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TEACHER PROFESSIONAL DEVELOPMENT IN THE ERA OF SOCIETY 5.0: REDEFINING COMPETENCIES FOR FUTURE CLASSROOMS

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Abstract

This study aims to reanalyze teacher competency needs in the Society 5.0 era, where digital technology and artificial intelligence are deeply integrated into social, economic, and educational life. The role of teachers in this context is no longer limited to imparting knowledge but also encompasses the ability to manage collaborative, data-driven learning, and be responsive to technological developments and student needs. The study was conducted using a literature review method, examining various research findings, academic articles, and policy reports related to teacher professional development in the digital era. The results indicate that teacher professional development must be directed at strengthening digital literacy, critical thinking skills, pedagogical creativity, cross-cultural communication competencies, and ethical skills in the use of technology. Furthermore, the paradigm shift toward the classroom of the future demands a sustainable development framework that is adaptive to technological and social changes. Thus, this study emphasizes the importance of redefining teacher competencies to address the challenges and capitalize on the opportunities presented by Society 5.0 in education.

Keywords: Teacher Professional Development, Society 5.0, Teacher Competence, Classroom of the Future

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INTRODUCTION

The development of human civilization has always been marked by major transformations that have had a significant impact on almost all aspects of life, including education. After experiencing the industrial revolution that brought automation and digitalization, the world is now entering a new phase known as Society 5.0. The concept of Society 5.0, first introduced in Japan, views technology not merely as a means of production or efficiency, but as an instrument for creating human-centered solutions that balance digital progress with social welfare. This era emphasizes the integration of physical space and cyberspace, where artificial intelligence, big data, the Internet of Things, and other digital technologies are directed to address complex challenges in society (Rusman et al., 2023a). Therefore, the world of education, as the foundation for developing human quality, cannot escape the demands of adapting to this new reality.

Teachers, as the spearhead of education, face dual challenges in the context of Society 5.0. On the one hand, they are required to master digital literacy, think critically, creatively, and adapt to technological developments (Volume 6, Number 1, March 2024, 2024). On the other hand, teachers must maintain the essence of humanity in the learning process, namely educating students by instilling moral values, ethics, empathy, and social responsibility. The role of teachers is no longer merely a transmitter of knowledge, but rather a facilitator, guide, and developer of competencies that combine cognitive, affective, and psychomotor skills. In other words, today's teachers are required to reposition their competencies to meet the challenges of future classrooms, which are far more complex than those of previous generations.

Global phenomena such as the acceleration of digital transformation due to the COVID-19 pandemic further emphasize the importance of teacher professional development. The pandemic has forced teachers around the world, including Indonesia, to adapt quickly to digital technology-based learning. The use of online platforms, learning applications, and virtual classroom management systems has become an integral part of teachers' daily lives. However, this experience has also revealed a competency gap among educators. Many teachers are not yet technically or pedagogically prepared to face this transformation. This demonstrates that teacher professional development in the Society 5.0 era is no longer an option but an urgent necessity to ensure the sustainability of educational quality (Eliwatis et al., 2022).

Educational institutions and governments around the world are beginning to emphasize the importance of future-oriented teacher professional development programs. These programs not only target the improvement of conventional teaching skills but also encompass mastery of educational technology, data literacy, cross-disciplinary collaborative skills, and leadership in learning innovation. Teachers are required to utilize technologies such as artificial intelligence to analyze student learning needs, personalize learning, and create interactive and participatory classroom environments. At the same time, they must be able to develop soft skills such as communication, empathy, and emotional management, which are crucial for maintaining the human dimension amidst the dominance of technology (Shahidi Hamedani et al., 2024).

The challenges of teacher professional development are increasingly complex when linked to the need for competency redefinition (Ong & Annamalai, 2024). Past teacher competencies, which emphasized mastery of material and traditional teaching methods, are no longer sufficient. Future classrooms will be filled with students who develop digital skills from an early age, have extensive access to information, and are accustomed to interacting online. Teachers can no longer be the sole source of knowledge; they must instead act as curators of information, motivators, and bridges between digital knowledge and real life. This demands new competencies oriented toward integrative, innovative, and transformative abilities.

Teacher professional development must also consider the dimensions of globalization and interconnectivity. The Society 5.0 era not only introduces technology but also encourages the formation of a borderless global society (Ng et al., 2023a). Students in future classrooms will face global issues such as climate change, sustainability, cultural diversity, and global economic challenges. Therefore, teachers must be prepared to instill a global perspective in their teaching, without neglecting local identities and national cultural values. This means that teacher professional development needs to be oriented towards 21st-century competencies that combine technological literacy with cultural literacy, human literacy, and sustainability literacy.

