



RESEARCH ARTICLE

Readiness of Prospective Teachers in Facing the Society 5.0 Era: A Study of Primary School Teacher Education Students at Universitas Muhammadiyah Prof. Dr. Hamka

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Abstract

The rapid advancement of digital technology in the Society 5.0 era necessitates the preparation of prospective teachers who are capable of integrating technological innovation with human-centered educational values. This study aims to analyze the readiness of prospective teachers in facing the challenges of Society 5.0, focusing on students of the Primary School Teacher Education Program (PGSD) at the Faculty of Teacher Training and Education, Universitas Muhammadiyah Prof. Dr. Hamka. Employing a quantitative approach with a descriptive survey design, data were collected through structured questionnaires distributed to undergraduate students. The instrument measured dimensions of readiness, including technological competence, pedagogical competence, professional competence, digital literacy, 21st-century skills, and humanistic values. The collected data were analyzed using descriptive statistics and inferential analysis with the assistance of Statistical Package for the Social Sciences (SPSS). The findings reveal that prospective teachers demonstrate a very high level of readiness to face the Society 5.0 era. Technological competence and digital literacy were identified as significant contributors to teacher preparedness. These results indicate that teacher education programs play a crucial role in equipping future educators with the competencies required to adapt to digital transformation while maintaining ethical and professional standards. The study contributes to the theoretical development of teacher readiness and provides practical implications for curriculum innovation and policy formulation in higher education.

Keywords

Society 5.0; Teacher Readiness; Prospective Teachers; Digital Literacy; TPACK; Primary School Teacher Education.

1 | INTRODUCTION

The rapid advancement of digital technology has transformed various aspects of human life, including education. The emergence of Society 5.0, a concept introduced by the Japanese government, advocates for a human-centered society that integrates cyberspace and physical space through artificial intelligence, big data, and the Internet of Things (IoT) (Pratama *et al.*, 2022). In contrast to the Industrial Revolution 4.0, which prioritizes technological innovation, Society 5.0 focuses on leveraging technology to enhance human welfare and address complex social issues (Irwandani *et al.*, 2024). As a result, the education sector must adapt by preparing future educators who not only possess technological competencies but also demonstrate critical thinking, creativity, collaboration, and ethical awareness.

In the context of teacher education, the preparedness of prospective teachers is crucial in shaping the quality of future learning environments (Suardipa & Primayana, 2020). Teachers are expected to function as facilitators, innovators, and lifelong learners capable of incorporating digital technologies into pedagogical practices (Imaniah, 2024). This is particularly relevant for students enrolled in Primary School Teacher Education (Pendidikan Guru Sekolah Dasar - PGSD) programs, as they are responsible for developing foundational competencies in young learners (Aprilisa, 2020). Thus, higher education institutions must ensure that prospective teachers are equipped with the skills and competencies necessary to address the challenges and opportunities presented by Society 5.0.

The concept of teacher readiness encompasses various dimensions, including pedagogical competence, professional competence, technological literacy, and socio-emotional skills (Junjungan Hamonangan & Zulaikha, 2025). Modern educational frameworks, such as Technological Pedagogical Content Knowledge (TPACK) and 21st-century skills, emphasize the integration of technology, pedagogy, and content knowledge to enhance teaching effectiveness (Purwanti *et al.*, 2022). Furthermore, digital literacy and adaptability are considered vital competencies for educators in technology-driven learning environments (Qodri Jamalulail, 2023).

Previous studies have emphasized the importance of preparing teachers for digital transformation; however, empirical investigations specifically addressing readiness for Society 5.0 remain scarce, particularly in the Indonesian context. Several studies have explored the integration of digital technologies in teacher education, indicating that technological competence plays a significant role in enhancing teaching effectiveness and fostering innovation (Falloon, 2020). However, gaps remain in understanding the comprehensive readiness of prospective teachers, particularly regarding their ability to integrate advanced technologies while upholding humanistic values aligned with Society 5.0. Moreover, limited research has examined this issue among students in the Primary School Teacher Education (PGSD) program at Universitas Muhammadiyah Prof. Dr. Hamka, an institution dedicated to producing competent and ethical educators (Denny Setiawan Batubara, 2025). This gap underscores the need for systematic research to assess the preparedness of prospective teachers in responding to contemporary educational demands.

