

**CHALLENGES FOR ENGLISH TEACHERS FACING ARTIFICIAL
INTELLIGENCE (MULTISITE STUDY AT NURUL HASANAH
TEMBUNG MIDDLE SCHOOL)**

SKRIPSI

*Submitted in partial fulfillment of the requirements
for the Bachelor of Education (S. Pd)
English Language Education Program*

BY

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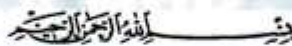
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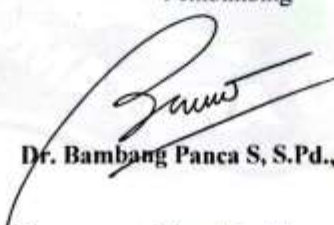
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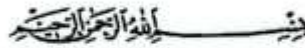


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ABSTRACT

The rapid development of Artificial Intelligence (AI) technology has significantly impacted the field of education, particularly in English language teaching. This study aims to identify the challenges faced by English teachers in integrating AI at Nurul Hasanah Private Junior High School and to formulate strategies to address those challenges. A quantitative survey method with a cross-sectional approach was used, involving four English teachers as respondents. The findings reveal several key challenges: limited access to technology, lack of training and understanding of AI, difficulties in curriculum integration, insufficient policy support, and ethical and accuracy concerns related to AI use. Despite these obstacles, teachers expressed a positive outlook on the potential of AI when supported by proper training and infrastructure. Recommended strategies include improving teachers' digital literacy, continuous professional development, collaboration with technology developers, and adapting curricula to better integrate AI. This study highlights the importance of institutional support and teacher capacity-building to navigate the digital transformation in education effectively.

Keywords: Artificial Intelligence, English language teaching, teacher challenges, learning strategies, digital education

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The writer is fully aware that this thesis is far from perfect in terms of content and structure. Therefore, constructive criticism and suggestions are highly welcomed for future improvement.

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Medan, Mei 2025

The Research

Sultan Rizky Harahap

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CHAPTER I

INTRODUCTION

1.1 Background

The rapid development of information and communication technology has brought significant changes in various aspects of human life, including in the field of education. One of the technological innovations that began to be widely used in education is artificial intelligence. (Artificial Intelligence). Artificial Intelligence, abbreviated to AI, offers a wide range of potential to enhance learning processes, such as personalized teaching, automated evaluation, intelligent tutoring systems, educational data analysis, more efficient administration, and the provision of rich and interactive learning resources especially for students with special needs.

According to a study by Wayne Holmes et al. (2019), AI enables adaptive learning systems that can adjust the content, speed, and methods of teaching to the individual needs of students. The system uses machine learning algorithms to analyze student learning patterns and adjust material in real-time. Furthermore, Rose Luckin, a professor at the UCL Knowledge Lab, in her book "Machine Learning and Human Intelligence" (2018) explains that an AI tutor system can provide instant and personal feedback, similar to a human tutor. The system uses natural language processing and other AI techniques to interact with students. Research by Alina von Davier et al. in "Artificial Intelligence in Education" (2019) shows that AI can evaluate essays, open answers, and even soft skills with accuracy that is close to human judgment. This allows for faster and more consistent judgments. According to the McKinsey & Company report (2020) on AI in education, AI-based data analysis can help educational institutions

identify students at risk of dropping out of school, optimize curricula, and improve overall learning outcomes.

Based on expert opinions and previous research results related to the rapid development of AI technology in education, it can be concluded that AI brings a transformation of learning experience with more personal and adaptive learning, improves efficiency related to administrative tasks and assessment, helps bridge gaps in education especially students with special needs, so teachers need to adapt to new technologies and develop skills to use AI effectively. The bottom line is, the development of AI technology in education brings major changes that potentially improve the quality and accessibility of learning through better personalization, efficiency, and data analysis. However, it also poses new challenges related to privacy, ethics, and adaptation to the changing role of educators. A balance between technological innovation and traditional educational values is key in optimizing the potential of AI in the world of education.

The application of AI in education allows highly personal language learning, such as an adaptive system that can analyze the strengths and weaknesses of each student, adjust the material, speed, and teaching methods in real-time. For example, if a student has trouble using an irregular vocabulary, the AI system will provide more training and explanation in this area. According to research by Xiangen Hu and Arthur C. Graesser (2019), the impact of AI in learning can improve learning efficiency by up to 30% compared to traditional methods. However, critics like Neil Selwyn of Monash University warned that too much personalization could diminish the social learning experience that is important in language acquisition. The next impact in the application of AI in English teaching is the presence of interactive conversation exercises, for example, Chatbots and AI-based virtual assistants offer unlimited opportunities to practice conversation. This system can simulate a variety of situations and contexts, helping students improve their

speaking and listening skills. This was proven by Serge Bibauw et al. (2019) showing a significant improvement in the fluency of speaking students who used AI chatbots for practice. However, some experts, such as Professor Stephen Bax of the Open University, warn that interaction with AI cannot completely replace human interaction in language learning.

