

## **ADAPTING TO DIGITAL PEDAGOGY: LECTURERS' EXPERIENCES IN INTEGRATING ICT TOOLS AT UNIVERSITAS MUHAMMADIYAH PALEMBANG**

Tanti Nur Annisa<sup>1</sup>, Adhadilah Galuh Andaresta<sup>2</sup>, Masagus Firdaus<sup>3</sup>

Universitas PGRI Palembang Master of Education English

Alamat e-mail : [annisatanti893@gmail.com](mailto:annisatanti893@gmail.com)<sup>1</sup>, [adgandaresta@gmail.com](mailto:adgandaresta@gmail.com)<sup>2</sup>,  
[firdaus26habib20@gmail.com](mailto:firdaus26habib20@gmail.com)<sup>3</sup>

### **ABSTRAK**

Study explores lecturers' experiences in adapting to digital pedagogy through the integration of Information and Communication Technology (ICT) tools at Universitas Muhammadiyah Palembang. Using a qualitative approach, data were collected through semi-structured interviews and classroom observations. The findings reveal that ICT integration has reshaped lecturers' teaching practices, encouraging more interactive, flexible, and student-centered learning environments. However, challenges such as limited institutional support, technological infrastructure, and lecturers' digital competence remain significant barriers. This study highlights the need for continuous professional development and strategic policies to strengthen digital pedagogy implementation in higher education.

**Keywords** : ICT integration, digital pedagogy, lecturers' experiences

### **A. Introduction**

The rapid development of Information and Communication Technology (ICT) has transformed the landscape of education worldwide. In higher education, the integration of digital tools has not only altered instructional strategies but also reshaped lecturers' roles as facilitators of learning rather than sole sources of knowledge (Ally, 2019). ICT not only serves as a tool to deliver content but also functions as a catalyst for transforming pedagogy from traditional, teacher-centered instruction to interactive, student-

centered learning (Rahmawati & Ardiansyah, 2023). The emergence of digital pedagogy has reshaped the roles of lecturers, positioning them as facilitators and learning designers who create digital spaces that foster collaboration, creativity, and critical thinking (Fawns, 2022).

In Indonesia, particularly in higher education, the acceleration of digital transformation was strongly triggered by the COVID-19 pandemic. Universities were forced to adapt rapidly to online and hybrid teaching models (Susanto et al., 2022). At Universitas Muhammadiyah

Palembang, this transformation created both opportunities and challenges for lecturers. Many educators were required to adopt ICT tools such as *Learning Management Systems (LMS)*, video conferencing platforms, and interactive media without sufficient preparation or training. While the adoption of these tools demonstrated institutional responsiveness, the extent to which lecturers successfully integrated ICT into their pedagogical practices remains unclear.

Previous research in Indonesia has focused largely on students' perceptions or technological readiness in ICT-based learning (Ayu & Nugroho, 2022; Sari, 2021; Prasetyo & Nurfadilah, 2022). However, limited studies have explored lecturers' lived experiences and reflective adaptation to digital pedagogy—how they negotiate between technological challenges, pedagogical goals, and institutional expectations. Studies conducted in other contexts (e.g., Kundu, 2023; Al-Kumaim et al., 2023) emphasize that successful ICT integration is not determined solely by access to technology, but also by lecturers'

pedagogical beliefs, digital literacy, and institutional culture. These elements are often under-researched within Indonesian private universities, particularly in Muhammadiyah higher education institutions.

This gap reveals a need for qualitative investigations that uncover the real experiences, perceptions, and coping strategies of lecturers when navigating digital pedagogy. Understanding how lecturers at Universitas Muhammadiyah Palembang adapt to ICT integration can offer valuable insights into professional development needs, institutional support systems, and future policy directions. Moreover, such understanding can enrich the discourse on the contextualization of digital pedagogy within the Indonesian Islamic higher education framework, where values-based learning and technology-driven innovation must coexist harmoniously.

Hence, the novelty of this study lies in its qualitative exploration of lecturers' authentic experiences in integrating ICT tools for digital pedagogy at Universitas Muhammadiyah Palembang—a context that has received minimal

scholarly attention. Rather than focusing on technical proficiency or student outcomes, this research investigates the pedagogical adaptation process from the lecturers' perspective, encompassing their perceptions, strategies, and challenges in using technology to support meaningful learning.