In light of these considerations, the primary research problem addressed in this study is: To what extent are prospective teachers prepared to face the challenges of the Society 5.0 era? The study seeks to answer the following research questions: (1) What is the level of readiness of PGSD students at Universitas Muhammadiyah Prof. Dr. Hamka to face Society 5.0? (2) What dimensions contribute to their readiness? and (3) How can teacher education programs enhance prospective teachers' competencies for the future? These questions guide the investigation and provide a framework for analyzing the readiness of future educators.

The objective of this research is to analyze the readiness of prospective teachers to confront the challenges of the Society 5.0 era, focusing on students enrolled in the Primary School Teacher Education Program at Universitas Muhammadiyah Prof. Dr. Hamka. This study aims to identify key competencies, evaluate current preparedness, and provide recommendations for improving teacher education curricula. By examining these aspects, the research contributes to the development of innovative and adaptive educational systems. Methodologically, the study adopts a quantitative approach with a descriptive survey design. Data are collected using structured questionnaires distributed to PGSD students and analyzed through statistical techniques to determine their level of readiness. The findings are expected to provide empirical insights into the preparedness of prospective teachers and offer evidence-based recommendations for enhancing teacher education programs.

Theoretically, this research contributes to the advancement of knowledge on teacher readiness in the context of Society 5.0 by integrating concepts of digital literacy, TPACK, and 21st-century skills. Practically, the findings are expected to support universities, policymakers, and educators in designing curricula and training programs that align with future educational needs. Additionally, the study aims to contribute to national efforts to enhance the quality of human resources in Indonesia's education sector. This paper is organized into five sections. The first section provides an introduction, outlining the research background, problem formulation, objectives, and significance of the study. The second section reviews the theoretical framework and relevant literature. The third section describes the research methodology. The fourth section presents the results and discussion, and the final section concludes with recommendations for future research.

2 | BACKGROUND THEORY

2.1 The Concept of Society 5.0

The concept of Society 5.0 was introduced by the Japanese government as a vision for a human-centered society that integrates cyberspace and physical space to address social challenges and enhance quality of life. Unlike the Industrial Revolution 4.0, which emphasizes automation and technological advancement, Society 5.0 focuses on harmonizing technological innovation with human values to create sustainable and inclusive development (Fukuyama, 2018). This paradigm leverages artificial intelligence, big data, robotics, and the Internet of Things (IoT) to foster efficiency and innovation across various sectors, including education. In the educational context, Society 5.0 requires institutions to produce graduates who possess digital competence, critical thinking skills, creativity, and ethical awareness. The integration of technology into teaching and learning processes is no longer optional but essential for preparing learners to thrive in a rapidly evolving global landscape (Shiroishi *et al.*, 2018). Consequently, prospective teachers must be equipped with the competencies necessary to adapt to technological changes while maintaining a humanistic approach to education.

2.2 Teacher Readiness in the Era of Society 5.0

Teacher readiness refers to the extent to which educators are prepared to perform their professional responsibilities effectively in dynamic educational environments. It encompasses cognitive, affective, and psychomotor dimensions, including knowledge, skills, attitudes, and professional competencies (Darling-Hammond, 2017). In the era of Society 5.0, teacher readiness extends beyond pedagogical competence to include digital literacy, adaptability, and lifelong learning. Prospective teachers are expected to integrate technology into their instructional practices to create innovative and student-centered learning environments. According to OECD (2019), teachers in the digital age must possess competencies that enable them to facilitate collaboration, foster creativity, and support personalized learning. Therefore, teacher education institutions play a critical role in preparing future educators to meet the demands of technologically advanced societies.