Another impact is instant feedback and error analysis in teaching, which means that AI can provide direct feedback on student writing, pronunciation, and grammar. Systems like Grammarly use AI to detect errors and suggest corrections. AI voice recognition technology can also help students improve their pronunciation. Similarly, Elena Cotos (2015) demonstrated how AI-based corpus analysis can identify common error patterns, helping teachers target areas that require special attention. However, there are concerns that excessive reliance on AI feedback could hinder the development of student self-editing skills. Then for the evaluation system can also happen automatically, but on an AI-based automated evaluation systems can evaluate essays, oral exams, and other tasks quickly and consistently. It frees the teacher's time to focus on more complex aspects of teaching. It is proved by Mark D. Shermis (2020) that an AI assessment system can a level of accuracy comparable to a human assessment for many kinds of tasks. However, there is still debate about the ability of AI to assess more subtle aspects of language usage, such as creativity or cultural nuances.

With the presence of AI in education, the role of English teacher has undergone a significant transformation. Teachers no longer only act as informants, but also as facilitators, learning designers, digital literacy developers, intercultural mediators, critical evaluators, and emotional guides. With these new roles, teachers can harness the potential of AI to create more effective, relevant, and in-depth English learning, while ining the humanistic aspects of education. According to Dr. Ying Zhang in the journal "Artificial

Intelligence in Education" (2022), English teachers are now more of a learning facilitator that helps students navigate a variety of digital learning resources. Teachers are no longer just a primary source of information, but more focused on supporting and guiding students in their learning process. AI can provide personalized English language content and exercises, so students can learn according to their respective learning speed and style. In this context, teachers play a role in helping students understand the material, overcome difficulties, and motivate them to learn independently.

Furthermore, English teachers must be able to design interesting and relevant learning using AI technology. This includes curriculum preparation, the development of interactive teaching materials, and the design of learning experiences that can be tailored to the individual needs of students. Darling-Hammond et al. (2019) stated that teachers should be able to design personalized learning, where AI can be used to customize teaching materials and methods based on the level of ability and learning style of each student. With the increasing use of technology and AI, English teachers also have an important role to play in guiding students on digital ethics. These include responsible technology use, digital footprint management, and understanding the implications of privacy and data security. According to Zhao et al. (2021), it is important for teachers to teach digital literacy and ethics of technology use so that students can become intelligent and responsible users of technology.

Teachers of English should also act as a link between technology and human needs. They must be able to evaluate and choose the technology that best suits students' needs and learning goals. Teachers must make sure that the technology used really supports the learning-teaching process and not just become a gimmick. According to Selwyn (2016), the role of teachers as connectors is crucial to ensuring that technology integration in education remains focused on improving the quality of learning and not just

following technological trends. According to the UNESCO report "AI in Education: Challenges and Opportunities for Sustainable Development" (2023), teachers have an important role to play in guiding students on the ethical and responsible use of AI in language learning.

According to Selwyn (2016), the role of teachers as facilitators is important in directing and supporting students to use technology effectively. However, many teachers feel unprepared to take on this new role due to lack of adequate training and support. One of the major challenges facing English teachers in private high schools is the digital skills gap. It turns out that this happened in Nurul Hasanah Tembung Private Primary School, that is, according to the results of the survey given to the researchers by some English teacher at Nurul Hasanah Tebung Private School, data can be obtained that most of the respondents are teachers with teaching experience of more than 5 years. The majority of teachers, 60 percent, said they had sufficient understanding of the concept of AI, while 25 percent felt they understood it, and only 15 percent felt that they had a very good understanding. 40% of teachers have used AI-based tools or applications, with language learning applications such as Duolingo and Grammarly being the most frequently used. As for data-related challenges faced by English teacher Nurul Hasanah Tembung, the most mentioned are technical difficulties (70%), lack of training (85%) and 40% also mention lack of resources or access to technology as a major problem. 55% of teachers felt that technical difficulties had a big impact on the teaching process, while 30% felt that the impact was big enough, and 15% felt that it was small. When it comes to questions about training needs, data were obtained that as many as 80% of teachers felt that it was imperative to get further training on the use of AI, 15% felt it was necessary, and only 5% felt it necessary enough.

