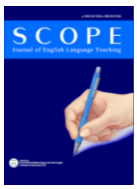
SCOPE
Journal of English Language Teaching
| p-ISSN 2541-0326 | e-ISSN 2541-0334 |
https://journal.lppmunindra.ac.id/index.php/SCOPE/



Research Article

The Effectiveness of Teacher Learning to Improve Teaching Capability in The Society 5.0 Era: An Epistemological Perspective

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KEYWORDS

Philosophy of Epistemology;
Effectiveness of Teacher Learning;
Society 5.0;
Teacher's Teaching Ability

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A B S T R A C T

The purpose of writing this article is to identify the effectiveness of teacher learning in an effort to increase teachers' abilities in teaching with the demands of learning in the Society 5.0 era by the epistemological perspective. The method used in this article is Literature or Library study. Education faced in the Society 5.0 era emphasizes the integration of technology and artificial intelligence. From an epistemological point of view, the article highlights the transformation of the concepts of knowledge and learning. The concepts of personalized learning, creativity and the use of technology are the main topics of discussion in improving teachers' abilities to facilitate learning that relate to the demands of Society 5.0 by considering the epistemological perspective. In order to improve teachers' capabilities, they need to be continuous and sustainable professional development, with a focus on mastering technology and learning strategies that are in accordance with the new learning paradigm. Teachers are also expected to be active learners, engaging in ongoing reflection on their teaching practice. In addition, the effectiveness of learning in improving teachers' abilities in the Society 5.0 era requires a shift in the learning paradigm which is supported by the epistemological views of constructivism and empiricism, where teachers act as facilitators who encourage students to be active in constructing their own knowledge. It is hoped that the efforts described above will encourage the need to adapt to changes in the learning environment which is increasingly integrated with technology and illustrate the importance of the role of teachers as agents of learning that continues to develop.

INTRODUCTION

We know that the world before was certainly different from the world we face today. In the past, people had to walk and wait outside to get public transportation. However, nowadays we can get them by clicking our mobile phone and the transportation would come to our place. The world is changing rapidly. This change is certainly not something to regret or oppose, but it is the challenge for human being to be more creative, innovative, and competitive in facing and adapting to current developments.

We have known the industrial revolution starting from Society 1.0, Society 2.0, Society 3.0, and Society 4.0.

DOI: http://dx.doi.org/10.30998/scope.v9i2.21097

Today, we face the new challenge. It is Society 5.0, which is a development of the previous industrial revolution (Society). The concept brought by Society 5.0 is the use of modern science to serve human needs as time goes by. This industrial revolution surely also has an impact on various aspects of human life, including economic, social, cultural and educational.

In technological developments, especially in education, literacy is much needed in the era of revolution 4.0. The development of information technology currently reaches all areas of society, including education (Handayani, 2020). Education is the main pillar in building advanced quality human resources, and the role of teachers as learning facilitators is the key to the success of the education process in the era of society 5.0, where technology and humans are increasingly being substituted to create increasingly complex problem solving. As time goes by, the concept of Society 5.0 has emerged which promotes the integration of advanced technology in everyday life. Education is an important aspect affected because human resources from the development of the industrial revolution come from people who receive education, and education is a forum for preparing society to face the industrial revolution (Harun, 2021).

Technology is developing rapidly in the 21ststst century. It also affects the learning and teaching system in the Society 5.0 era. The role of educators is very significant in producing the ready generation to face this challenge. In facing Society 5.0, the quality of teachers as the front guard of education must be improved. Educators must adapt to the digitalization of systems and the use of technology for education. Old teaching methods must be developed according to the needs of the current era. Rapid changes mean that educators need time to adapt. Currently, there are educators who do not understand technology so they still use old teaching methods which cause the learning to be less effective.