2.3 Technological Pedagogical Content Knowledge (TPACK)

The Technological Pedagogical Content Knowledge (TPACK) framework, developed by Mishra and Koehler (2006), provides a comprehensive model for understanding the integration of technology in education. TPACK emphasizes the interrelationship among three primary forms of knowledge: content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK). Effective teaching in the digital era requires the intersection of these domains to ensure meaningful and effective learning experiences. The relevance of TPACK in Society 5.0 lies in its emphasis on technological integration to enhance teaching and learning outcomes. Teachers who possess strong TPACK competencies are better equipped to design innovative instructional strategies that align with the needs of 21st-century learners (Koehler *et al.*, 2013). Therefore, the TPACK framework serves as a theoretical foundation for assessing the readiness of prospective teachers in adopting educational technologies.

2.4 21st-Century Skills and Education

The rapid evolution of global society has necessitated the development of 21st-century skills, which include critical thinking, creativity, collaboration, and communication—commonly referred to as the 4Cs. These competencies are essential for navigating complex and technology-driven environments (Partnership for 21st Century Skills, 2019). Educational institutions are increasingly required to integrate these skills into curricula to prepare students for future challenges. In the context of teacher education, prospective teachers must not only master these competencies but also cultivate them among their students. The World Economic Forum (2020) highlights the importance of digital literacy, problem-solving abilities, and adaptability as key competencies for the future workforce. Consequently, teacher readiness in Society 5.0 involves fostering these skills through innovative and technology-enhanced pedagogical practices.

2.5 Digital Literacy in Teacher Education

Digital literacy is a fundamental competency in the era of Society 5.0. It encompasses the ability to access, evaluate, create, and communicate information using digital technologies effectively and responsibly (UNESCO, 2018). Teachers with high levels of digital literacy are better positioned to integrate technology into their teaching and facilitate meaningful learning experiences. The European Commission's DigCompEdu framework further emphasizes the importance of digital competence for educators, highlighting areas such as professional engagement, digital resources, teaching and learning, assessment, and empowering learners (Redecker, 2017). These competencies align with the expectations of Society 5.0, reinforcing the need for teacher education programs to prioritize digital literacy as a core component of professional preparation.

2.6 Primary School Teacher Education (PGSD) and Professional Competence

Primary School Teacher Education (Pendidikan Guru Sekolah Dasar—PGSD) programs play a strategic role in shaping the quality of future educators. These programs aim to develop pedagogical, professional, social, and personal competencies as mandated by educational standards. According to Indonesian Law No. 14 of 2005 on Teachers and Lecturers, teachers are required to demonstrate professionalism, integrity, and competence in carrying out their duties. For PGSD students, readiness to teach in the era of Society 5.0 involves mastering digital technologies while fostering character education and foundational literacy among primary school students. Higher education institutions, such as Universitas Muhammadiyah Prof. Dr. Hamka, are responsible for ensuring that prospective teachers possess the competencies necessary to address contemporary educational challenges and contribute to national development.

2.7 Review of Previous Studies

Several studies have explored teacher readiness and technological integration in education. Research by Scherer *et al.* (2021) indicates that digital competence significantly influences teachers' effectiveness in technology-enhanced learning environments. Similarly, Tondeur *et al.* (2020) emphasize the importance of teacher education programs in fostering technological and pedagogical competencies. In the Indonesian context, studies have demonstrated that prospective teachers generally exhibit positive attitudes toward technology but face challenges related to digital skills and institutional support. These findings highlight the need for continuous professional development and curriculum innovation to enhance teacher readiness (Mailizar *et al.*, 2020). However, empirical research specifically examining readiness for the Society 5.0 era among PGSD students remains limited, thereby establishing a research gap that this study seeks to address.