From this survey, it appears that although there is a positive view of the potential of AI in learning English, many teachers still face significant challenges, especially related to technical difficulties, training needs, and data privacy concerns. Teachers also stressed the importance of refining the quality of social interaction and developing critical skills of students in the use of AI. According to Redecker (2017), many teachers are still less familiar with AI technology and applications that can be used in the learning process. This gap makes it difficult for teachers to optimally utilize AI technology to enhance learning. Besides, the lack of access to training and technological resources also exacerbates this gap.

The integration of AI into education requires adaptation of curricula and appropriate teaching methods. According to Darling-Hammond et al. (2019), adaptive curricula and personalized learning are key to maximizing the potential of AI in education. However, many teachers are still trapped in traditional teaching methods and difficult to make the necessary adaptations. AI integration also affects teacher workloads. Although AI can help in some administrative tasks, such as automated assessment and student data management, teachers still face the challenge of managing the increasing workload. According to Fullan and Langworthy (2014), teachers need time to learn and adapt to new technologies, which often add to their workload. Besides, inadequate technical support can also aggravate the situation. The use of AI in education also has a psychosocial impact on teachers and students. Teachers may feel threatened by technology that is thought to replace their role. According to Hargreaves and Fullan (2012), this fear and uncertainty can affect the motivation and emotional well-being of teachers. On the other hand, students also need to be guided to understand and use AI wisely so as not to depend entirely on technology and keep developing their critical skills and creativity.

To address these challenges, comprehensive policies and support from schools and governments are needed. This support includes the provision of training and professional development for teachers, access to technological resources, as well as policies that support the integration of AI into the curriculum. According to Zhao et al. (2021), adequate support is essential to helping teachers adapt to change and utilize AI technology effectively in learning. Based on the exposure described, the researchers will undertake case studies related to the challenge of English teacher facing artificial intelligence and how teachers can face this challenge in an effective way at Nurul Hasanah Tembung Private Primary School.

1.2 Formulation of The Problem

Based on the background that has been stated, the formulation of the problem in this study is as follows:

1. What are the challenges faced by Private Junior High School English teacher Nurul Hasanah in integrating AI into the learning process?
2. What are some strategies that can be applied by English teacher Nurul Hasanah to overcome the challenges in the use of AI in learning?

1.3 Research Objectives

This study aims to:

1. Identify the challenges faced by Private Junior High School English teacher Nurul Hasanah in integrating AI into the learning process.
2. Develop strategies that can be applied by private junior high school English teacher Nurul Hasanah to overcome challenges in the use of AI in learning.

1.4 Research Benefits

This research is expected to provide the following benefits:

1.4.1 Theoretical Benefits

- a) Increase the knowledge of the integration of AI in education, especially in the teaching of English, especially AI, in the learning process so that it can help teachers to identify effective learning models that combine AI with conventional learning methods.
- b) This research can deepen the understanding of how the role and function of teachers is changing as technology develops, so it can lead to new theories about how teachers can adapt and remain relevant in an increasingly digital learning context.

1.4.2 Practical Benefits

The results of the research can be used to develop more effective teaching strategies and methods using AI, thereby improving the quality of English language learning, in addition to being able to provide insights and guidance to English language teachers in dealing with the challenges associated with the use of AI, as well as developing effective strategies to address these challenges. Furthermore, this research can help in developing guidelines and best practices for student data management, thus minimizing the risks associated to the use in education of AI because by understanding the needs and challenges of teachers, technology developers can design tools and applications of AI that are more suitable and effective for use in English learning.

CHAPTER II

THEORETICAL STUDIES

2.1 Literature Review

In today's digital era, technology has penetrated into various aspects of life, including the field of Education. One of the technological developments that is developing rapidly is artificial intelligence (AI). This technology brings various changes and new challenges for English teachers in Junior High School (SMP).

2.1.1 Definition and role of Artificial Intelligence in education

Artificial intelligence (AI) is the ability of a machine to mimic cognitive functions normally associated with the human mind, such as learning and problem solving. In the context of education, AI can be used for a variety of purposes, such as personalization of learning, automation of assessments, and administrative support. According to Russell & Norvig (2020) artificial intelligence is an intelligent agent that understands and interacts with its world through perception, learning, reasoning and action. In the report "*Intelligence Unleashed: An argument for AI in Education*," Luckin et al (2016) suggest that AI has great potential to enrich student learning experiences by providing personalized and adaptive feedback, as well as assisting teachers in identifying student needs and progress. Hwang and colleagues (2017) in their research entitled "Prepare your students for the future: Artificial Intelligence in education" highlighted the role of AI in personalizing learning and supporting the development of 21st century skills. They state that AI can help create a learning environment that is more responsive and adaptive to students' needs.