Considering the era of Society 5.0, where digital transformation and artificial intelligence are the main drivers of social change, education is one area that requires rapid adaptation. In this context, factual issues in the 5.0 era, especially in educational teaching, are very complex. Teachers face the challenge of integrating digital technology and AI into their teaching methods, requiring ongoing training and intensive professional development. The curriculum must also evolve to include digital literacy, programming, and 21st-century skills to prepare students for a technology-dominated world. Additionally, there are issues of access and equity, where not all students have the same access to necessary technology, creating gaps in digital learning. Assessment methods must also be adjusted to reflect students' progress accurately. The article titled "The Effectiveness of Teacher Learning to Improve Teaching Capability in the 5.0 Era: An Epistemological Perspective" discusses the importance of teacher learning and professional development from an epistemological perspective, i.e., how new knowledge and skills can be acquired, understood, and applied to improve teaching capabilities in this digital era. This is also the main guide in building a society based on knowledge and technology. This rapid development not only affects the way we work and live, but also revolutionizes the education system. In this context, teachers have an important role in disseminating knowledge in the classroom. Teacher's role is becoming increasingly complex, requiring adaptation skills to technological innovation to maintain the relevance of the curriculum to the changing needs of society. Improving teacher effectiveness is needed not only in the context of traditional education, but also as a response to rapid technological developments and social change.

Since the teacher's role as a learning facilitator is important, this cannot be ignored. Teachers are not only transmitters of information, but also shape students' mind-set and skills. Therefore, improving the effectiveness of teacher learning is crucial, considering the demands of the era which require mastery of information technology and advanced concepts. So, this article will discuss in depth how understanding epistemology can be the key to guiding the strategies for improving teacher learning effectiveness in the midst of the industrial revolution 5.0.

In achieving improved teacher effectiveness, the application of the philosophical school of science of epistemology becomes relevant and the epistemological perspective becomes a critical basis. Epistemology discusses the nature, the origins and the limits of knowledge. How teachers understand sources of knowledge, organize information, and apply learning methods has a significant impact on the quality of education. According to Dagobert D. Runes (1983) in Dedi Yusuf (2023), Epistemology is a branch of philosophy that studies the sources of knowledge. Social structure, knowledge and methods, and also validation of knowledge. Meanwhile, according to Jujun S. Sumantri (2010), epistemology is a way of human thinking in determining and gaining knowledge by using various abilities embedded in a person such as the ability of reason, senses and intuition. Another opinion from Mujamil Qomar (2007), Epistemology is a part of philosophy that studies human knowledge in depth. Epistemology needs to be studied because this is a knowledge that has strategic importance for human life. Strategy is the management of existing power and strength so that goals can be achieved. Knowledge essentially represents authority or power, and from the perspective of cultural studies, epistemology is being the main explanation for why knowledge is one of

DOI: http://dx.doi.org/10.30998/scope.v9i2.21097

the fundamental elements in culture. In fact, culture has other important elements, such as social systems, religious systems, language systems, art systems, economic systems, technological systems, symbol systems and their meanings.

Viewed from an educational perspective, understanding this deep study related to how teachers acquire, organize and transfer knowledge is an important key. Therefore, the application of the philosophical of science epistemology can provide a strong foundation for teachers in carrying out their duties. According to A. C. Graham (1992) in his work entitled "The Disputers of the Tao: Philosophical Argument in Ancient China," the philosophy of science epistemology helps determine valid methods for obtaining knowledge. Furthermore, according to Junaidin Zakariya (2023: 7), Epistemology is a branch of philosophy that investigates the origins, methods and validity of science. Thus, teachers can integrate these methods into their teaching strategies, improving the quality of student learning.

An interdisciplinary approach between philosophy of science, epistemology and information technology can be a strong foundation for improving teacher effectiveness in the Society 5.0 era. Technology is not just a tool, but also a source of knowledge that can be combined and used wisely. For example, according to Johnson and Smith's (2008) book, Teaching Students to Learn: The Common Core in Action, teachers can use technology to encourage deeper, critical and meaningful learning.

Thus, this article tries to explore the potential for applying the philosophical school of science epistemology in the context of educational science in the Society 5.0 era. By embracing the basic principles of epistemology, it is hoped that teachers can optimize their role as knowledge facilitators so that they are able to guide students and can manage their classes with effective methods in facing challenges and opportunities in this era full of innovation, the era of society 5.0.