### **Research Question**

1. How do lecturers adapt to digital pedagogy in integrating ICT tools into their teaching practices?
2. What pedagogical strategies do lecturers employ to effectively integrate ICT tools in their teaching?
3. What challenges do lecturers face when integrating ICT tools in their teaching activities?

### **Literature Review**

#### **2.1 Concept of Digital Pedagogy**

Digital pedagogy refers to the thoughtful and effective use of digital technologies to support teaching, learning, and assessment processes (Fawns, 2022). It is not merely about

transferring conventional classroom practices into online formats, but rather rethinking the teaching philosophy to leverage digital tools in promoting interaction, creativity, and autonomy (Carrillo & Flores, 2020). According to Rahmawati and Ardiansyah (2023), digital pedagogy requires lecturers to move from the role of "knowledge transmitters" to "learning facilitators," who design flexible, collaborative, and student-centered learning environments.

In higher education, digital pedagogy is characterized by several principles:

1. Learner-centered approach, emphasizing active participation and engagement.
2. Technology-mediated collaboration, using digital platforms to foster peer learning and feedback.
3. Blended learning design, combining online and face-to-face instruction.
4. Critical digital literacy, enabling both lecturers and students to evaluate, create, and communicate knowledge responsibly (UNESCO, 2023).

Digital pedagogy thus reflects a pedagogical transformation rather than a technological substitution; it prioritizes meaningful learning experiences over tool usage (Kundu, 2023).

## **2.2 ICT Integration in Higher Education**

The integration of Information and Communication Technology (ICT) into higher education has reshaped how knowledge is delivered and constructed. ICT provides lecturers with access to various digital resources and platforms that facilitate content delivery, interaction, and assessment (Alshammari, 2021). As pointed out by Ally (2019), the effective use of ICT tools—such as Learning Management Systems (LMS), video conferencing platforms, and digital collaboration tools—can enhance accessibility, flexibility, and inclusiveness in learning.

In Indonesia, ICT integration has become an educational priority following the Ministry of Education's digital transformation agenda. The *Merdeka Belajar* policy encourages universities to incorporate technology in curriculum design, classroom

instruction, and evaluation (Kemendikbudristek, 2022). However, the adoption of ICT varies widely across institutions. Research by Sari (2021) and Susanto et al. (2022) found that many universities, particularly private institutions, still struggle with issues such as limited internet access, low digital literacy, and insufficient institutional support.

Moreover, the success of ICT integration largely depends on lecturers' readiness and beliefs. According to the study by Tondeur et al. (2020), lecturers who perceive technology as beneficial for learning are more likely to integrate it effectively. Conversely, those with limited confidence or negative attitudes toward ICT tend to use technology only for administrative or superficial purposes (Al-Kumaim et al., 2023).

## **2.3 The Role of Lecturers in Digital Pedagogy**

Lecturers play a central role in bridging pedagogical and technological aspects of learning.

Their digital competence influences not only how they use technology but also how they redesign the learning process. Mishra and Koehler's (2006) Technological Pedagogical Content Knowledge (TPACK) framework highlights that effective ICT integration requires the intersection of three domains:

1. Technological knowledge (TK)  
– understanding how to use digital tools and platforms.
2. Pedagogical knowledge (PK) – knowing how to structure, deliver, and assess learning effectively.
3. Content knowledge (CK) – mastery of the subject matter being taught.

Lecturers who successfully integrate these domains are able to design innovative learning experiences that enhance student engagement (Lai & Bower, 2020). However, developing TPACK competence is a gradual process that requires ongoing professional learning and institutional encouragement (Rahman et al., 2022).

Research by Setiawan and Utami (2023) on Indonesian lecturers

shows that many still face challenges in balancing technological and pedagogical dimensions. While they may understand how to use applications like Zoom or Google Classroom, they often struggle to align these tools with learning outcomes and assessment strategies. Therefore, effective digital pedagogy is not about the quantity of technology used, but about how technology supports meaningful and reflective teaching practices.

## **2.4 Challenges in Implementing ICT Integration**

Although ICT offers vast opportunities, lecturers face multiple challenges in integrating it effectively into their teaching. These challenges can be grouped into four major categories:

1. Technical barriers – such as poor internet connectivity, outdated devices, or software limitations (Susanto et al., 2022).
2. Pedagogical barriers – including difficulties in designing engaging online

materials and maintaining student motivation (Ayu & Nugroho, 2022).

3. Institutional barriers – like lack of training programs, limited administrative support, and inadequate ICT infrastructure (Al-Kumaim et al., 2023).
4. Psychological barriers – related to lecturers' resistance to change or low self-efficacy in using technology (Kundu, 2023).

