Moderating Effect -> Lecturer Performance	0,143	0,044	0,001
Digital Competence -> Digital Teaching Innovation -> Lecturer Performance	0,364	0,078	0,000

The first analysis highlights the fundamental relationship between Digital Competence and Digital Teaching Innovation, revealing a strong positive influence with the most dominant coefficient in the model, valued at 0.775, and a highly significant P-value of 0.000. This substantial figure provides compelling empirical evidence that, within private universities (PTS) in Kendari City, digital competence is not merely a supplementary asset—it is an essential prerequisite and the foundational driver for innovation. In other words, high levels of technical ability and digital literacy naturally foster greater confidence and capacity among lecturers to experiment with new teaching methods. Without solid mastery of tools and technologies, it becomes nearly impossible for a lecturer to design creative and adaptive learning strategies. Thus, digital competence serves as the core raw material powering the engine of teaching innovation.

Moving forward, the direct path analysis shows that Digital Competence also has a significant positive impact on Lecturer Performance, with a coefficient value of 0.304 (P-Value 0.002). This finding suggests that even on its own, having strong digital skills already makes a tangible contribution to performance improvement—especially in areas like academic management efficiency and the smooth delivery of fundamental instructional tasks. Tech-savvy lecturers have proven to be more agile in handling administrative work, accessing global reference materials, and delivering content, all of which cumulatively raise their performance standards. However, when compared to its effect on innovation, this value is relatively lower, implying that digital competence should not remain a passive skill—it needs to be actively leveraged to create added value in teaching.

The third key finding uncovers a crucial insight: Digital Teaching Innovation has a significantly stronger impact on Lecturer Performance, with a coefficient of 0.470 (P-Value 0.000), surpassing the direct effect of digital competence itself. This provides a deeper understanding that the true driver of high lecturer performance in

Kendari's private universities lies in actionable innovation rather than just potential competence. Lecturers who are rated highly are those who actively transform their digital knowledge into dynamic, interactive, and engaging teaching practices. In other words, teaching innovation acts as a lever that converts technical capability into impactful educational outcomes, ultimately enhancing the quality of learning experiences for students.

The fourth analysis sheds light on the strategic role of external factors through the moderation effect of Organizational Support, which significantly strengthens the relationships in the model with an interaction value of 0.143 (P-Value 0.001). This finding emphasizes that lecturer performance does not develop in a vacuum but is highly dependent on the institutional ecosystem in which they operate. The positive value here indicates that the impact of digital competence on performance can be fully realized—and even amplified—when supported by a campus environment that promotes innovation. This includes access to technological infrastructure, continuous training opportunities, and innovation-friendly policies. Conversely, in the absence of sufficient institutional support, even lecturers with high digital potential may struggle to translate it into optimal performance.

Finally, the indirect path analysis confirms the vital mediating role of Digital Teaching Innovation, where Digital Competence significantly influences Lecturer Performance through innovation, with a mediation coefficient of 0.364 (P-Value 0.000). This statistic validates a process-based view, showing that the ideal pathway to performance improvement for lecturers in Kendari's private universities involves a transformation of competence into innovation. Lecturers must first master the technology, then apply it to innovate, and only then can they achieve peak performance. Teaching innovation thus serves as an effective bridge, channeling lecturers' technical abilities into high-quality, competitive professional outcomes

### **Discussions**

This study demonstrates that digital competence is a foundational element in improving lecturer performance, particularly in private universities in Kendari. The ability to effectively use digital technologies enables lecturers to manage instructional tasks more efficiently, access global academic resources, and enhance their delivery of course materials. These findings align with prior research indicating that digital skills are essential for teaching effectiveness in the digital era [2, 3]. However, the study also reveals that competence alone does not automatically translate into higher performance, unless it is actively applied in innovative and student-centered ways.

While the direct effect of digital competence on lecturer performance is statistically significant, its influence becomes more substantial when mediated by digital teaching innovation. The findings suggest that lecturers who possess a strong foundation in digital skills and apply them through innovative instructional methods are more likely to achieve higher performance outcomes, as supported by previous research on the role of digital tool integration in enhancing instructional self-efficacy [4]. This is further reinforced by studies emphasizing that the consistent use of digital technology increases the relevance and quality of teaching, particularly within higher education settings where student expectations for digital engagement are continually evolving [23].