METHOD

This research method is qualitative research with a literature study approach which is usually called a literature review. In this research, the literature study method was chosen because the data used is secondary data originating from books and accredited scientific research articles. This method involves compiling and analyzing data from previous studies to obtain relevant conclusions or results (Sulistyorini & Anistyasari, 2020). This article adopts an epistemological perspective to explore how knowledge and understanding of teacher learning is constructed and applied in the context of Society 5.0. By using literature studies, authors can explore various epistemological views from various sources, compare and integrate these views in analysis. In addition, the literature study method allows the author to draw conclusions based on evidence from various previous studies. By collecting and analyzing information from these sources, the authors can provide more informed and evidence-based recommendations on how to improve teacher learning in the context of Society 5.0 (Afiyanti, 2005).

According to Creswell (2014), a literature study is a written summary of articles from journals, documents and books that can explain information in the past or what is happening now, which in turn will become a reading material for everyone related to the topic. . Meanwhile, literature review is library-based writing (library research). Library research is a researcher's effort to collect useful information about a topic or problem. Books, scientific works, articles, theses, dissertations, encyclopedias, and other printed and electronic sources provide this knowledge (Azizah & Purwoko, 2019). An in-depth literature study was carried out by the author to collect all materials related to the problem being discussed, the author then understood the material well, and finally the author produced several related findings, just like a scientific essay containing the opinions of experts or experts on the problem are not (Zed, 2008). Descriptive writing is used extensively throughout this literature review, and "descriptive" in KBBI means "presentation and description in clear and detailed words". According to Zed (2004) in literature research which is carried out not only as a first step but also as an At the same time, it can be used as a written source that will be utilized and obtain the information needed.So this library research is a method which is assisted by collecting information from various references, including books, articles, magazines, research projects and online media.

The approach or method used in this scientific article is a literature study. Literature studies can be done by collecting various references or literature from several sources such as digital books, journals and other internet-based information that is relevant to the discussion of epistemology, especially in increasing teacher effectiveness in managing classes in the era of society 5.0. The procedure used in this literature study is as follows (Khultau, 2002):

1. Selection of topics
2. Information exploration
3. Determining the focus of the research
4. Collecting data sources
5. Preparing data presentation
6. Preparation of reports

The data analysis technique used in writing this scientific article is a content analysis method that can be used to draw up valid inferences. The analysis will conduct selection, comparison, combination and sorting of the contents of the studies. Next, the data obtained is analyzed and concluded to obtain conclusions regarding the literature study.

RESULTS AND DISCUSSION

This literature study aims to identify efforts to improve teachers' teaching abilities in the Society 5.0 era by paying attention to the epistemological perspective that guides teaching practice. Epistemology is a branch of philosophy that discusses the nature of human knowledge. The main issues that develop in epistemology include sources of knowledge, the nature of human knowledge, whether that knowledge is true (valid) or not, how human knowledge is obtained, in what ways and what conditions must be met, up to the problem of the relationship between methodology and the objects of science (Mujahidin 2013). Improving teacher effectiveness in the Society 5.0 era must be pursued based on aspects of epistemology because epistemology provides a deep philosophical foundation for understanding the sources, structures and boundaries of knowledge so that it can provide a well conceptual framework for teaching and learning. By integrating epistemological concepts in teaching, it is hoped that teachers can guide students to build a deeper and more relevant understanding.

There are several aspects of epistemology that encompass various views and perspectives on how knowledge is acquired, managed, and organized. The following are several aspects of epistemology and their explanations:

1. Empiricism:

Empiricism prioritizes experience as the main source of knowledge. According to this perspective, knowledge is obtained through observation and sensory experience. John Locke, an empiricist philosopher, stated that the human mind was initially like a "blank sheet of paper" (tabula rasa) and knowledge developed through sensory experience (Sativa, 2011). So, empiricism is defined as a way of finding knowledge based on observation and experimentation (Nasoetion, 1988). A statement is considered true if the content has an empirical manifestation, a real manifestation in experience. Or in other words, sensory experience is considered to be the main source of knowledge or truth.