In the Indonesian context, the urgency of teacher professional development in the Society 5.0 era is increasingly relevant. Indonesia faces challenges of unequal education quality, disparities in digital infrastructure, and low levels of digital literacy among educators. Existing teacher capacity-building programs are often mired in administrative aspects and fail to address the essential competencies needed in the future (Adel, 2024). Yet, investment in teacher professional development is key to developing a generation capable

of competing globally. Professional, adaptive, and innovative teachers will produce students with high competencies, both in terms of knowledge, skills, and attitudes (Tavares et al., 2022).

Therefore, research on "Teacher Professional Development in the Era of Society 5.0: Redefining Competencies for Future Classrooms" is crucial. This research is expected to provide a deeper understanding of the urgency of teacher professional development, the new competencies that must be mastered, and strategies for effectively realizing this development. With a comprehensive review, this research will not only provide theoretical contributions to academic literature but also offer practical implications for the government, educational institutions, and teachers themselves in preparing future classrooms. Quality education relevant to the challenges of the Society 5.0 era can only be realized if teachers, as agents of change, are equipped with appropriate competencies and continuously developed.

RESEARCH METHOD

The research method used in this study is a literature review, which examines various academic sources, such as journal articles, books, research reports, and educational policy documents relevant to teacher professional development in the Society 5.0 era. This literature review process was conducted systematically by identifying, analyzing, and synthesizing findings from various previous studies related to the redefinition of teacher competencies, educational transformation, and the challenges and opportunities emerging in the context of the future classroom. Literature selection was based on relevance, novelty, and publication quality to ensure the research results provide a comprehensive overview of the issues under study.

Furthermore, this study employed a descriptive-analytical approach in processing the obtained literature data, thus providing an in-depth understanding of the concept of teacher professional development aligned with the demands of Society 5.0. The analysis was conducted by grouping the literature into key themes, such as digital competency, innovative pedagogy, and the role of teachers in navigating socio-technological change. The results of this literature review are expected to produce a conceptual framework that can be the basis for formulating strategies for sustainable teacher professional development, as well as providing practical recommendations for policy makers, educational institutions, and teachers themselves in preparing future classes that are adaptive and responsive to global challenges.

RESULT AND DISCUSSION

The Role of Teachers in Facing the Shifting Paradigms of 21st-Century Learning

The shifting paradigms of 21st-century learning have significant consequences for the world of education, including the role of teachers as key actors in the learning process. While previously viewed as the sole source of information and center of knowledge, this paradigm has shifted in line with technological developments, globalization, and the demands of new competencies for students. The 21st century emphasizes the importance of critical thinking, creativity, collaboration, and communication skills integrated with digital literacy, data literacy, and cultural literacy. In this context, the role of teachers is no longer limited to the mere transfer of knowledge, but rather as facilitators capable of creating interactive, enjoyable, and relevant learning environments to meet the challenges of the times. Teachers are required to guide students to develop their potential, think independently, and adapt to rapid social and technological changes (Chetry, 2024).

Teachers also play a crucial role in building student readiness to face the complexities of global life. With the rapid flow of information and the penetration of digital technology, students must have the ability to sort, understand, and use information wisely. This is where teachers function as guides and controllers, ensuring that students are not merely consumers of information but are also able to contribute productively. Teachers are required to provide experiential learning, problem-solving, and cross-disciplinary collaboration so that students become accustomed to critical thinking and finding innovative solutions. Furthermore, teachers need to ensure that students' mastery of technology is accompanied by a strong understanding of ethics, morals, and human values, so that intellectual intelligence can balance with emotional and spiritual intelligence (Şenol, 2020).

The role of teachers in the 21st century is also inseparable from the need to master educational technology. The integration of technology into learning is inevitable, no longer an option (Rodney, 2020). Teachers need to understand the various digital platforms, learning applications, and interactive media that can be used to enhance the effectiveness of the teaching and learning process. However, the use of technology is not merely about mastering the devices; it is also about how teachers can design learning strategies that utilize technology to enrich students' learning experiences. This includes the ability to manage virtual classrooms, create interactive digital teaching materials, and foster in-depth digital literacy skills in students. Teachers play a crucial role in leveraging technology as a vehicle for fostering creativity, collaboration, and broader

communication, so that students are not trapped in passive technology consumption (Maba et al., 2023).

