



Pre-Service English Teachers' Lived Experience in Using AI in Teaching Preparation

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Abstract: Pre-service English teachers are expected to integrate technologies to teach in this digital era. Furthermore, AI is rapidly growing and offers teachers to be supported. This phenomenological study explicated pre-service English teachers' lived experiences in using AIs to support their teaching preparation. In previous studies, less was known about how newcomer educators integrated AI into their pedagogical development. Through in-depth interviews, this study addressed two research questions; What are the pre-service English teachers' lived experiences in using AI in teaching preparation? How does the AI help the teacher prepare for their teaching? This study showcased five themes emerging: 1) exploration of AI's pedagogical potential; 2) emerging pedagogical beliefs and shifting attitudes; 3) intentional integration and innovative lesson design; 4) ethical reflections and responsible AI use; and 5) shifting self-efficacy and confidence. This study explicated how AI utilization experiences mold participants' pedagogical beliefs, implementation, and perception of technology integration. These findings will help education programs in preparing candidates and require the TPACK.

Abstrak: PPG Pendidikan Bahasa Inggris diharapkan dapat mengintegrasikan teknologi untuk mengajar di era digital ini. Di sisi lain, AI berkembang secara pesat dan menawarkan dukungan kepada guru. Penelitian ini menggunakan pendekatan *transcendental phenomenology* untuk memahami kesadaran akan pengalaman dalam kehidupan partisipan. Penelitian bertujuan untuk menjelaskan pengalaman nyata dari 6 partisipan yang merupakan mahasiswa PPG Pendidikan Bahasa Inggris dalam menggunakan AI untuk mendukung persiapan mengajar mereka dengan wawancara mendalam sebagai metode pengumpulan data. Pada penelitian terdahulu hanya sedikit diketahui mengenai guru baru menggunakan AI dalam pengembangan pedagogi. Penelitian ini menjawab dua pertanyaan; apa saja pengalaman nyata PPG Pendidikan Bahasa Inggris dalam menggunakan AI mendukung persiapan mengajar mereka? Dan Bagaimana AI membantu dalam persiapan mengajar? Pada penelitian ini terdapat 5 tema besar yang muncul: 1) eksplorasi potensi pedagogis AI; 2) keyakinan pedagogis yang muncul dan perubahan sikap; 3) integrasi yang disengaja dan desain pelajaran yang inovatif; 4) refleksi etis dan penggunaan AI yang bertanggung jawab; dan 5) peningkatan efikasi diri dan kepercayaan diri. Studi ini menjelaskan bagaimana pengalaman penggunaan AI membentuk keyakinan pedagogis, implementasi, dan persepsi peserta terhadap integrasi teknologi. Temuan ini dapat memperkaya pemahaman mengenai pemanfaatan AI oleh calon guru untuk pengembangan pedagogis dan persiapan mengajar.

A. Introduction

The Indonesian Ministry of Education and Culture regulated pre-service teachers to take certification programs to develop their professionalism and ability in teaching (Arifa & Prayitno, 2019). According to the regulation of The Minister of Education and Culture of The Republic of Indonesia No.87 of 2013 concerning pre-service teacher professional education programs, a professional education program is a higher education to prepare undergraduates with qualification requirements for the teaching profession. The pre-service teacher education program organized preparation through training education bachelor's degree graduates in mastering teaching competencies aligned with national education standards. A pre-service teacher program was established to standardize and improve the quality of teachers. By participating in the Pre-service teacher program and mastering the competencies, candidates can obtain a professional educator certificate that is qualified and fully prepared to teach in primary and secondary schools. The National education standards are the minimum criteria of the education system in Indonesia and are used as a reference to develop a curriculum and the provision of education to realize the objectives of the national (Permendikbud, 2013). The national education is refined in a planned, directed, and sustainable with the changing demands of local, national, and global life.