2. Rationalism:

Rationalism emphasizes the role of reason and logical deduction in acquiring knowledge. The belief that some knowledge can be acquired without relying on direct empirical experience. This is in line with the statement of René Descartes, a rationalist philosopher who said "Cogito, ergo sum" (I think, therefore I am) to show the existence of the self which can be understood through reason (Teng, 2016). So, the strategy for developing science according to rationalism is to explore ideas using human intellectual abilities.

3. Constructivism:

Constructivism emphasizes that knowledge is built by individuals through active interaction with information and the environment. Lev Vygotsky, a social constructivist psychologist, suggested that learning occurs through social interaction, and students can build their knowledge through collaboration (Hein, 1991; Boghossian, 2006). Based on this, it can be concluded that students acquire and form knowledge naturally through their own experiences.

4. Realism:

Realism states that objects and phenomena in the real world have an independent existence and exist outside of human thinking. Plato was a realist philosopher who believed in the existence of abstract ideas that have an existence in the world of forms or the world of ideas. In other words, realism believes that the external world or observed objects have a real existence and do not depend on human consciousness or thinking (Budiarti et al, 2022).

5. Idealism:

In philosophical studies, idealism is a doctrine that teaches that the nature of the physical world can only be understood in its dependence on the soul (mind) and spirit (ruh) (Tafsir, 2004). George Berkeley, an idealist philosopher, stated "Esse est percipi" (To be is to be perceived), highlighting the dependence of existence on perception. So it can be understood that Idealism emphasizes the mind as basic or comes first to matter and even assumes that the mind is something real, while matter is the result of the mind (Rusdi, 2013).

6. Pragmatism:

Pragmatism emphasizes that the truth value of an idea is measured by its usefulness and its consequences in life practice. William James, a pragmatic philosopher, said that truth is "what works" or "what produces positive results in practical experience." This school is willing to accept anything, as long as it brings practical consequences. Personal experience, mystical truths are all acceptable as long as they have useful practical consequences. Thus, the benchmark for pragmatism is the practical benefits of life (Meiyani, 2913).

As previously explained, improving teacher effectiveness in the Society 5.0 era must be pursued based on aspects of epistemology because epistemology provides a deep philosophical foundation for understanding the sources,

DOI: http://dx.doi.org/10.30998/scope.v9i2.21097

structures and limits of knowledge. By integrating epistemological concepts in teaching, teachers can guide students to build a deeper and more relevant understanding of technological developments.

More than understanding aspects of epistemology, teachers also need to understand the concept of learning in the era of society 5.0 which focuses on innovation skills or abilities and the use of technology. The Society 5.0 era emphasizes the development of 21st century skills, such as critical thinking, communication, collaboration, creativity and character (Sulastri Harun, 2021). Meanwhile, Trilling and Charles Fadel (2009) argue that 21st century skills include three types, (1) life and career skills, (2) learning and innovation skills, and (3) information media and technology skills. Therefore, the solution in facing the era of society 5.0 in education is the need for a teacher who can form a creative, innovative and competitive generation. This can be achieved by optimizing the use of technology as a tool for educators which is expected to be able to produce a generation that can follow or change the times to become better and ready to face the challenges of this era (Arjunaita, 2020).
The following are several strategies for applying aspects of epistemology in order to improve teachers' teaching abilities in the Society 5.0 era.