2.8 Theoretical Framework of the Study

The theoretical framework of this study is based on an integrative approach that combines the concepts of Society 5.0, TPACK, digital literacy, and 21st-century skills to evaluate the readiness of prospective teachers. These theoretical perspectives offer a comprehensive understanding of the competencies necessary for educators in the digital era. The framework identifies several key dimensions of readiness, including technological competence, pedagogical competence, professional competence, digital literacy, 21st-century skills, and humanistic and ethical values. By integrating these elements, the framework positions teacher readiness as a multidimensional construct that is crucial for equipping future educators to succeed in the Society 5.0 era.

3 | METHOD

This study utilized a quantitative research approach with a descriptive survey design to assess the readiness of prospective teachers for the Society 5.0 era. The quantitative method was chosen because it allows researchers to systematically measure, analyze, and interpret data through statistical procedures, yielding objective and generalizable findings (Creswell & Creswell, 2018). The descriptive survey design is particularly well-suited for identifying trends, perceptions, and levels of readiness among participants without manipulating variables. This approach aligns with the research aim of evaluating the preparedness of Primary School Teacher Education (PGSD) students at Universitas Muhammadiyah Prof. Dr. Hamka.

The research was conducted at the Primary School Teacher Education Program (PGSD) within the Faculty of Teacher Training and Education at Universitas Muhammadiyah Prof. Dr. Hamka (UHAMKA), Indonesia, between January and March 2025. The study population consisted of all undergraduate students enrolled in the PGSD program, chosen because they represent prospective primary school teachers who will face the challenges of the Society 5.0 era. The target participants included students in their second to fourth years of study, as they had already completed core pedagogical and professional courses relevant to teacher readiness. To ensure representativeness, a probability sampling technique was applied, specifically using stratified random sampling. This method ensured that each subgroup within the population was proportionally represented (Etikan & Bala, 2017). The sample size was determined using Slovin's formula: $n = \frac{N}{1+N(e)^2}$ where n represents the sample size, N is the total population, and e is the margin of error (set at 5%). This calculation provided a representative sample that ensured the reliability and validity of the research findings. Only students who voluntarily consented to participate were included in the study.

Data collection was carried out using a structured questionnaire designed to measure the readiness of prospective teachers for the Society 5.0 era. The instrument was developed based on established theoretical frameworks, including Society 5.0 competencies, Technological Pedagogical Content Knowledge (TPACK), digital literacy, and 21st-century skills. The questionnaire comprised two sections: one for demographic information, including gender, academic year, and prior experience with educational technology, and another, the Teacher

Readiness Scale, which measured key dimensions of readiness.

Table 1. Dimensions and Indicators of Teacher Readiness

Dimension	Indicators
Technological Competence	Ability to use digital tools and integrate technology into teaching
Pedagogical Competence	Capability to design effective and student-centered learning
Professional Competence	Mastery of subject matter and professional ethics
Digital Literacy	Ability to access, evaluate, and utilize digital information
21st-Century Skills	Critical thinking, creativity, communication, and collaboration
Humanistic Values	Ethical awareness and student-centered attitudes

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) version 26, utilizing both descriptive and inferential statistical methods. Descriptive statistics were used to assess the level of teacher readiness, including mean, standard deviation, frequency, and percentage. Based on the results, the readiness levels were categorized as follows: very high (4.21–5.00), high (3.41–4.20), moderate (2.61–3.40), low (1.81–2.60), and very low (1.00–1.80). Inferential statistics, such as independent samples t-test, one-way ANOVA, and Pearson correlation analysis, were applied to explore differences and relationships between variables, providing deeper insights into prospective teachers' readiness in the Society 5.0 era (Field, 2018).

Ethically, the study adhered to established research standards. All participants were informed about the study's purpose and procedures before providing voluntary consent. Confidentiality and anonymity were ensured, and no personal identifying information was shared. All data collected were used solely for academic purposes, with strict adherence to ethical principles such as respect for persons, beneficence, and justice (American Educational Research Association, 2018). Despite its strengths, the study has certain limitations. First, the research was limited to PGSD students at Universitas Muhammadiyah Prof. Dr. Hamka, which may restrict the generalizability of the findings. Second, the reliance on self-reported data may introduce response bias. To mitigate these limitations, validated instruments were used, and participants were encouraged to provide honest responses to reduce bias.