On the other hand, the transformation of 21st-century education emphasizes the importance of character-oriented learning. Globalization and modernization often pose challenges in the form of shifting values, individualism, and a tendency toward pragmatism that neglects morality. In this regard, teachers have a significant responsibility to shape students' strong character, emulating honesty, discipline, caring, and responsibility. Character education is inseparable from competency-based learning, as the two complement each other in shaping a well-rounded personality. Teachers serve as concrete role models for students to emulate in their daily lives, both in their attitudes, interactions, and in dealing with problems. Thus, teachers educate not only with words but also with behaviors that consistently reflect the values they wish to instill (Sikhakhane et al., 2020).

Beyond being educators and role models, 21st-century teachers are also required to be lifelong learners. The ever-changing dynamics of education require teachers to continually improve their professional and pedagogical competencies. This can be achieved through self-development, ongoing training, and active involvement in learning communities that encourage the exchange of experiences and innovation. A teacher committed to continuous professional development not only enriches their personal knowledge but also makes a significant contribution to improving the overall quality of education (Sumardi et al., 2020). Teachers who continually learn will be better prepared to respond to curriculum changes, technological developments, and the increasingly complex needs of students. In this way, teachers can maintain the relevance and meaningfulness of their role amidst rapidly shifting learning paradigms.

The shifting paradigm of 21st-century learning also requires teachers to adopt a more inclusive and collaborative approach. Today's education no longer focuses solely on academic achievement but also accommodates the diversity of students' potential, interests, and needs (Peña-Ayala, 2021). Teachers need to create a welcoming, inclusive classroom environment that allows each student to develop according to their capacity. This requires teachers to understand the differences in students' learning styles, cultural backgrounds, and socioeconomic conditions so that the learning strategies they design are truly appropriate to their context. With this approach, teachers act as liaisons, bridging gaps and fostering a spirit of togetherness amidst diversity.

Redefining Teacher Competencies in the Context of Digital Technology, Big Data, and Artificial Intelligence

The shifting educational paradigm in the digital era demands a redefinition of teacher competencies to address the challenges and opportunities arising from technological developments. Teachers no longer serve solely as transmitters of knowledge, but also as facilitators, guides, and learning managers capable of integrating digital technology, big data, and artificial intelligence into the teaching process. This shifts the traditional, one-way orientation of education toward a more interactive, adaptive, and data-driven approach. Therefore, teacher competencies in this century must be understood within a broader framework, encompassing digital pedagogical skills, data literacy, and ethical skills in utilizing smart technologies, which are now an integral part of the education ecosystem (Ng et al., 2023b).

Digital technology has transformed the way students learn and teachers teach. The presence of digital devices, online learning platforms, and open learning resources requires teachers to be able to adapt to various new media. Teachers are not only required to master basic skills in using technological devices but also to develop creativity in designing digital-based learning strategies. For example, interactive video-based learning, virtual classes, and the use of gamification as a means of increasing student motivation to learn. Teachers' digital competencies also include the ability to maintain digital security, media literacy, and critical awareness of information circulating online. Teachers who possess these competencies will be able to educate students not only to master material but also to become intelligent, critical, and responsible individuals in using technology (Zhang, 2024).

Furthermore, the development of big data brings a new dimension to the world of education. Data generated from student learning activities, both in physical and digital classrooms, can be processed to understand the learning patterns, weaknesses, and potential of each student. Teachers are required to possess data literacy competencies, namely the ability to read, analyze, and utilize data to design more personalized learning (Rajeswari, n.d.). With big data, teachers can understand that no two students learn in the same way. Therefore, a uniform learning approach is no longer relevant. Teachers with data literacy competencies are able to adapt teaching methods based on students' specific needs, resulting in more inclusive and effective learning. A major challenge in this regard is how teachers can interpret data wisely without losing the humanistic values of education.

The advent of artificial intelligence (AI) adds complexity and yet presents opportunities in redefining teacher competencies. AI exists in the form of learning recommendation systems, tutoring chatbots, and automated evaluation tools that can ease teachers' administrative burdens. However, AI cannot completely replace the role of humans in education, as there are dimensions of empathy, moral values, and personal relationships that only teachers can embody. The competencies required of teachers in the context of AI include the ability to understand how these intelligent systems work, evaluate the reliability of their results, and use them ethically and responsibly (Redefining Teacher Qualification in the Artificial Intelligence Era, n.d.). Teachers must also be able to guide students in understanding how AI works, while instilling awareness of the biases, limitations, and social implications of its use. Thus, teachers play a crucial role in ensuring that AI is used not only for efficiency but also to improve the quality of education.