1. Using a Student-Centered Learning Model

Student-based approach according to Azizah et al. in (Supriyadi, 2011) is about how to help students find their own learning style, understand motivation and master the learning skills that are most suitable for them. Kemendikbud as quoted (Sugandi, 2020) said that Student Centered Learning is a learning method that empowers students to be the center of attention during the learning process. Meanwhile, according to Oemar Hamalik in (Nurhayanti, 2020), the student-centered learning approach is a teaching and learning process based on the needs and interests of children. Meanwhile, according to Harsono in (Ningsih, 2020), Student Centered Learning is an approach to learning that facilitates students to be involved in the Experiential Learning process (learning experience). From the opinions above, it can be concluded that student-centered learning is a learning approach that places students as the main subject in the learning process by understanding students' needs, interests and learning styles as the main focus and emphasizing active involvement of students, collaboration between students, as well as the use of various resources and technology aimed at improving students' learning motivation, understanding of concepts and problem solving abilities. In this learning model the teacher must be able to carry out his role well, which is not only as a teacher, but also as a motivator, facilitator and innovator (Ramadhani in Kuswandi, 2019). This is in line with Hapsah (2018) who said that in the 21st century teachers are no longer a source of learning who must transfer all knowledge to students, but here teachers change towards perfection, they are becoming facilitators who provide material, and with the development of science and technology that is increasingly advanced, teachers must innovate and be creative in learning activities by using existing technology to facilitate learning. Student-Centered based learning is in accordance with the aspects contained in the epistemology of the philosophy of science because it is based on the philosophy of empiricism and constructivism where these two aspects emphasize the active role of individuals in utilizing direct experience, observation and experimentation as the main methods for acquiring knowledge (Hein, 1991; Boghossian, 2006; Puspitasari, 2012).

There are several learning models that were born from this approach, including:

a. Inquiry Learning Model.

Inquiry comes from the English language which means question, examination, or investigation. Inquiry is broadly defined as a general process carried out by humans to search for or understand information (Solichin, 2017). Inquiry learning is a series of learning activities that emphasize the process of thinking logically, critically and analytically to search for and find answers to a problem in question (Shoimin, 2014). This is in line with Azizah, Nur Hani (2016) who concluded that the inquiry learning model can improve students' critical thinking abilities. The improvement in students' critical thinking skills with inquiry learning is significantly better than students who use conventional learning. (Azizah, Nur Hani: 2016). This is in accordance with the epistemological view that critical thinking skills are a tool to improve understanding and determine truth or untruth based on the views of scientists or academics (Unwakoly, 2022). The inquiry approach places students as the main subject in learning, allowing them to develop knowledge through exploration, observation and experimentation. Thus, the inquiry approach reflects the principles of empiricism which emphasizes experience as a source of knowledge (Sativa, 2011; Puspitasari, 2012).

Meanwhile, according to Anam (2017), inquiry emphasizes the activities of students as learning subjects and teachers as facilitators, maximally seeking and finding the essence of the lesson material presented. Inquiry will present learning materials not in 'finished form' with the aim of stimulating students to ask questions or express doubts about the data presented by the teacher (Anam, 2017). According to Husnah (2022), this inquiry learning model is in line with the goals of Era Society 5.0 because this learning model is able to improve students' collaboration skills

because collaboration skills are very useful in improving cooperation in groups with different backgrounds and can be used to face competition in the era of globalization in the future (Sarifah & Nurita, 2023).

b. Project Based Learning Model

There are several definitions of the project-based learning (PBL) model. Joel L Klein et. Al in Widyantini (2014) explains that "Project-based learning is a learning strategy that empowers students to gain new knowledge and understanding based on their experiences through various presentations". In addition, according to Thomas, et al (1999) in Wati (2013), it is stated that project-based learning is a learning model that provides teachers with the opportunity to manage learning in the classroom by involving project work. Then according to the Buck Institute for Education (M. Hosnan, 2014), PBL is a systematic learning method that involves students in learning knowledge and skills through a process of investigating real problems and creating various carefully designed works. Meanwhile, according to Ridwan Abdullah Sani (2014), it is teaching and learning that involves students working on a project that is useful for solving community or environmental problems. From these opinions, it can be concluded that project-based learning is a learning approach where students are involved in in-depth, careful and planned investigations of a topic or issue through planning, design and implementation of projects. The projects may include a variety of activities, such as research, experimentation, problem solving, or product creation. The main aim is to enable students to gain knowledge through contextual and meaningful practical experiences (Rohman et al., 2024)

This project-based learning not only examines the relationship between theoretical information and practice, but also motivates students to reflect on what they learn in learning in a real project. Students can work in real life, as if they were in the real world and can produce realistic products (Purworini, 2009). Moreover, PBL has several advantages. According to Trianto (2011) the project-based learning model has enormous potential to create a more interesting and useful learning experience for students. Meanwhile, according to Santyasa (2006), in project-based learning, students are encouraged to be more active in learning. Project-based learning also has great potential to provide a more interesting and meaningful learning experience for students (M. Hosnan, 2014).