Several studies emphasize that the absence of structured professional development remains a significant issue. For instance, Rahmawati and Ardiansyah (2023) argue that most training sessions focus on technical skills rather than pedagogical innovation. Lecturers need opportunities to explore digital pedagogy as a reflective practice, where technology supports teaching philosophy rather than replaces it.

Furthermore, the cultural context of Indonesian higher education plays a crucial role. As found by Prasetyo and Nurfadilah (2022), institutional hierarchies and bureaucratic systems often slow down

innovation in teaching practices. In Islamic-based institutions like Universitas Muhammadiyah Palembang, lecturers must also balance digital modernization with the integration of moral and religious values a dual responsibility that makes pedagogical adaptation more complex but also more meaningful.

A number of studies have explored ICT integration in Indonesian universities. For example, Sari (2021) identified technical and motivational challenges among lecturers in implementing online learning, while Ayu and Nugroho (2022) highlighted students' motivation and digital engagement. However, few studies have examined lecturers' personal experiences, beliefs, and coping strategies in transitioning toward digital pedagogy.

Research by Al-Kumaim et al. (2023) in Middle Eastern universities and Kundu (2023) in India indicates that successful digital transformation depends heavily on institutional culture and lecturers' agency. These studies suggest the importance of context-specific analysis, which remains underexplored in Indonesian private universities.

Therefore, this research fills the gap by providing a qualitative investigation of lecturers' lived experiences in integrating ICT tools at Universitas Muhammadiyah Palembang. Unlike previous studies focusing on readiness or quantitative adoption levels, this study focuses on how lecturers interpret, adapt, and reflect upon their digital teaching practices. It also contributes to the discourse on how pedagogical innovation can be harmonized with Islamic educational values, thus offering both theoretical and practical implications for the future of higher education in Indonesia.

## 2.6 Conceptual Framework

Based on the reviewed literature, this study is underpinned by three interrelated concepts:

1. Digital Pedagogy – the use of technology to enhance interactive, student-centered learning (Fawns, 2022).
2. TPACK Framework – the integration of technological, pedagogical, and content knowledge (Mishra & Koehler, 2006).

3. Institutional Support and Professional Development – as mediating factors that determine the success of ICT integration (Rahman et al., 2022).

These frameworks collectively guide the exploration of how lecturers at Universitas Muhammadiyah Palembang experience and adapt to ICT-based teaching. The framework assumes that lecturers' adaptation is a dynamic process influenced by technological skills, pedagogical philosophy, institutional environment, and cultural values.

## B. Methode

### 3.1 Research Design

This study employed a qualitative research design with a phenomenological approach to explore lecturers' lived experiences in adapting to digital pedagogy and integrating ICT tools in teaching. The phenomenological design was chosen because it allows researchers to capture participants' authentic experiences, feelings, and perceptions regarding ICT integration in the learning

process(Creswell&Poth,2018). The aim was not to generalize findings but to obtain a deep understanding of how lecturers at Universitas Muhammadiyah Palembang conceptualize, implement, and reflect on their digital teaching practices.

### **3.2 Research Setting and Participants**

The research was conducted at Universitas Muhammadiyah Palembang, one of the largest private Islamic universities in South Sumatra, Indonesia. The institution has actively implemented digital learning policies through the use of Learning Management Systems (LMS), Zoom, Google Classroom, and Moodle-based platforms.

Participants were selected using purposive sampling, which allows the inclusion of individuals who have substantial experience in ICT-based teaching. The main criteria were:

1. Lecturers who have used ICT tools for at least two years in teaching.
2. Lecturers who have participated in digital training or workshops.

3. Lecturers from different faculties to ensure data variety.

A total of 10 lecturers were selected from five faculties: Teacher Training and Education, Economics, Law, Engineering, and Islamic Studies.

**Table 1. Profile of Participants**

	C o d e	F a c u lt y	Teachin g Experien ce	ICT Tools Com monly Used
L 1	E d u c a t i o n		8 years	Googl e Classr oom, Kahoo t
L 2	E c o n o m i c s		10 years	Zoom, Edmo do
L 3		L a w	6 years	Moodl e, Whats App Group
L 4	I s l a m i c s t		9 years	Googl e Meet, Quiziz z

C	F	Teachin	ICT	C	F	Teachin	ICT
o	a	g	Tools	o	a	g	Tools
d	c	Experien	Com	d	c	Experien	Com
e	l	ce	monly	e	l	ce	monly
	y		Used		y		Used
	u				L		Kahoo
	d				9		t,
	i				a		Whats
	e				w		App
	s						
	E				I		
	n				s		
	g				l		
L	i				a		
5	n		LMS,		m		
	e	12 years	YouTu		i		
	e		be		c		
	r				S		
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	g				u		
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### 3.3 Data Collection Techniques

Data were collected through semi-structured interviews and document analysis.