The integration of digital technology, big data, and AI requires teachers to possess multidimensional competencies. First, pedagogical competence must be redefined from a digital perspective (George, 2023). Teachers must not only master learning theory but also be able to design curricula that optimally utilize data and technology. Second, teachers' professional competence is no longer limited to mastery of scientific fields, but also extends to mastery of educational technology and the ability to collaborate across disciplines. Teachers need to be lifelong learners, continuously updating their knowledge and skills to remain relevant amidst rapid change. Third, teachers' social and personal competence is also being redefined, requiring them to develop effective virtual communication, build trust in the digital space, and foster ethics and empathy in technology-based interactions.

Redefining teacher competency must also encompass ethical and philosophical dimensions. The use of big data and AI has the potential to raise issues of privacy, data security, and algorithmic bias, which can influence learning decisions. Competent teachers are not only technically proficient but also able to establish ethical principles as the basis for technology utilization. In this context, teachers have a moral responsibility to ensure that technology is used in the best interests of students, not merely for administrative purposes or system efficiency. This ethical competency is a crucial pillar for maintaining education's focus on humanity amidst the dominance of technology.

Furthermore, the redefinition of teacher competency cannot be separated from the context of globalization and the Society 5.0 era, which emphasizes the synergy between technology and humanitarian values.

Teachers are required to be not only users of technology but also agents of change, able to guide students so they don't get caught up in dehumanizing technological currents. Teachers must be able to integrate critical thinking, creativity, collaboration, and communication skills with digital skills. In other words, teacher competency must encompass 21st-century skills balanced with advanced technological literacy. This is not only crucial for preparing students for a world of work filled with intelligent technology, but also for shaping a generation capable of ethical, innovative, and responsible thinking.

Ultimately, redefining teacher competencies in the context of digital technology, big data, and artificial intelligence is inevitable. Teachers can no longer rely on traditional competencies limited to mastery of conventional materials and methodologies. They are required to be tech-savvy educators, data-savvy, proficient in using AI, and steadfastly upholding ethical principles in education. With these redefined competencies, teachers will be able to maintain the relevance of their roles amidst rapid changes, while ensuring that education remains a humanizing process that shapes the whole person. Transforming teacher competencies is not merely a technical necessity, but a strategic agenda for building a future of education that is inclusive, equitable, and oriented toward human progress.

Challenges Faced by Teachers in Adapting to the Needs of the Future Classroom

Developments in digital technology, scientific advancements, and socio-cultural changes have given rise to a new paradigm in education. The classroom of the future is no longer viewed solely as a physical space, but rather as a flexible, collaborative, and technology-based learning ecosystem. In this context, teachers are required to adapt to evolving needs, both in terms of methods, media, and personal competencies. The challenges faced by teachers are becoming increasingly complex, as they involve a shift in their role from mere transmitters of knowledge to facilitators, motivators, and managers of learning experiences relevant to the demands of the 21st century.

One of the main challenges emerging is the transformation of the teacher's role amidst the rapid flow of digitalization (Khatoony & Nezhadmehr, 2020). Future students are growing up in an environment saturated with digital devices, artificial intelligence, big data, and unlimited access to information. This means that teachers are no longer the sole source of knowledge; they must instead be able to guide students in sorting, analyzing, and using information critically and ethically. These changes require teachers to master digital literacy,

understand the potential and risks of technology, and create learning strategies that encourage higher-order thinking skills. The challenge is further exacerbated by the difficulty some teachers still experience in integrating technology into the learning process due to limited experience, lack of adequate training, or resistance to change.

In addition to the challenge of mastering technology, teachers also face the need to adapt their pedagogical approaches. The classroom of the future emphasizes project-based learning, collaboration, problem-solving, and creativity. Traditional teacher-centered learning models are considered less relevant because they are not aligned with the characteristics of students who are more critical, independent, and accustomed to rapid access to information (Lavidas et al., 2022). Teachers must be able to design contextual, interactive, and experience-based learning so that students can develop 21st-century skills such as communication, collaboration, critical thinking, and creativity. However, this transition is not simple, requiring a change in mindset, pedagogical innovation, and the courage to step outside the comfort zone of long-established conventional methods.