The project-based learning (PBL) approach has a close relationship with the pragmatism aspect of the epistemological view. Pragmatism emphasizes the importance of direct and practical experience in learning, which is in accordance with the project-based approach which emphasizes the application of knowledge in real contexts (Wasitohadi, 2012; Wiranata et al, 2021). The pragmatism view also emphasizes the importance of results, consequences, and new facts, which is in line with a project-based approach that requires students to produce real products as a result of learning. Thus, the project-based learning approach can be seen as an implementation of the pragmatism view in educational practice, which emphasizes direct experience, concrete results, and the application of knowledge in real contexts (Maslakhah, 2019).

The application of the project-based learning model has been proven to improve student creativity. Based on research conducted, several findings show that the project-based learning model can significantly improve student creativity. For example, a study conducted by Ni Wayan Rati et al (2017) and Suryani Jati Rahayu et al (2019) has proven that the application of the PBL model can improve student creativity, and project-based learning is a learning model that makes students active and innovative in completing a project within a certain period of time. Moreover, a study conducted by Zaharah and Mangudor Silitonga (2023) proved that the learning process carried out by applying the PBL learning model can make students active, improve students' ability to transfer knowledge, think critically and solve problems (problem solving) and improve students' creativity and achievement. This shows that the project-based learning (PBL) model allows students to develop critical thinking, collaboration, communication and creativity skills, which are in line with the demands of student abilities in the Society 5.0 era.

2. Integrating Technology in Learning

The application of learning technology in the Society 5.0 era has many interests that are relevant to the development of technology and artificial intelligence. The Society 5.0 era emphasizes the use of high technology such as artificial intelligence (AI), robotics, internet, and blockchain to accelerate social and technological development (Harun, 2021). In this context, the application of learning technology is important because learning technology can improve the quality of student learning by utilizing various types of technology such as mobile phones, laptops, artificial intelligence and computerization (Harun, 2021). Moreover, the application of learning technology helps prepare students to face world changes, especially in education, with a focus on developing digital skills, communication skills and critical thinking skills (Subandowo, 2022). Learning technology can also

DOI: http://dx.doi.org/10.30998/scope.v9i2.21097

facilitate students to improve creativity, innovation and critical thinking skills, in line with the demands of abilities in the Society 5.0 era (Subandowo, 2022).

The application of technology in learning apparently supports the student-centered learning model. Research conducted by Abdulmajid and Setiadi (2015) on the use of social web environments shows that technology can be used to improve student skills and create a student-oriented learning environment. This is because technology allows fast and easy access to various sources of information. Students can access learning materials, reading materials, videos, and other educational resources online. This supports independent learning and allows students to explore topics more widely (Hattie & Yates, 2014). In addition, technology can support adaptive learning, adjusting learning materials according to students' level of understanding and individual needs (VanLehn, 2011).

The application of technology in learning is closely related to the epistemological view because technology facilitates the process of knowledge construction, wider access to information, and the understanding that knowledge is dynamic and can continue to develop. Constructivism, which is one aspect of epistemology, emphasizes that knowledge is built through active interaction with information. Technology enables the implementation of a student-based learning model that emphasizes the active role of students in building knowledge. For example, through online projects, adaptive learning platforms, and digital collaboration tools (Vygotsky, 1978). Therefore, teachers must receive adequate training and support to master technology and use it in learning (Gusmaneli, 2012). Moreover, teachers must also continue to follow technological developments and update their knowledge and skills regularly. Thus, teachers can utilize technology effectively to improve the quality of learning and prepare students to face the demands of the Society 5.0 era (Zulhafizh, 2022).