In line with this program, Kemdikbud tries to encourage teachers to be innovative, creative, and able to integrate technology into teaching (Kemdikbud, 2023). It aligns with 21st-century life skills which expect teachers to be creative, capable of teaching, educating, inspiring, and serving as role models (Widiasanti et al., 2023). Teachers who have good knowledge of pedagogical, technology, and content can implement them in classroom activities, and have enthusiasm towards learning are regarded as competent teachers (Baber, 2022). TPACK (Technology, Pedagogy, and Content Knowledge) is an important framework that needs to be owned by teachers to build effective learning activities (Hidayati et al., 2022). TPACK framework provides an understanding of the complex relationship between pedagogy, technology, and content that are effective for teaching with the current technology. The ownership and development of TPACK is a priority in the educational field for pre-service teachers (Jin & Schmidt-Crawford, 2022) Thus to help the development of TPACK, pre-service teachers recommend integrating AI tools into education (Celik, 2023).

The more advanced the era, the more educators quest for effective and reachable technology to be used in their daily lives (Cardona et al., 2023). Artificial Intelligence (AI) has been around for the last decade and growing rapidly in the industry (Chu et al., 2022; Niemi, 2021; Pedró, 2019). Moreover, the COVID-19 Pandemic has resulted in AI being closer to reality and becoming real (Lim et al., 2022; Ratten & Jones, 2023). AI refers to a machine that can perform intelligent tasks that have several types of technologies such as computer vision, speech recognition, machine learning, analyzing big data, and generating human language (Chiu et al., 2023; Pedró, 2019). It has grown tremendously and impacted on how people socialize, live, learn, and work (Chiu, 2021; Chiu et al., 2023). It is one of the advanced inventions and has been considered in this modern era (Alqahtani et al., 2023).

There are many massive changes in our lives because of technological development that intensified our living, working, and learning (Huang et al., 2023; Kohnke et al., 2023).

AI usage can be considered a new concept in the recent era where a tool can provide teachers with smart services to facilitate their activity (Adams et al., 2023; Hrastinski et al., 2019). AI in Education (AIEd) refers to the utilization of various AI technologies such as chatbots, tutoring systems, and automated grading of digital assignments which enhance the educational process (Chiu et al., 2023). AIEd has great potential to benefit teaching-learning activities by helping teachers develop new teaching methods, curriculum design, and activities. In education, there are a lot of AI tools that can be used to support teaching-learning activities (e.g. ChatGPT, Quilbott, Grammarly, etc) (Alqahtani et al., 2023). The utilization of AI in higher education proved as a helpful technology in teaching learning and enabled pre-service teachers to improve their teaching strategies (Chiu et al., 2023; Chu et al., 2022; Pedró, 2019). AI technology adoption in education also presents challenges for the user such as output biases, privacy concerns, ethical utilization, and AI dependency on decision-making (Alqahtani et al., 2023; Sarker, 2022). To overcome those challenges, guidelines for ethical and responsible AI utilization need to be created. This will help ensure that AI is utilized correctly and helps improve education (Alqahtani et al., 2023). Leaving the old culture where teachers copy-paste the lesson plan (Sihotang et al., 2022) in the process of preparing the teaching, AI could help pre-service English teachers analyze the students' needs, develop additional support, and adjust teaching methods to be appropriate lesson plans (Alqahtani et al., 2023; Chiu et al., 2023). The experiences gained by using AI as a tool in their teaching preparation for pre-service teachers can help them develop their understanding of how these newest technologies can support their TPACK framework.

As educational institutions increasingly adopt AI, the perspective and experiences of the pre-service teachers need to be understood as they will integrate the AI tools in the English language is crucial, yet currently lacking. This study seeks to shed light on the real experience of pre-service English teachers in utilizing AI to develop lessons and materials. The aim is to provide new insights to teacher training programs in integrating technological knowledge. In addition, it empowers English educators to properly embed AI in their instructional tools, thus matching educational evolution with an increasingly digital world.

More specifically, the study explores AI's impacts on lesson planning processes for pre-service English teachers by examining the types of AI tools accessed, implementation challenges and benefits, resultant perspective shifts, and changes in confidence when leveraging AI. By examining these lived experiences, the study ultimately aspires to supply key implications that could enhance pre-service training practices. Much of the existing research has focused on AI utilization in general contexts, but limited research explores the lived experience of the pre-service English teacher in preparing their teaching with AI support. As the AI tools integration into classrooms advances, it is important to gain an understanding of how this technology impacts the perspective and pre-service English teachers' work. This study aims to contribute new insight regarding the pre-service English teachers' interaction and views on AI technologies, while also apprehending the AI

technology integration of AI into future English teaching-learning. To guide and provide contextualized qualitative findings, two research questions emerged; What are the lived experiences of the pre-service English teacher in using AI to prepare the teaching? How does the AI help the teacher prepare for their teaching?