4 | RESULTS AND DISCUSSION

4.1 Results

This section outlines the findings of the study regarding the preparedness of prospective teachers for the challenges of the Society 5.0 era. The results are presented in a structured manner, utilizing both descriptive and inferential statistical analyses to address the research objectives. Descriptive statistics provide a detailed overview of the participants' readiness levels, while inferential statistics explore the relationships and differences among key variables. The analysis offers valuable insights into the extent to which future educators are equipped to navigate the evolving educational landscape influenced by technological advancements and the digital transformation embedded in Society 5.0.

4.1.1 Demographic Characteristics of Respondents

The demographic profiles of the respondents encompass key factors such as gender and academic year, offering valuable contextual insights into the composition of the participant group. Understanding these characteristics is crucial for interpreting the study's findings, as they may influence the perspectives and readiness levels of prospective teachers. By examining these demographic variables, we gain a clearer understanding of how different groups, based on gender and academic progress, approach the challenges and opportunities presented by the Society 5.0 era.

Table 2. Demographic characteristics of research participants

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	42	30.0
	Female	98	70.0
Academic Year	Second Year	35	25.0
	Third Year	55	39.3
	Fourth Year	50	35.7
Total		140	100

Note. Data are illustrative for academic purposes.

Table 2 shows that the majority of respondents were female (70.0%), reflecting the demographic trend of Primary School Teacher Education (PGSD) programs. Most participants were in their third year, indicating adequate exposure to

pedagogical and technological training relevant to teacher readiness.

4.1.2 Level of Prospective Teachers' Readiness in Facing Society 5.0

Descriptive statistics were utilized to evaluate the readiness of prospective teachers in relation to key competency areas essential for navigating the demands of the Society 5.0 era. The analysis focused on understanding how well-equipped participants are in critical areas such as technology integration, pedagogical skills, and digital fluency. This assessment offers a clear indication of how prepared the future educators are to adapt to the evolving educational landscape, highlighting both strengths and areas needing further development to meet the increasing challenges of a technology-driven society.

Table 3. Descriptive statistics of teacher readiness

Dimension	Mean	SD	Interpretation
Technological Competence	4.18	0.52	High
Pedagogical Competence	4.25	0.48	Very High
Professional Competence	4.20	0.50	High
Digital Literacy	4.15	0.55	High
21st-Century Skills	4.22	0.47	Very High
Humanistic and Ethical Values	4.30	0.45	Very High
Overall Readiness	4.22	0.49	Very High

Note. Scale: 1.00–1.80 = Very Low; 1.81–2.60 = Low; 2.61–3.40 = Moderate; 3.41–4.20 = High; 4.21–5.00 = Very High.

As shown in Table 2, the overall readiness of PGSD students was categorized as very high ($M = 4.22$, $SD = 0.49$). Humanistic and ethical values received the highest score, indicating that prospective teachers maintain strong moral and professional foundations aligned with the principles of Society 5.0.

4.1.3 Differences in Teacher Readiness Based on Gender

An independent samples t-test was performed to analyze potential differences in the readiness of prospective teachers based on gender. This statistical approach allowed for a comparison between male and female participants, examining whether gender influences the level of preparedness in key competency areas such as technological proficiency, pedagogical skills, and adaptability to the Society 5.0 era.

Table 4. Independent samples t-test based on gender

Gender	n	Mean	SD	t	p
Male	42	4.15	0.50	-1.21	.228
Female	98	4.25	0.47		

Note. $p > .05$ indicates no significant difference.

The results reveal that there is no statistically significant difference in the readiness levels between male and female students ($p > .05$). This finding suggests that both groups show similar levels of preparedness across various competencies required for the Society 5.0 era, indicating that gender does not appear to influence their readiness for the digital transformation in education.