However, the transition to the Society 5.0 era has presented numerous challenges for teachers. One of the primary issues is the rapid technological advancements that have transformed the learning landscape. Teachers are required to adapt their teaching methodologies to incorporate digital tools and platforms, which can be a daunting task, especially for those who are less technologically inclined (Tondeur et al., 2017; Harahap & Kembaren, 2023). Additionally, the increasing diversity of learners in the classroom, with varying backgrounds, learning styles, and needs, has necessitated a more individualized approach to teaching (Schleicher, 2018). Another significant challenge is the need to foster critical thinking, problem-solving, and collaboration skills in students, which are essential for success in the Society 5.0 era (Kereluik et al., 2013). Traditional teaching methods that focus on rote learning and memorization may no longer be sufficient, and teachers must develop new strategies to engage students and promote these higher-order thinking skills. Furthermore, the rapid pace of change in the Society 5.0 era requires teachers to continuously update their knowledge and skills to remain relevant and effective. This can be a significant burden, especially for those who are already overburdened with administrative tasks and other responsibilities (Darling-Hammond et al., 2017).

To address these challenges, it is essential for teachers to engage in continuous learning and professional development. This can take various forms, such as participation in workshops, online courses, and collaborative learning communities (Timperley, 2011). By continuously updating their knowledge and skills, teachers can better adapt to the changing needs of their students and the demands of the Society 5.0 era. Additionally, schools and educational institutions should provide comprehensive support and resources to help teachers navigate the transition to the Society 5.0 era. This may include the provision of technology-based tools and training, as well as opportunities for peer-to-peer learning and collaboration (Tondeur et al., 2017). By fostering a culture of continuous learning and innovation, schools can empower teachers to become more effective and adaptable in their teaching practices. Another important solution is the integration of interdisciplinary and project-based learning approaches in the classroom (Setyowati, 2023). These methods can help students develop critical thinking, problem-solving, and collaboration skills, which are essential for success in the Society 5.0 era (Kereluik et al., 2013). By shifting the focus from rote learning to more engaging and meaningful learning experiences, teachers can better prepare their students for the challenges of the future.

Therefore, in the Society 5.0 era, the role of teachers is more crucial than ever. By engaging in continuous learning and professional development, and by embracing innovative teaching approaches, teachers can overcome the challenges posed by technological advancements, diverse learner needs, and the rapidly changing demands of the modern workplace. Through a collaborative and epistemological approach, teachers can enhance their teaching capabilities and ensure that their students are well-equipped to thrive in the Society 5.0 era.

CONCLUSION

Education faced in the Society 5.0 era emphasizes the integration of technology and artificial intelligence. From an epistemological point of view, the article highlights the transformation of the concepts of knowledge and learning. Teachers are expected to not only be transmitters of

information, but also facilitators of learning who encourage students to become builders of their own knowledge. This change is in line with the epistemological views of constructivism and empiricism, where knowledge is seen as the result of active construction by individuals. Teachers need to develop the ability to create learning environments that allow students to participate in deep and meaningful learning experiences. The concepts of personalized learning, creativity, and the use of technology are the main topics of discussion in improving teachers' abilities to facilitate learning that meets the demands of Society 5.0.

In order to improve teacher abilities, there needs to be continuous and sustainable professional development, with a focus on mastering technology and learning strategies that are in accordance with the new learning paradigm. Teachers are also expected to be active learners, engaging in ongoing reflection on their teaching practice.

Furthermore, improving teacher's abilities in the Society 5.0 era requires a shift in the learning paradigm that is supported by the epistemological views of constructivism and empiricism, where teachers act as facilitators who encourage students to be active in constructing their own knowledge. It is hoped that the efforts described above will encourage the need to adapt to changes in the learning environment which is increasingly integrated with technology and illustrate the importance of the role of teachers as agents of learning that continues to develop.

ACKNOWLEDGMENT

I would like to extend my heartfelt gratitude to Dr. Henny Suharyati, M.Si, for her exceptional guidance and mentorship throughout the development of this article. Her insightful direction and unwavering support have been crucial in shaping the research and ensuring its academic rigor. Thank you, Dr. Henny Suharyati, M.Si. for your invaluable contributions and dedication to advancing the field of education. Your expertise has been a constant source of inspiration and motivation.

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