According to some experts related to the notion of artificial intelligence can be seen as follows:

1. John McCarthy, a computer scientist considered one of the pioneers of AI, defines artificial intelligence as "the science and technique of making smart machines, specifically smart computer programs." Although this definition is common to AI, in the context of education, it means the use of machines and computer programs to facilitate and improve the educational process.
2. Ray Kurzweil, futurist and technologist, describes AI as a technology that can perform tasks that require human intelligence. In education, these can be tasks such as automated grading, analysis of student context, and adaptive learning support.
3. UNESCO, in their publication on AI in education states that AI in education encompasses the application of technology to support teachers and students, enrich the learning experience, and ensure that the educational process is more inclusive and efficient.

Thus, artificial intelligence in education aims to create a more personalized, effective and efficient learning experience for students and support teachers in their teaching tasks. Scientifically Artificial Intelligence is also referred to as —synthetic intelligence and this concept refers to AI systems that combine and process information and context from various sources on a scale that cannot be understood by humans, because all these processes occur outside the control of humans themselves (Abdullah, 2020). *Artificial Intelligence* has also been used in everyday life for all people for various purposes. AI is also considered as a technology that can assist individuals in carrying out communication activities, finding location points, and their intelligence is able to complete tasks commonly performed by humans through human intelligence (Yamin,

2021). Based on the analysis carried out, it can be argued that Artificial Intelligence (AI) is now increasingly developing both in terms of hardware (hardware) and software (software). AI is already successfully creating and creating System products that can be used in everyday life. There are four techniques performed by the AI, namely searching means searching, reasoning means thinking, planning means planning, and learning means teaching

Artificial intelligence (AI) has brought many changes in various aspects of life, including in education. Here are some of the roles of AI in education along with the views of some experts:

1. Personalized Learning

According to Sir Anthony Seldon, vice-chancellor at the University of Buckingham, AI has the potential to revolutionise education by personalising learning for each student. AI can analyze student learning context and adapt learning content and methods to suit individual needs.

2. Virtual tutors and adaptive learning

Sebastian Thrun, founder of Udacity and pioneer of open massive online courses (MOOCs), says that AI can serve as a virtual tutor that provides hands-on help to students. Adaptive learning allows AI to adjust the difficulty and type of questions based on students' abilities, thus speeding up the learning process.

3. Automatic Evaluation

Daphne Koller, co-founder of Coursera, suggests that AI can help in automated evaluations, including the assessment of assignments and exams. This not only reduces the workload of teachers but also provides quick feedback to students, which is important for the teaching and learning process.

4. Predictive Analytics

John Baker, CEO of D2L, an educational technology company, highlighted the use of AI in predictive analytics to identify students at risk of failing or dropping out of school. With this context, appropriate interventions can be made earlier to help such students.

5. Distance learning and E-learning

Mitra Prahalad, a renowned management expert, emphasizes the importance of AI in supporting distance learning and e-learning. AI can manage virtual classrooms, deliver learning content interactively, and ensure every student stays engaged.

AI in education is not only about using new technologies, but also about creating a more efficient, adaptive, and inclusive learning environment. Although challenges such as context privacy and access inequality still exist, the potential for AI to improve the quality of education is huge and growing. Artificial Intelligence (AI) adopts technological work processes similar to human performance, ranging from processing information to receiving, storing, processing information in the form of a diverse display. This process is known as a cyclical form of intelligence in AI technology. One scientific figure named Watson uses AI to examine and summarize contracts and documents with thousands of pages. Not only that, Watson also said that the AI system is able to check and analyze context about transactions (Farwati. 2023)

The use of Artificial Intelligence is understood to improve the quality of life and solve various social problems by integrating the existence of technology. Through this source, it is obtained that the interest of the Indonesian people in the use of AI is the main highlight because considering the opportunities, potential and impacts that exist (Kharis, et al. 2023). Basically, the use of Artificial Intelligence is not just any system about robots, but AI is also a system about how to understand the nature, intelligent actions, and thoughts to operate a computer as an experimental device. Simply put, Artificial

Intelligence in the world of education as a digital assistant used to provide learning tutorials, student communication systems, and evaluate learning systems (Ririh, et al. 2020)

There are several advantages or characteristics possessed by the system in Artificial Intelligence (Yudoprakoso. 2019), including:

1. The system can act as a consultant, instructor or colleague according to user needs.
2. Able to increase the availability or expertise available in all computer devices.
3. Reduce the cost of running this AI program.
4. Are permanent.
5. The knowledge and information presented may be incomplete. However, in general, it can be developed according to what is expected.
6. Intelligently presented Contextbase.