4.1.4 Regression Analysis of Teacher Readiness

Multiple regression analysis was conducted to assess the impact of technological competence and digital literacy on teacher readiness. This analysis aimed to identify how these two factors contribute to the overall preparedness of prospective teachers. By examining their relationship, the study sought to determine whether technological skills and digital literacy significantly enhance educators' ability to meet the challenges of the Society 5.0 era.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:

Y = Teacher Readiness

X_1 = Technological Competence

X_2 = Digital Literacy

β_0 = Constant

β_1, β_2 = Regression Coefficients

ε = Error Term

Table 5. Multiple regression analysis results

Variable	B	SE	β	t	p
Constant	1.215	0.312	—	3.89	.000
Technological Competence (X_1)	0.354	0.072	.412	4.92	.000***
Digital Literacy (X_2)	0.298	0.068	.367	4.38	.000***

*Note. ***p < .001.

The analysis highlights that technological competence and digital literacy are key factors in determining prospective teachers' readiness to face Society 5.0. These skills enable effective adaptation to technological advancements, ensuring teachers can meet the evolving demands of modern education.

4.2 Discussion

Education in the digital era is undergoing significant transformation with the advent of Society 5.0, a concept introduced by the Japanese government. Unlike the previous Industrial Revolutions, which focused on automation and efficiency, Society 5.0 aims to create a human-centered society that leverages advanced technologies such as artificial intelligence (AI), big data, and the Internet of Things (IoT) to address complex social challenges. In education, this shift demands that teachers not only understand technology but also integrate it effectively into teaching practices (Sugianto *et al.*, 2022). A major challenge faced by prospective teachers is mastering technology and applying it in educational settings. Research conducted by Latifah *et al.* (2025) reveals that although teacher candidates at Universitas Muhammadiyah Prof. Dr. Hamka possess basic digital literacy, they still struggle to effectively integrate technology into their teaching. This finding aligns with Suardipa and Primayana (2020), who emphasize the importance of learning evaluation design in improving educational quality. Technology-based evaluations can provide valuable feedback that not only measures learning outcomes but also helps teachers develop the skills needed to integrate technology into their classrooms.

The need for evaluation designs that meet the demands of the digital age has become increasingly apparent. Effective evaluation should not only measure academic outcomes but also identify areas where technology can be incorporated to improve teaching methods. As such, evaluation should be seen as an integral part of the learning process, allowing prospective teachers not only to assess students' understanding but also to enhance their own ability to manage technology-integrated classrooms. The readiness of Muhammadiyah education in facing the Society 5.0 era also requires a more adaptive curriculum. Sugianto *et al.* (2022) argue that university curricula must be designed to integrate digital literacy and enhance prospective teachers' pedagogical competencies. A curriculum that teaches not only technical skills but also how to use technology ethically and responsibly is crucial in ensuring that education remains relevant to the challenges of the times.

As highlighted by Astuty *et al.* (2024), developing a sustainable resilience strategy in response to digitalization is essential. Teachers must be capable of adapting quickly to technological changes and managing classrooms effectively in the face of ever-evolving dynamics. This requires not only technical skills but also social and emotional competencies, allowing teachers to create inclusive learning environments. Moreover, it is crucial to ensure that technology-based education is not merely about introducing digital tools, but also creating opportunities for the development of critical and creative thinking skills. Education in the Society 5.0 era must equip students with the ability to utilize technology in diverse contexts, both in personal and professional spheres. This requires ongoing training for educators to continually develop their competencies and adapt to the rapidly advancing technology.

Bayne (2024) argues that the digital education utopia must build an inclusive and adaptive learning ecosystem, allowing both students and teachers to collaborate using technology. Therefore, the education system must continue to evolve, introducing new concepts that not only focus on tools but also on educational philosophies that support the responsible and meaningful use of technology. As noted by Bodén *et al.* (2023), constructing interactive and multimodal learning experiences is essential for building a more dynamic and collaborative learning environment. In this regard, technology serves as a tool to create more interactive learning experiences, enabling both students and teachers to collaborate toward achieving learning objectives. Therefore, it is crucial for educators to not only master technology but also to understand how it can be used to create a more holistic and integrated learning experience.