B. Method

To examine the lived experience of pre-service English teachers in using AI to prepare their teaching phenomenological qualitative methodology was employed for this study. According to Creswell (2017), the phenomenological approach allows researchers to examine the phenomenon objectively to understand the perspectives and experiences of the participants more deeply. In other words, phenomenology is an approach used by researchers to describe the quintessence of a phenomenon by discovering the people who have the experiences (Neubauer et al., 2019). The data was collected through in-depth interviews with six pre-service English teachers, participants were chosen through purposive sampling hinge on their lived experience (Andrade, 2021). Lived experience is a beginning stage and an ending stage in phenomenological research. The use of phenomenology in a study is to convert the lived experience of participants into the written interpretation of its essence (Van Manen, 1997). To truly understand the phenomenon the study should be perceived by the consciousness of the experience in individuals' lives (Moustakas, 1994). Phenomenology sees consciousness as the foundation for all experience because it is always intentionally focused on objects outside itself, allowing it to describe and bring meaning to what we experience (Moustakas, 1994). Lived experience should understand the phenomenon as it is, where there are dimensions that discover the phenomenon's nature (Neubauer et al., 2019), Transcendental phenomenology research requires the researchers to set aside personal assumptions, beliefs, and biases to focus merely on capturing the participants' lived experience of the phenomenon. Researchers must strive for transcendental subjectivity by constantly reflecting on how their views could influence the study so that researchers need to neutralize any preconceptions to avoid the inquiry of the object (Moustakas, 1994).

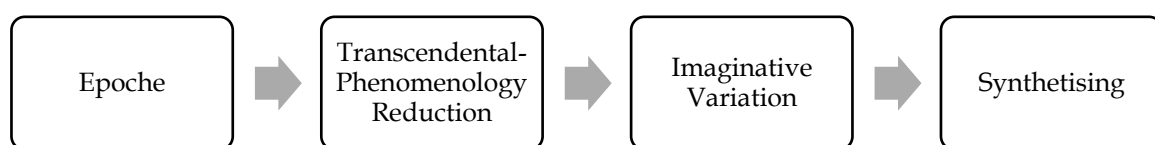


Figure 1. Research Flowchart

At the heart of transcendental phenomenology, there is a systematic methodology that enables the discovery of phenomena that present consciousness: Epoche, Reduction, and Imaginative Variation (Moustakas, 1994). According to Moustakas, Epoche is a stage where the researchers set aside the judgments, beliefs, and assumptions or people's opinions about things. In this stage, the researchers will place Bracketing where the prior knowledge

and assumption are placed in a “bracket”. The researchers have to set aside preconceived ideas, biases, and expectations. This allows the researchers to see the phenomena, events, and people as it is the first time without the influence of past experiences or opinions. Epoche is beneficial for research to help find the true essence and meaning of things without biases.

The next stage is transcendental phenomenology Reduction. There is the process of horizontalizing where participants’ statements are considered equally valuable. Next, the statements in which irrelevant and repeated are removed. Then, the remaining statements are clustered into common themes and combined the themes into a textural description that consists of the experience’s essence. This step will take the phenomenon down to its true essence and dismiss the outside perspective (Moustakas, 1994).

The Imaginative Variation comes after the Transcendental-Phenomenology Reduction (Moustakas, 1994). It aims to embrace structural differentiation by imagining changes to the phenomenon by altering the perspective that could lead to every possibility. After understanding the experience essence through reduction, the researchers creatively think of the ways of phenomenon is altered by adding or changing parts. By exploring the possibility, the researchers can discover what is the thing that stays the same to make the experience occur. Through Imaginative Variation, researchers could understand that the essence and meanings of experience are connected intimately (Moustakas, 1994).

After obtaining textural descriptions and structural descriptions through the steps above, the researchers combine these descriptions into synthesis. By thoughtfully synthesizing the textual and structural components, the researchers can construct a comprehensive illustration of the essence and meaning of lived experiences that have been described by the participants (Moustakas, 1994).