#### 1. Semi-Structured Interviews

- Each participant was interviewed individually for approximately 45–60 minutes.
- Questions explored experiences, challenges, and strategies in using ICT tools for teaching.
- Interviews were conducted in both

	<b>No</b>	<b>Interview Focus</b>	<b>Sample Questions</b>
Bahasa Indonesia and English to allow participants to express themselves comfortably.			
<ul style="list-style-type: none"> <li>○ All interviews were recorded with participants' consent and transcribed verbatim.</li> </ul> <p>2. Document Analysis</p> <ul style="list-style-type: none"> <li>○ Institutional documents (such as e-learning policy guidelines, digital training reports, and course syllabi) were analyzed to understand the university's framework for ICT adoption.</li> </ul>	4	Institutional Support	How does the university support your digital teaching process?
	5	Reflection	How has ICT integration changed your teaching practices?

**Table 2. Example of Interview Questions**

<b>No</b>	<b>Interview Focus</b>	<b>Sample Questions</b>
1	Perceptions	How do you perceive the use of ICT tools in teaching and learning?
2	Adaptation	What strategies do you use to integrate digital tools into your teaching?
3	Challenges	What challenges have you faced when applying digital pedagogy?

### **3.4 Data Analysis Procedures**

Data were analyzed using thematic analysis following Braun and Clarke's (2019) six-phase framework:

1. Familiarization: Reading and re-reading interview transcripts.
2. Coding: Identifying key phrases related to ICT use, experiences, and challenges.
3. Generating Themes: Grouping similar codes into major themes such as pedagogical adaptation, technological barriers, institutional support, and professional growth.
4. Reviewing Themes: Checking coherence between data and themes.
5. Defining and Naming Themes: Labeling each theme clearly to represent lecturers' experiences.
6. Reporting: Writing descriptive and interpretive narratives with

supporting quotations from participants.

### 3.5 Trustworthiness of the Study

To ensure credibility and reliability, the researcher applied Lincoln and Guba's (1985) four criteria of trustworthiness:

Criteria	Strategy Used	Description
Credibility	Member checking	Participants verified interview transcripts and findings.
Transferability	Thick description	Detailed explanation of setting, participants, and context.
Dependability	Audit trail	Documentation of data collection and analysis procedures.
Confirmability	Reflexive journaling	Researcher's reflections to reduce personal bias.

### 3.6 Ethical Considerations

Ethical approval for this research was obtained from the Research Ethics Committee of Universitas Muhammadiyah Palembang. Participants were informed about the study's objectives, their rights, and data confidentiality. Each participant signed an informed consent form, and pseudonyms (L1–L10) were used to maintain anonymity. The collected data were stored securely and used only for academic purposes.

## C.Result

### 4.1 Lecturers' Perceptions of ICT Integration

Lecturers generally expressed positive attitudes toward ICT, recognizing its potential to enhance student engagement and improve instructional efficiency. One lecturer stated, "Technology allows me to reach students beyond the classroom; it keeps them more involved in the learning process."

This aligns with Alshammari (2021), who found that lecturers view

ICT as a means to improve learner autonomy and instructional flexibility.

#### **4.2 Strategies for Adapting to Digital Pedagogy**

Lecturers adopted various strategies to implement ICT tools effectively:

- Blended learning combining face-to-face and online instruction;
- Development of multimedia learning materials;
- Use of collaborative platforms such as Google Classroom, Zoom, and Padlet.

These strategies demonstrate a pedagogical shift from teacher-centered to student-centered learning, reflecting constructivist principles (Vygotsky, 1978).

#### **4.3 Challenges in ICT Integration**

Several challenges emerged from the data:

1. Technical issues: unstable internet connectivity and limited access to devices.

2. Pedagogical difficulties: limited skills in designing interactive online materials.

3. Institutional barriers: insufficient support for digital training and infrastructure.

These findings echo Sari (2021), who emphasized that Indonesian lecturers often face structural and institutional constraints in ICT-based teaching.