Other challenges arise from psychological and sociocultural aspects. The next generation of students brings different characteristics compared to previous generations (Регистрация, n.d.). They tend to be more open, adapt quickly to technology, but are also vulnerable to digital distractions and decreased concentration. Teachers are required to understand the dynamics of this generation, including appropriate communication methods, effective motivational approaches, and adaptive classroom management strategies. This condition adds to the burden on teachers who must not only teach, but also be emotional companions, character mentors, and agents of social change amidst the complexity of societal developments. It is not uncommon for teachers to feel overwhelmed by having to balance professional demands with personal needs, especially when changes occur too quickly without adequate support from the education system.

Furthermore, structural challenges and educational policies also play a significant role. Unequal technological infrastructure, disparities in internet access, and limited facilities in various schools remain major obstacles to realizing the ideal classroom of the future. Teachers in urban areas may find it easier to adapt due to the availability of comprehensive facilities, while teachers in remote areas face far greater difficulties. This inequality has the potential to widen the gap in education quality if not addressed promptly. On the other hand, frequently changing educational policies and high administrative

demands can actually reduce teachers' focus on innovation. This forces teachers to struggle between the idealism of creating the classroom of the future and the reality of limitations on the ground (Sepulveda-Escobar & Morrison, 2020).

Equally important, ethical challenges also arise in the context of the use of technology and data in learning. The classroom of the future relies on the use of big data, digital platforms, and artificial intelligence to personalize the learning experience. Teachers need to understand the ethical implications of using these technologies, including issues of privacy, data security, and the potential for algorithmic bias. A lack of digital ethical literacy poses significant risks for both teachers and students, as misuse of technology can impact the integrity of the learning process. Teachers are required to not only master technical aspects but also possess moral sensitivity in guiding students to use technology responsibly (Sepulveda-Escobar & Morrison, 2020).

Furthermore, the challenges teachers face in adapting to the classroom of the future also relate to the sustainability of their professionalism. Rapid changes in education require teachers to continuously learn and improve their competencies through ongoing professional development. However, reality shows that not all teachers have the opportunity or motivation to engage in self-development programs due to limited time, funds, or institutional support. As a result, a gap in skills exists among teachers, impacting the inequity of educational quality. To address this, professional development strategies are needed that are adaptive, accessible, and relevant to real-world needs (Amin, 2023).

All of these challenges demonstrate that adapting to the needs of the classroom of the future is no simple matter for teachers. They must be able to manage technological, pedagogical, psychological, sociocultural, structural, and ethical transformations simultaneously. This burden will be even heavier if teachers are left to fend for themselves without the support of clear policies, adequate infrastructure, and a solid professional community. Therefore, these challenges should not be seen as mere obstacles, but rather as a momentum to strengthen the role of teachers as the main agents in shaping a future generation that is resilient, critical, and globally competitive.

Relevant Teacher Professional Development Models and Frameworks in the Society 5.0 Era

The Society 5.0 era marks a fundamental shift in how humans interact with technology. Artificial intelligence, big data, the internet of things, and

other digital technologies are no longer seen merely as tools but have become integral parts of everyday life and the workplace. In the educational context, this change requires teachers to possess new capacities and competencies, extending beyond mastery of traditional learning materials and methods, to include skills in integrating technology, understanding the needs of digital-generation students, and adapting to increasingly complex social dynamics (Masitoh & Purbowati, 2024). Therefore, teacher professional development needs to be designed through models and frameworks that align with the challenges of this era, ensuring that teachers remain central actors in the learning process and facilitators in shaping a critical, creative, and character-driven generation.

One prominent approach to teacher professional development in the Society 5.0 era is the lifelong learning model. This concept positions teachers as permanent learners who continually update their knowledge and skills in line with technological developments and educational needs. Through lifelong learning, teachers are no longer trapped in the routine of conventional teaching methods, but are instead open to pedagogical innovations that integrate digital technology, artificial intelligence, and big data. This is crucial because the challenges teachers face are not only academic but also social and emotional for students growing up in the digital age. A teacher professional development framework in this context must be able to provide continuous access to learning resources, whether through online platforms, global teacher communities, or through interdisciplinary collaboration (Rusman et al., 2023b).

Furthermore, teacher professional development needs to be designed through a framework based on 21st-century competencies. These competencies include critical thinking, communication, collaboration, and creativity skills integrated with digital literacy, data literacy, and technological literacy. Teachers who are competent in mastering these skills are not only able to teach effectively but also able to guide students in developing capacities relevant to future needs. Within this framework, teachers are viewed as learning facilitators who encourage students to actively participate, solve real-world problems, and develop creative, technology-based solutions (Angkarini et al., 2025). Therefore, teacher professional development models must provide space for real-world practice, project-based learning, and training involving simulation technology and artificial intelligence to equip teachers with hands-on experience.