To select appropriate participants this study used criterion sampling. The participants were chosen because they met the criteria of being pre-service English teachers who had experience in using AI and using it to prepare their teaching, to gain a deep understanding of their lived experiences with AI, the researchers conducted face-to-face in-depth interviews. It will help the researchers to have a conversation that stimulates participants to share their perspectives of experience (Rutledge & Hogg, 2020). In this study, the researchers used open-ended questions to ask questions and follow up on the participants’ answers to gain as much information as possible and dig up the ideas raised during the interview (Elhami & Khoshnevisan, 2022).

After gaining information on pre-service English teachers’ experience in using AI to prepare their teaching, the data analysis involved several steps. First, the recorded interviews were listened to carefully and transcribed in textual form. To validate the transcript, participants were invited to verify and give feedback if needed by member checking. They were next, assigning codes of the important ideas to organize the transcript. As the codes accrue, related codes were grouped into themes to generate broader meanings and modified if necessary. An expert professor was also invited to evaluate as avoidance of

data misinterpretation. Finally, after refining the themes, each of them all reported in clear writing to be able to understand.

C. Result and Discussion

Result

This qualitative study on six pre-service English teachers brought the data and findings that will be discussed in this section. The data was obtained through conducting in-depth face-to-face interviews. After examining the participants' responses five themes emerged: 1) Exploration of AI's pedagogical potential; 2) Emerging pedagogical beliefs and shifting attitudes; 3) Intentional integration and innovative lesson design; 4) Ethical reflections and responsible AI use; and 5) Shifting self-efficacy and confidence.

Exploration of AI's Pedagogical Potential

Several participants expressed that AI helps them to enhance their pedagogical development. The potential of AI can be seen from the enthusiasm of the pre-service English teachers' responses. It was believed that insights gained from AI helped them to be more prepared for the expected questions that could arise in the class. The references and recommendations they got from AI-enabled them to address the spontaneous questions sparked by students and still ensure the accuracy is factual.

I felt more ready to teach. The new insight that I have read suggested by AI helped me to answer students' questions in the class. (Participant 6)

In addition, AI facilitated them to enrich their vocabulary and refine their grammar. If they found terminology they had never known before, they could easily seek the meaning in the AI after the appeared response.

If there is a word that I don't know, it increases my curiosity. I am moved to look up the meaning in a translation engine or online dictionary. (Participant 3)

Emerging Pedagogical Beliefs and Shifting Attitudes

AI can provide instant access to educational databases on the internet which leads to efficiency of time. The conveniences of AI help pre-service teachers shorten their working time as stated by all participants:

When I used AI, it's really time efficient. If we're googling, we have to click all the pages we want to read but AI simplifies and is time efficient. (Participant 2)

AI helps and shortens time. When we use AI, what we try to find comes out instantly. AI has summarised various answers from other websites instantly. So, it helps and shortens time. (Participant 3)

I don't need to google here and there, but I can immediately find lots of things by using AI. (Participant 5)

I became faster in working. Throughout using AI, I became more time-efficient and also able to work on other tasks. (Participant 6)

Besides that, moving from the traditional methods to AI utilization in their work made pre-service English teachers meet plenty of inspiration sources that can be used in their teaching-learning activities. Most of them expressed how AI helps them to uncover relevant references. They seem obtained new perspectives and innovative-impactful lesson activities.

In AI I found worksheets that are suitable to the K-13 curriculum which is student centered base. (Participant 2)

My preparation became more effective. It makes me broaden my viewpoint. (Participant 4)

By using AI, I can get more references for interesting learning activities. (Participant 5)

I took AI references to make worksheets. We felt like we brought something new for students, especially in material delivery. Even though they are chill, they still understand the games we gave. (Participant 6)

The pre-service teachers found that using AI in their teaching preparation was highly beneficial.

Intentional Integration and Innovative Lesson Design

Pre-service English teachers recognized that AI-generated ideas can be used to develop and prepare their teaching. Some of them reported that the classroom activities became more interesting and gained students' engagement:

My teaching quality became better because I got to know which activities were student-centered and improved my knowledge about teaching activities, teaching methods, and worksheets. AI-generated ideas made the students not just sit alone, but encourage them to collaborate with other friends. (Participant 2)

I found a lot of brainstorming ideas. I learned that if I give brainstorming activities, it should be different between the morning and the noon. I also found a lot of interactive games from AI. (Participant 6)

AI helped me to gain new creativity and knowledge about English teaching methods that are suitable for the current curriculum, Merdeka. (Participant 2)

While pre-service teachers found out that AI-generated ideas helped them to design lesson activities, they also recognized that they did not always meet their expectations. They also recognized the well-prepared knowledge required to ensure the AI utilization ability and meet the principal goals. They suggested that workshops and training are needed to develop AI pedagogical skills.