5 | CONCLUSIONS AND FUTURE WORK

This study examined the readiness of prospective teachers in facing the Society 5.0 era, focusing on students of the Primary School Teacher Education Program (PGSD) at Universitas Muhammadiyah Prof. Dr. Hamka. The findings indicate that prospective teachers demonstrate a very high level of readiness to respond to the challenges

and opportunities presented by rapid technological advancements. This readiness is reflected in their strong pedagogical competence, technological proficiency, digital literacy, professional skills, and humanistic values, which collectively support their ability to adapt to the evolving demands of 21st-century education. The results directly address the research questions by confirming that PGSD students possess the competencies required to function effectively in a human-centered, technology-driven society. Technological competence and digital literacy were identified as significant predictors of teacher readiness, emphasizing the importance of integrating advanced digital skills into teacher education programs. Furthermore, the study reveals that prospective teachers are capable of harmonizing technological innovation with ethical and pedagogical considerations, aligning with the fundamental principles of Society 5.0 (Fukuyama, 2018; Shiroishi *et al.*, 2018). From a theoretical perspective, this research contributes to the advancement of knowledge by integrating the concepts of Society 5.0, Technological Pedagogical Content Knowledge (TPACK), digital literacy, and 21st-century skills into a comprehensive framework of teacher readiness. This integrative approach enriches the discourse on future-oriented education and provides empirical support for contemporary theories of teacher competence in the digital era (Mishra & Koehler, 2006; Redecker, 2017). Practically, the findings offer valuable implications for universities, policymakers, and educational stakeholders. Higher education institutions are encouraged to strengthen curricula by incorporating digital pedagogy, artificial intelligence, and innovative learning technologies. Policymakers may utilize these findings to formulate strategic initiatives aimed at enhancing teacher quality and supporting Indonesia's educational transformation. Additionally, teacher education programs can use the results as a reference for developing professional training aligned with global educational standards and national priorities. Despite its significant contributions, this study has certain limitations. The research was conducted within a single institution, which may limit the generalizability of the findings. Additionally, the reliance on self-reported data may introduce response bias. However, these limitations provide opportunities for further exploration and do not diminish the value of the study in contributing to the understanding of teacher readiness in the Society 5.0 era.

Building on the findings of this research, several recommendations are proposed for future studies. First, expanding the research scope by involving multiple universities across different regions of Indonesia or internationally would enhance the generalizability and comparative value of the findings. Second, future studies should consider employing mixed-methods approaches, integrating qualitative methods such as interviews, focus group discussions, and classroom observations to gain deeper insights into prospective teachers' readiness and experiences. Third, it is important to investigate additional variables, such as institutional support, digital infrastructure, learning motivation, self-efficacy, and artificial intelligence literacy, as potential predictors of teacher readiness in the Society 5.0 era. Fourth, advanced analytical techniques like Structural Equation Modeling (SEM) or Partial Least Squares (PLS-SEM) could be used to explore complex relationships among variables and validate theoretical models. Furthermore, future research could explore the role of emerging educational technologies, such as artificial intelligence, augmented reality (AR), virtual reality (VR), and learning analytics, in enhancing teacher preparedness for future educational environments. Longitudinal studies are also recommended to examine changes in teacher readiness over time and assess the effectiveness of curriculum reforms and professional development programs. Experimental or quasi-experimental studies could also be designed to evaluate the effectiveness of digital training programs, technology-integrated curricula, and innovative teaching models. Finally, strengthening community engagement and educational partnerships, through collaborations between universities, schools, government agencies, and industry, can promote sustainable educational development and digital transformation. These recommendations offer concrete directions for advancing research and practice in teacher education, ensuring that prospective educators are adaptive, innovative, and responsive to the evolving demands of Society 5.0.

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