Digital teaching innovation has emerged as a more powerful predictor of lecturer performance than digital competence alone. The ability to translate digital skills into innovative teaching practices such as designing interactive content, implementing feedback technologies, and utilizing digital storytelling contributes to the creation of more engaging and effective learning experiences [18, 19]. These innovations are particularly critical in post-pandemic educational contexts, where hybrid and online learning models demand increased pedagogical flexibility and adaptability from lecturers, as indicated by recent studies on the successful use of technology in remote and blended learning environments [9]. The mediating role of digital teaching innovation reinforces a process-oriented understanding of performance development. Digital competence alone does not automatically lead to better outcomes unless it is applied through innovative pedagogical strategies. The pathway to improved performance begins with digital skill acquisition, continues through its pedagogical application, and culminates in enhanced learning results, a progression supported by established educational frameworks that integrate digital and pedagogical knowledge [6, 24]. This staged development has also been observed in the context of the COVID-19 pandemic, where educators who followed such trajectories demonstrated stronger instructional preparedness in digital settings [25].

Organizational support plays a crucial moderating role in this relationship by creating an enabling environment where digital competence can be effectively applied. The results of this study indicate that the positive effect of digital competence on lecturer performance is amplified when institutions invest in adequate infrastructure, training programs, and innovation-oriented policies. When lecturers are supported by a collaborative institutional culture, they are more likely to engage with digital tools and take instructional risks, leading to stronger

performance outcomes [26]. Furthermore, the importance of access to institutional resources and structured support systems has been linked to higher teaching effectiveness across various academic settings (Litiņa & Miltuze, 2023).

In conclusion, improving lecturer performance in the digital age requires more than individual skill development. It involves the intentional transformation of digital competence into teaching innovation, supported by an institutional framework that encourages experimentation and continuous learning. Institutions must invest in training, promote a culture of collaboration, and provide the necessary tools for lecturers to thrive in digital environments. Without such support, even highly competent lecturers may find it difficult to reach their full potential. By aligning digital skills with innovation and embedding both within a supportive ecosystem, higher education institutions can drive meaningful improvements in teaching quality and student learning outcomes.

#### 4. Conclusion

This study concludes that digital competence is a fundamental strategic asset for lecturers in Private Universities (PTS) in Kendari City. It has a significant impact on improving lecturer performance, both directly and indirectly through the mediation of digital teaching innovation. The findings affirm that possessing technical skills alone is insufficient; such skills must be actively transformed into innovative teaching behaviors to generate meaningful performance outcomes. Furthermore, the study underscores the critical role of organizational support as a moderating factor that strengthens the impact of digital competence. This highlights the importance of institutional investment not only in training programs but also in developing an enabling environment where digital skills can be effectively applied. The managerial implications of these findings suggest that university leaders in Kendari should focus on building a supportive ecosystem. This includes the provision of adequate technological infrastructure, sustained professional development, and policy frameworks that encourage digital innovation in teaching. When such an environment is in place, the digital potential of lecturers can be fully realized, leading to improved educational quality and long-term institutional performance. Despite these contributions, the study has several limitations that should be taken into account. The research is geographically limited to private universities in Kendari City, which may restrict the generalizability of the findings to other regions with differing technological capacities or educational policies. Additionally, the use of a cross-sectional research design captures data at only one point in time, limiting the ability to assess long-term trends or changes in lecturer performance. Another limitation lies in the reliance on self-reported data, which may introduce bias due to subjective perceptions of the respondents. This could affect the accuracy of the results, particularly in measuring constructs such as performance or innovation. To address these limitations, future studies are encouraged to expand the research scope by including comparisons between private and public universities across various regions in Indonesia. Moreover, employing longitudinal research methods would allow for the examination of how digital competence and innovation evolve over time and how they impact lecturer performance in the long run. Future studies may also benefit from integrating emerging variables, such as the role of artificial intelligence in teaching or the effect of digital innovation on student satisfaction and learning outcomes. Such efforts would contribute to a deeper understanding of digital transformation in higher education and enrich the broader literature on educational management.

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