Related shortcomings or weaknesses possessed by Artificial Intelligence systems, among others (Rayendra, 2021):

1. AI is not creative, with the existence of AI is considered as a device that is not creative compared to human intelligence that can be more creative and flexible. This is caused by AI must adjust to the system that has been built by technology.
2. The use of experience, where the human system must use symbolic inputs unlike humans who can get and share experiences directly.
3. AI has a narrower scope of discussion and is limited to certain problems than humans who have a wider scope of capabilities and are free.

In the discussion of the division into Artificial Intelligence systems, the main part of the main intelligence or AI, among others (Rayendra. 2021). Knowledge Base, This includes facts, theories, thoughts as well as relationships between components.

1. The ability of AI systems to draw conclusions based on the experiences experienced by individuals and groups as well as perform representation and duplication using machines.
2. Artificial intelligence concept. One of them is the turning test.
3. Intelligence testing methods. It involves the person asking or the human being with the object being asked.

According to Encyclopaedia Britannica, Artificial Intelligence is a branch of Science in the field of computers that successfully presents more knowledge and insights to individuals or groups and processes information according to needs. However, the fact is that Artificial Intelligence (AI) systems cannot completely replace the role of humans in all fields, including education. It's just that AI acts as a program or system that supports human performance and helps humans in completing their tasks (Devianto, et al. 2020).

Artificial Intelligence is basically divided into several forms of application of intelligence, including virtual mentors, voice assistant, smart content, presentation translator, global courses, automatic assessment, personalized learning.

2.1.2 Challenges Faced By English Teachers

The challenge of AI in learning is that although AI can be used to automate certain tasks, AI is still difficult to capture irony, irritation, and humor. (Popenici, 2017). While AI can guide learning, monitor student participation, and involvement with content, as well as provide feedback and incentives, AI has yet to be a solution for more complex tasks in higher learning. AI also still has limits in dealing with more complex learning situations, which require a high level of imagination, creativity, and civic involvement. Therefore, there is still a challenge in implementing AI in the context of higher education (Popenici, 2017). Other challenges faced by English teachers include:

A. Lack of understanding of AI

One of the biggest challenges faced by English teachers is the lack of understanding of AI and how this technology can be used in the learning process. Many teachers are not yet familiar with the concepts and applications of AI, so they find it difficult to integrate it into the curriculum.

B. Technology and infrastructure readiness

Technology and infrastructure readiness in schools is also a significant challenge. Not all schools have access to adequate hardware and software to support the implementation of AI in learning. This can hinder teachers' efforts to effectively utilize AI technology.

C. Time and resource constraints

English teachers often face limited time and resources in adopting new technologies. Administrative demands and high workload make it difficult for them to learn and implement AI technology optimally.

D. Ethics and Privacy

The use of AI in education also raises ethical and privacy concerns. Teachers must understand how student context is used and protected, and ensure that the use of AI does not violate students' privacy rights.

The challenges for teachers to artificial intelligence (AI) in schools can be divided into several categories, namely technology, pedagogy, ethics, and professional skills. Several experts and organizations have expressed their views on this challenge, including UNESCO, the OECD, and educational researchers. Here is a detailed description of these challenges:

1. Technology

a. Implementation Complexity

According to the OECD, the main technological challenge is the complexity of implementing AI in schools. Teachers often do not have enough technical knowledge to integrate AI into learning. This requires strong technical support and continuous training.

b. Infrastructure Limitations

UNESCO notes that many schools, especially in developing countries, face technological infrastructure limitations. Poor internet connections, lack of adequate hardware, and limited technical support can hinder the use of AI.

2. Pedagogy

a. Curriculum Adjustments

According to a study by EdTech, AI could change the way curricula are designed and delivered. Teachers need to be able to adapt their teaching methods to suit AI technology, which can take extra time and effort.

b. Diversity Of Learning Approaches

AI has the potential to provide a personalized learning approach. However, this also means that teachers need to understand and manage a variety of different learning approaches, which can be confusing and challenging.

3. Ethics

a. Privacy and Context Security

According to a UNESCO report, the use of AI in schools could raise concerns regarding the privacy and security of student context. Teachers need to understand how student context is collected, used and protected to ensure compliance with privacy regulations

b. Fairness and accessibility

AI can enlarge education gaps if it is not evenly accessed. The OECD notes that there is a risk that students from disadvantaged backgrounds may not get the same benefits from AI due to access limitations.

4. Professional Skills

a. Skill Development

According to a study by the Brookings Institution, teachers need to constantly update their skills to use AI effectively. This requires ongoing professional training programs and institutional support.

b. The Changing Role Of Teachers

AI can change the traditional role of teachers. The teacher may serve more as a facilitator or guide than the primary instructor. According to EdTech, this requires adjusting the mentality and approach to education.

c. Expert and organizational views

1) OECD (Organisation for Economic Co-operation and Development)

The OECD emphasizes that teachers need to be thoroughly trained to understand and use AI technologies, as well as to prepare students for a world increasingly influenced by AI.