A relevant framework in the Society 5.0 era must also be flexible and adaptable to change. Education can no longer be viewed as a static system, but

rather as a dynamic system adapted to societal and technological developments (Sabariah et al., 2023). Teachers need a professional development model that allows them to quickly adapt their competencies to policy changes, new technological developments, or emerging social challenges. This flexibility can be realized through a modular framework, where teacher training is structured into modules that can be selected according to individual needs and learning contexts. Thus, professional development is not uniform or top-down, but rather based on the real needs faced by teachers in the field.

Similarly, teacher professional development frameworks should also emphasize the importance of collaboration between teachers, between schools, and across countries. The Society 5.0 era presents opportunities for global collaboration that allows teachers to share knowledge, experiences, and best practices through digital platforms. This collaboration enriches teachers' perspectives and encourages the creation of more diverse pedagogical innovations. A relevant professional development model is one that facilitates the formation of professional learning communities, whether in the form of online working groups, global discussion forums, or cross-disciplinary collaborative projects. These communities serve not only as a means of sharing information but also as a space for emotional and professional support, helping teachers cope with the pressures and complexities of their work in the digital age (Kasinathan et al., 2022).

In addition to collaboration, the framework for teacher professional development must also address ethical and humanitarian dimensions. Society 5.0 is not simply about technological dominance, but rather about harmonizing humans and technology to create more humane values. Therefore, teachers need to be trained to develop ethical awareness in the use of technology, particularly regarding data privacy, information security, and the potential for algorithmic bias. Teachers are not only required to understand how technology works, but also to instill moral values, character, and empathy in students when using technology. This is crucial so that the generation growing up in the Society 5.0 era is not merely technologically literate but also possesses social sensitivity and moral responsibility in its use.

Furthermore, teacher professional development in the Society 5.0 era requires consistent and sustainable policy support from both the government and educational institutions. A sound professional development model cannot function optimally without a supportive ecosystem, including the availability of digital infrastructure, access to quality training, and recognition for teachers'

efforts to improve competency. An ideal framework should involve synergy between various stakeholders, from the government, higher education institutions, the technology industry, and the community. This synergy aims to create professional development programs that are relevant, applicable, and future-oriented.

Therefore, it can be concluded that a relevant model and framework for teacher professional development in the Society 5.0 era must be holistic, adaptive, collaborative, and humanistic. Teachers need to be positioned as lifelong learners who not only improve their digital skills but also develop their intellectual, emotional, and ethical capacities. Teacher professional development cannot simply rely on occasional formal training; it must be a continuous process integrated with daily teaching practice. Only in this way will teachers be able to fulfill their strategic role in guiding the younger generation to face future challenges and opportunities, while maintaining humanitarian values amidst the rapid technological flow of Society 5.0.

CONCLUSION

The conclusion of the study "Teacher Professional Development in the Era of Society 5.0: Redefining Competencies for Future Classrooms" confirms that teacher professional development is a fundamental aspect in realizing education that is relevant to the needs of the times. The Society 5.0 era requires teachers to master not only traditional pedagogical skills but also digital competencies, critical thinking, creativity, and the ability to adapt to rapid technological change. Teachers are required to be able to bridge the role of technology with humanitarian values so that learning remains student-centered and produces a generation that is not only intellectually intelligent but also possesses empathy, ethics, and social responsibility.

Furthermore, this study shows that developing teacher competencies in the Society 5.0 era requires a sustainable strategy through training, collaboration, and the integration of technology into learning practices. Efforts to strengthen teacher capacity cannot be carried out in isolation but must involve the entire education ecosystem, including policy support, infrastructure, and partnerships with various parties. Thus, the process of teacher professional development is not merely a response to change, but rather a comprehensive transformation toward more innovative and relevant pedagogical practices.

Finally, it can be concluded that redefining teacher competencies to face the classroom of the future is a crucial prerequisite for creating quality and

sustainable education. Teachers in the Society 5.0 era act as agents of change, capable of integrating intelligent technology with humanistic values in the teaching and learning process. The success of teacher professional development will significantly determine how education can produce human resources ready to face global challenges while maintaining social harmony, so that education truly serves as the primary foundation for future national development.

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