The answer given was bizarre. It wasn't related to what I asked. (Participant 1)

Not all of the AI's output can be implemented in real life because the answer is too global. Meanwhile, our students are different from what AI suggested. So, what AI suggested can not necessarily be applied or follow the characteristics of my students. (Participant 3)

Maybe because it is technology-based, it is kind of less flexible. It's like any other technology that just does things based on the program or the prompt we put it. (Participant 4)

Furthermore, several participants highlighted the need which the government and policymakers to consider the varied geographical conditions across Indonesia when planning the AI implementation.

In the suburban areas which geographically the students don't know yet or never exploring technology perhaps I will not apply the same thing as students in the city. (Participant 1)

Of course, AI cannot be used every time. If we teach in, for example, remote areas that have not been reached by the internet or there are not too many students who have not used the internet maybe, it is not fit. (Participant 3)

I suggest the integration of AI should be evenly distributed. Not only to be applied for students who live in the city but also able to be applied for students who have less technologically advanced backgrounds. So, there will be no gap and does not increase inequality. (Participant 3)

Ethical Reflections and Responsible AI Use

While AI benefits learning, its impact must be carefully managed. AI technology integration can cause laziness, cultural biases due to the large datasets, and overreliance that requires oversight from educators.

Don't depend on AI or new platforms that are emerging because they have a negative impact which can make us lazy to think. (Participant 1)

Not every answer given by AI can be applied in the real world because AI's answer is too global. Meanwhile, our students are different from what is suggested by AI. So, what is suggested by AI can not be applied or suitable to the students' characteristics. (Participant 3)

The participants in this study seem aware of the limitations and potential threats of AI output dependency. Several participants mentioned specifically the value of using critical thinking during AI utilization as they stated:

I reprocessed and rearranged the output which has to be suited to students' characteristics. (Participant 1)

I got the learning activities from AI. But usually, I modified again and adjusted to the needs of the students. (Participant 2)

As a teacher we should be smart to modify AI utilization in the learning process we can not directly apply 100% of AI's output. We need to cross-check whether the output is valid or not or suitable to be applied in our class or not. (Participant 3)

All pre-service teachers believed that modification and personalization of AI-generated ideas will harmonious more with students and support their educational growth better.

AI is just a reference for me. As a teacher, we should be as smart as we can to modify AI's output to teach and learn. (Participant 2)

AI is just a helper or an advisor. I didn't do 100% copy-paste from AI. So, it is only a reference. (Participant 3)

We just picked the essential thing, then we developed it. For example, if we get a new idea, it becomes an input for us to develop it. (Participant 4)

As sophisticated as machines are, they don't have hearts like humans. There must be a sense that AI doesn't have. (Participant 6)

The pre-service teachers also realized that they needed to develop the HOTS in the class.

The question given should not able to be answered by AI itself. The questions should contain analyzing, creating, analyzing text, analyzing grammar, etc. Some kind of those things which given to students or in other words HOTS. (Participant 2)

However, pre-service teachers' skills to think creatively to apply HOTS have to be considered. (Participant 5)

If for example, we look for references in AI don't copy the AI questions because there must be an answer from it and we have to train students' critical thinking. (Participant 6)

For the participants, adjusting and personalizing the idea given by AI is important to match the characteristics of students and develop their critical thinking skills.

Shifting Self-Efficacy and Confidence

The impact of teachers' self-efficacy can provide meaningful insight to support educators and improve educational outcomes.

The preparation became more effective and AI utilization helped me to broaden my viewpoints. It also helped me to be more prepared because I have several lesson plans. (Participant 3)

I became more prepared and knew what kind of activities I applied in the class. (Participant 4)

Because I already had overviews of the activities, I felt more prepared and prepared to teach in the class. (Participant 5)

When I use AI, I feel more prepared because I get new insights. It made me more confident. If there are students who ask me questions, I can explain or answer according to the references that I got from the AI. (Participant 6)

According to their statements, we can conclude that they were more assured that they could provide good explanations and learning activities because of the AI-generated ideas.