#### **4.4 Professional Development and Institutional Support**

Lecturers emphasized the need for regular training programs and collaborative learning communities. They argued that institutional policies should not only provide equipment but also foster digital culture through mentoring and peer sharing. As one lecturer remarked, "We need to go beyond tool training what we need is to rethink how to teach digitally."

#### **D. Discussion**

The findings of this study indicate that lecturers at Universitas Muhammadiyah Palembang are in a crucial "developmental phase" of digital pedagogy. While they show positive attitudes toward ICT for

enhancing student engagement, their experiences are marked by a significant gap between possessing basic technological skills and mastering true pedagogical integration. This discussion will analyze this gap by linking the findings to the TPACK framework and the unique institutional context.

### **5.1 The Shift to Student-Centered Practice**

The lecturers' adoption of strategies like blended learning, multimedia development, and collaborative platforms such as Padlet and Kahoot is a promising finding. This reflects a move away from traditional, teacher-centered instruction, aligning with the core definition of digital pedagogy as a facilitator of student-centered learning. Experts in the field emphasize that the goal of this approach is to foster "participation, critical thinking, and collaboration" and develop key "problem-solving and creativity skills". The lecturers' positive perceptions suggest they recognize this potential, viewing ICT as a tool for deeper engagement, not just content delivery.

### **5.2 The Pedagogical Gap and the Need for Deeper Support**

The most critical finding is the set of challenges lecturers face, particularly the "pedagogical difficulties" in designing interactive materials. This aligns directly with the "institutional barriers" of insufficient training. This problem is a classic illustration of an underdeveloped Technological Pedagogical Content Knowledge (TPACK). The lecturers' own words, that they "need to rethink how to teach digitally", are insightful; they recognize that knowing how to use Zoom is different from knowing how to teach with Zoom.

This challenge is often a failure of institutional support. Research shows that "light-touch digital tools alone" or simple tool-training workshops "often yield limited effects". True pedagogical transformation, as desired by the lecturers, requires a more robust support system. Experts argue that digital supports "work best as a complement, and not as a substitute, to sustained, in-person coaching" and the fostering of "peer networks". The findings at Universitas Muhammadiyah Palembang confirm that to move beyond the current

"developmental phase," institutional support must evolve from providing tools to cultivating a culture of pedagogical reflection and innovation.

### **5.3 The Context of Islamic Higher Education**

Finally, the study's setting at an Islamic university introduces a unique and vital dimension that was highlighted in the literature review. The integration of ICT is not just a technical challenge but a moral one. Research on integrating Islamic values in the digital era highlights that technology can have "negative effects on the behavior of the young generation".

Therefore, for lecturers at this institution, successful digital pedagogy has a dual mandate: it must be educationally innovative and morally grounded. The challenge is to actively "integrate Islamic values into English language learning in the digital era". This means ICT use must be framed to strengthen, not erode, student character (akhlaq). This reinforces the concept of "harmonizing pedagogical innovation with Islamic educational values" and suggests that professional development at

Universitas Muhammadiyah Palembang should explicitly address how to use digital tools as a form of modern tarbiyah (moral and spiritual education).

### **E. Conclusion**

This study concludes that lecturers at Universitas Muhammadiyah Palembang are actively undergoing a pedagogical transformation as they integrate ICT tools into their teaching practices. Their generally positive perceptions of technology demonstrate an awareness of ICT's role in enhancing interaction, accessibility, and student-centered learning environments. They have implemented several digital teaching strategies such as blended learning, multimedia content, and collaborative online platforms that increasingly shift instruction away from traditional teacher-centered methods toward more participatory approaches.

However, the findings also reveal persistent challenges that hinder optimal digital pedagogy. Technical issues, pedagogical difficulties in designing engaging digital materials, and limited institutional support remain major

barriers. These issues highlight a gap between basic technological use and the deeper integration of pedagogical principles as described in the TPACK framework.

The study further emphasizes that successful ICT integration requires more than technological infrastructure; it demands continuous professional development, reflective practice, and strong institutional policies that foster a supportive digital culture. In the context of Islamic higher education, lecturers are also expected to harmonize technological advancement with the cultivation of moral and religious values, making the digital transformation both unique and meaningful.

Therefore, to strengthen digital pedagogy implementation in the university, structured training programs, collaborative learning communities, and improved digital infrastructure are essential. Such efforts will enable lecturers not only to enhance the quality of learning but also to sustain innovation in response to evolving educational needs and technological progress.

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