2) UNESCO (United Nations Educational, Scientific and Cultural Organization)

UNESCO focuses on issues of ethics and inclusion, highlighting the importance of ensuring that AI is used in a fair and equitable way, as well as respecting the privacy and security of student context.

3) Brookings Institution

Brookings highlighted the need for sustainable skills development for teachers, and how AI can transform the role of the teacher in the classroom to become more of a personalized learning guide.

4) EdTech

EdTech often discusses how AI can be used to enrich learning and customize teaching methods, but also notes significant challenges in terms of teacher training and curriculum customization.

Overall, the challenges teachers face in dealing with AI in schools require a holistic approach, encompassing technical support, ongoing training, pedagogical adjustments, as well as attention to ethical and fairness issues.

2.1.3 Implications of Using AI In English Learning

The use of AI in English learning has significant implications, especially in the context of second language learning. Here are some of the implications and views of some experts on this subject:

1. Personalized Learning

According To Dr. Cristina Sanz, a linguist from Georgetown University, AI can personalize English learning by customizing materials, exercises, and tests based on each student's language skills. It helps in maximizing the effectiveness of learning by focusing on individual needs.

2. Development of speech and hearing skills

Dr. Catherine Doughty, a senior researcher at the Center for Advanced Study of Language, highlights that AI can help in the development of speaking and listening skills in English through technologies such as speech recognition and interactive dialogue. It is important to improve students ' communication skills in foreign languages.

3. Automatic correction and feedback

According To Dr. According to Scott Crossley, an expert in Applied Linguistics and language technology at Georgia State University, AI can be used to provide automatic

corrections and feedback to students ' writing in English. It helps in improving the accuracy and understanding of language usage.

4. Integration with learning technology

Dr. Thérèse Laferriere, a professor at Université Laval, emphasizes the integration of AI in existing digital learning platforms. This includes the use of chatbots for conversational practice, context analysis to measure student progress, and real-time customization of learning content.

5. Strengthening The Digital Curriculum

Dr. Jared Bernstein, an education and technology expert from New York University, sees AI as a tool to strengthen digital curricula in English learning. AI can help in providing relevant, dynamic and engaging content to motivate students in learning English.

The use of AI in English learning not only offers the possibility of increasing learning efficiency, but also supports the overall development of language skills. With the right integration, AI can be a valuable tool in creating a learning environment that is more adaptive and responsive to individual needs in understanding and using English better. The use of AI in English learning has many significant implications, both positive and negative. Here are some of them:

1. Positive Implications

a. Personalized Learning

AI enables the development of learning programs tailored to individual student needs by analyzing data on student learning progress and providing appropriate material recommendations (EdTech Magazine, 2021),

b. Wide Access to Materials

AI can integrate various educational resources from around the world, giving students access to materials that may not be available locally, thus helping to create a richer and more diverse learning environment (UNESCO, 2019).

c. Real-Time Feedback

The use of AI technology in education enables instant feedback to students to help correct mistakes more quickly and continuously improve the learning process (Journal of Educational Technology & Society, 2020).

d. Interactive Learning

AI can create a more interactive and engaging learning environment through the use of chatbots, virtual assistants, and gamification, making learning more interesting and enjoyable for students (EdSurge, 2022).

e. Automated Learning

AI can automate administrative tasks such as grading assignments and analyzing student progress, allowing teachers to focus more on direct interaction and teaching, increasing learning efficiency (McKinsey & Company, 2020).

2. Negative Implications

a. Technology Dependence

Over-reliance on technology can reduce students' ability to learn independently and think critically, and can even reduce social interactions that are essential to the learning process (American Psychological Association (APA). 2019).

b. Lack of Human Touch

While AI can provide feedback, human interaction remains essential in language learning, but the presence of teachers and classmates in providing cultural and social context cannot be completely replaced by machines (International Society for Technology in Education (ISTE), 2021).

c. Data Security and Privacy

The use of AI in education involves the collection of students' personal data, which poses risks to data privacy and security, so strict regulation and protection are needed to ensure student data is secure (European Commission, 2020).

d. Content Limitations

The quality of content generated by AI can vary, resulting in unverified or low-quality content that can mislead students and hinder the learning process (Harvard Business Review, 2021).

d. Digital Divide

Not all students have equal access to the technology needed to use AI in learning, widening the educational gap between those with access and those without (World Economic Forum, 2019).

e. Limited AI Capabilities

The use of AI can make it difficult to understand complex contexts or provide in-depth explanations. Language learning involves many nuances that are difficult for AI algorithms to capture (Brookings Institution, 2020).