Discussion

AI presents new possibilities in the educational field in terms of enhancing learning and teaching (Celik, 2023). As can be seen, AI can facilitate a student-centered approach through personalized learning activities (Celik, 2023; Luan et al., 2020). By analyzing individual student data, the AI system can develop customized learning paths and assign personalized work. This level of personalization allows the teacher to share the education that has been tailored to the student's specific needs and abilities.

According to Chen et al (2021), the cognitive and emotional needs of students were considered by AI to provide instruction. This allows the pre-service English teachers to customize their lesson plans and teaching strategies to be the most suitable for students. With the access of AI to vast amounts of data and exposure to its various contexts (Luan et al., 2020) AI can also help pre-service teachers to expand their terminology banks that can be used in their teaching-learning activities. On the other hand, the lesson plans need to be based on HOTS. By designing activities that engage students' critical thinking skills, it will create a meaningful experience for students. The HOTS could be implemented by providing critical and analytical test performance. Students are considered to have good HOTS if they master the competencies in learning objectives (Noorhapizah et al., 2022). With careful modification and integration of AI by knowledgeable teachers, students will be able to sharpen their critical thinking skills which is an important skill for navigating their future.

Through participants' experiences in using AI, their pedagogical beliefs and attitudes began to change or develop in certain ways. All of the participants reported that they encountered pedagogical transition as a result of traditional workflow reduction. That helps pre-service teachers take over the traditional all-purpose educational approaches by providing learners with customized-adaptive learning experiences and learning styles, thus increasing their learning efficacy (Chu et al., 2022; Xie et al., 2019).

Transitioning from traditional to AI technology for pre-service teachers made them provided with a wealth of lesson plan references and teaching resources. Most of them expressed how AI helps them to uncover relevant references. The pre-service teachers found that using AI in their teaching preparation was highly beneficial. It allowed them to access the relevant and needed references and material faster compared to the traditional methods. AI utilization made their time more efficient and able to work faster than usual. AI helped them to ease the process of teaching preparation. However, the participants recognized that adopting AI-generated ideas would be useful and engage students in the class.

Rather than replacing teachers, Artificial intelligence has shown its potential to assist teachers in the lesson design process. Instead of creating traditional worksheets only, AI assisted them in constructing interesting classroom activities that engaged students (Ersozlu et al., 2021; Cardona et al., 2023). On the other hand, participants also recognized that it did not always meet their expectations. While AI technology shows much promise in enhancing many aspects of human life and experience, humans still need to maintain what machines can't do and finalize the decision (Ahmad et al., 2023). In addition, they recognized

the narrow capabilities of AI and understood that human decision-making cannot and should not be replaced (Alqahtani et al., 2023; Sarker, 2022).

As stated above, AI in education still has both benefits and drawbacks in the utilisation and it's still growing every day. In the future, AI is expected to be able to be implemented in the school curriculum since it has been deliberated as a helpful tool (Ayanwale et al., 2022). As the pre-service teachers see the promising potential of AI integration that can support their work as educators, they realize that they need to be responsible in the implementation according to the student's needs. Pre-service teachers need to modify the output to meet the student's needs and learning objectives. Those can help pre-service teachers create learning activities that build students' critical thinking. Students have to experience activities that let them increase their knowledge and train their critical thinking skills (Kwangmuang et al., 2021). The pre-service teachers expressed openness to integrating AI but recognized the need for proper training, while willing to formally include AI in curriculums, they acknowledged expert knowledge is required to ensure effective use meets educational goals. They suggested workshops and skill development are needed to cultivate AI pedagogical expertise. Educators need to develop a leadership attitude and ethics positively when using AI technologies to aid their educational work (Ng et al., 2023). Having the right mindset can help ensure AI tools are implemented appropriately to benefit students learning responsibly.

Furthermore, they noted that not all learning institutions, especially those located in remote areas, have sufficient internet access or a reachable budget to keep up with technological advancement. In addition, they shared their worry about slower or unstable network connectivity in urban areas. Those challenges could potentially hinder the opportunities and worsen the inequality of the inability of certain areas to participate. The pre-service English teachers wanted the government to make sure all the schools could adopt AI to support the teaching-learning activities. Yet AI integration in school is needed to follow the advancement of technology development there are still challenges to preparing it. Both educators and government must collaborate to attempt those challenges. The pre-service teachers will require training to develop the skills, learn practices in the utilization of AI, and master the technologies. The government also must facilitate and ensure resources, innovative policies, and solutions. Educators and the government must work together to set up and maintain effective AI integration (Pedró, 2019).

Technology that is called AI has a significant impact in this 4.0 industry era. Nowadays, every human's life aspects and society are intervened by AI. There are a lot of people who rely on AI in their decision-making process in their everyday work. In educational institutions, AI utilization increases every day. Even in many universities, AI has been used in academic and administration activities (Ahmad et al., 2023). In the education field, AI plays a role in answering questions, task automation, and personalization that assist quick and 24-hour access (Karandish, 2021). This leads humans

to laziness which needs to be surmounted by the pre-service teachers. In addition, the data collected by AI is too global and can raise discrimination and biased information towards certain cultures (Weyerer & Langer, 2019).

The essence of intelligence includes the ability to make predictions of the physical world and understand the basic aspects of it. Observing something and then using background knowledge to evaluate the things are true or not (Korteling et al., 2021). All the pre-service teachers knew it was important to develop the ideas they got because AI served as inspiration. They did not fully adopt the recommendations with thoughtful adjustments to meet the goal which addressing engaging lessons for all students. Several participants expressed that AI-generated ideas have no sense as human sense. It is considered that AI's output lacks human touch and sense.

AI can be seen to boost the pre-service English teachers' self-efficacy. Self-efficacy is an important concept of belief in someone's ability to execute their tasks to achieve certain goals. As defined by Bandura (1997), self-efficacy is a belief in someone's ability to successfully carry out their task performance. In the teaching profession, It is an important term for educators in the educational process and has become interesting research conducted by academics. Teacher self-efficacy means how they see their capability to accomplish their important teaching jobs including preparing lessons, classroom management, and engaging students in learning activities. It also allows teachers to assess and measure whether they performed the tasks confidently or not. Research has shown that higher technology self-efficacy leads to and positively influences successful performance (Oran, 2023). The pre-service teachers noted that their interaction with AI technologies as educators enriched their knowledge and built their confidence to believe they were well-equipped to teach effectively in the class. They felt that they gained valuable insights from the AI which helped them to broaden their knowledge to develop interactive and effective teaching-learning activities. No longer limited by traditional methods or materials, they were more confident to engage students better and prepare to solve the problems that may arise.

D. Conclusion

Artificial Intelligence (AI) has shown its existence and growth in the educational field in recent years. AIED potentially assists pre-service English teacher in improving their teaching strategies and proved very helpful in preparing their teaching. The study explored the perspectives and lived experiences of pre-service English teachers utilizing AI to prepare their teaching. The key themes showed benefits like enhanced perspectives, efficiency, resources, and preparation. However, limitations persist including alignment issues and cultural biases. Overall, the research questions were sufficiently addressed that AI serves as an enhancement for humans. The participants provided insightful descriptions of their interactions and engagement with various AI technologies to enhance different aspects of their teaching preparation process. They also discussed which of the AI tools

assisted with tasks ranging from content development, highlighting key benefits, and the limitations. Thus, their voices and experiences were shared, and the participants stated that AI was very useful and helped them to prepare the teaching effectively. A previous study also showed that AI helps pre-service teachers access educational resources and has a positive impact on their performances (Butakor, 2023; Tunjera & Chigona, 2023; Zhang et al., 2023). In addition, the utilization of AI in education should be implemented and must be accompanied by ethical discipline (Adam et al., 2023; Cardona et al., 2023). Therefore, this contributes to closing the research gap on how pre-service English teachers use AI for teaching preparation.

This study has implications for pre-service training programs to consider guided integration of AI that optimizes benefits while addressing ethical concerns. This research contributes to the conceptual understanding of AI's impact and highlights the need to foster the development of pedagogical-technological skills. AI experiences can be used by training to inform the result of the preparation of a teaching workforce ready and skilled in technology.

To build on these findings by investigating the effects of specific AI technologies on learning outcomes when lessons involve ideas generated by AI. Exploring the pedagogical outcomes of specific AI tools can help refine best practices for implementation. Advancing an understanding of the optimal and ethical integration of AI to complement pedagogical approaches remains important.

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