Overall, the use of AI in English learning can improve the efficiency and effectiveness of the learning process if applied appropriately. However, it is important to consider and overcome the negative implications that may arise so that the benefits can be felt to the fullest.

2.1.4 Strategies To Overcome Challenges

Addressing the challenges faced by English teachers in the presence of artificial intelligence (AI) requires a strategic and holistic approach. Here are some strategies that can be used:

1. Understanding and continuous learning about AI

- a) Training and Professional Development: teachers should attend training and workshops on the use of AI in education to understand how this technology can support the teaching and learning process (Yu & Deng, 2019).
- b) Online resources: utilizing online courses, webinars, and discussion forums that focus on the application of AI in Language Teaching (Bates, 2018).

2. Integration of AI in the curriculum

- a) Use of AI tools: integrate AI tools that help in English Language Teaching, such as grammar checker apps, translator tools, and AI-based language learning platforms (Kukulska-Hulme, 2012).
- b) AI-assisted learning activities: creating tasks and projects that involve the use of AI technology to encourage students to interact with these tools critically (Holmes et al., 2019).

3. Addressing concerns about AI

- a) Ethics and Privacy: provides students with an understanding of the ethics of using AI and the importance of context privacy (Buchanan, 2020).
- b) Wise utilization of AI: educating students about the limitations of AI and the importance of still developing human skills such as creativity, critical thinking, and empathy (O'neil, 2016).

4. Personalized Learning

- a) Customizable learning: using AI to analyze students ' individual learning needs and adapt materials and teaching methods according to their individual learning styles (Sewak et al., 2020).

- b) Automated feedback: leverages AI to provide fast and accurate automated feedback on student assignments, allowing teachers to focus more on face-to-face interactions (Luckin, 2017).

5. Collaboration with technologists

- a) Collaboration with AI developers: collaborate with AI technologists and application developers to develop tools that truly support English learning (Mayer-Schönberger & Cukier, 2013).
- b) Evaluation and adaptation: continuously evaluate the effectiveness of the AI tools used and make adaptations according to technological developments and student needs (Clifton et al., 2019).

6. Improving Teachers ' Technology Skills

- a) Technology mastery: encouraging teachers to improve their technology skills in order to use AI tools effectively (Brown, 2020).
- b) Technological infrastructure: ensuring that schools or educational institutions have adequate technological infrastructure to support the use of AI in learning (Popenici & Kerr, 2017).

7. Increased Human Interaction

- a) Hybrid teaching: combining the use of AI with traditional teaching methods to create a balanced learning environment between technology and human interaction (Bonk & Graham, 2012).
- b) Focus on social skills: it remains to place emphasis on the development of social skills and direct communication between teachers and students (Vygotsky, 1978).

The development of artificial intelligence brings new challenges to English teachers in junior high schools, but also opens up opportunities to improve the learning process. By understanding the challenges and implementing the right strategies, teachers

can leverage AI technology to support more effective and efficient learning. These challenges require great adaptation and commitment, but with concerted efforts, teachers can better deal with these technological developments. With these strategies, English teachers can address the challenges posed by the development of AI and leverage it to improve the effectiveness and quality of their teaching.

1.2 Frame Of Mind

AI technology has great potential in education, but it faces various challenges in its implementation by teachers. Teachers are concerned that AI might replace them in teaching roles, lowering the need for human interaction. Many teachers feel less confident in using AI technologies, requiring additional training. AI is difficult to adapt to meet the individual needs of students due to algorithm limitations. The implementation of AI is hampered by the lack of resources and support of educational institutions. Concerns about how student context is collected and used by AI applications. These challenges indicate the need for attention to a variety of factors to maximize the benefits of AI in education, including teacher competence, infrastructure support, and privacy and security policies. The development of artificial intelligence brings new challenges to English teachers in junior high, but also opens up opportunities to improve the learning process. By understanding the challenges and implementing the right strategies, teachers can leverage AI technology to support more effective and efficient learning. These challenges require great adaptation and commitment, but with concerted efforts, teachers can better deal with these technological developments. With appropriate strategies, English teachers can address the challenges posed by the development of AI and leverage it to improve the effectiveness and quality of their teaching. Here's the thinking behind this research:

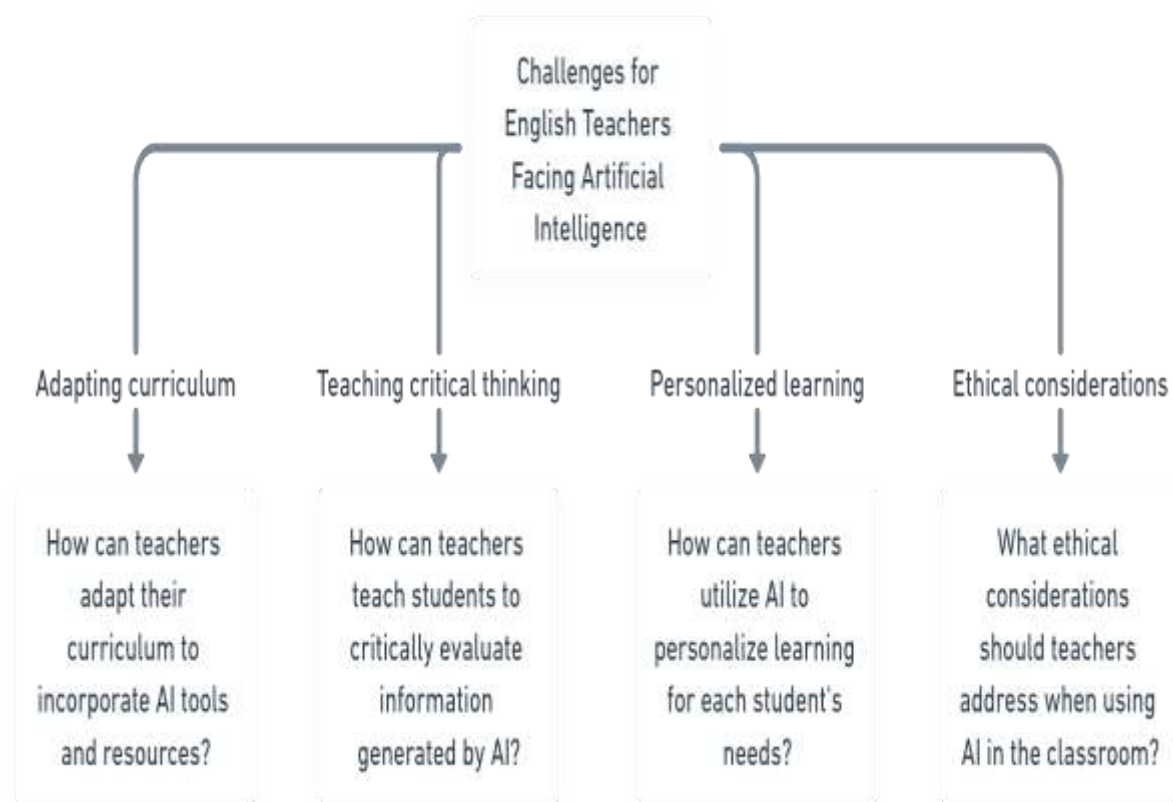


Figure 2.1 flow framework

The Diagram above illustrates the flow of the AI challenge frame of mind for teachers in the world of education, from the introduction of the problem to the conclusion that highlights the need for attention to various important factors.

1.3 Relevant Research

Relevant research related to the challenges of artificial intelligence for English teachers that have been carried out before include the following:

1. Research by Feng et al. (2019) found that the integration of artificial intelligence (AI) technology in English Language Teaching has increased the workload of teachers, especially in terms of monitoring and evaluation. Teachers are also faced with changing roles, from traditional teachers to learning facilitators. The research that will be done is similar to this research in terms of focusing on the workload of teachers and their changing roles with the integration of AI in English teaching.

However, this new research will expand its coverage with an additional focus on technical challenges, training needs, more diverse contexts and populations, as well as privacy and ethics issues. It is expected to provide a more comprehensive and in-depth picture of the impact of AI on English teaching and how to deal with it.

2. Research by Xu and Warschauer (2020) shows that many English teachers feel less prepared in using AI technology in the classroom. They face challenges in understanding and adapting AI-powered teaching methods, requiring more intensive training and support. The proposed research has much in common with the Xu and Warschauer (2020) research in terms of focusing on teacher readiness, challenges in adapting teaching methods, and the need for training and support. However, the difference lies in specific contexts, research methods, focus on practical solutions, and policy and infrastructure analysis. Thus, the proposed research could broaden and deepen our understanding of the challenges and solutions to the integration of AI in English language learning, in more local or specific contexts.
3. Research by Smith and Doyle (2022) shows that the use of AI in the classroom can reduce face-to-face interaction between teachers and students. This poses the challenge of building strong relationships and understanding the individual needs of students in depth. The similarity between these studies lies in their focus on ethical and privacy challenges in the use of AI in education. However, the research that will be done has a broader coverage, a more specific focus on English subjects, as well as an emphasis on practical strategies to address the challenges faced by teachers. Thus, this new research can provide a more comprehensive and applicable insight to help English language teachers effectively integrate AI into the learning process.
4. Research by Clark and Mishra (2021) highlights the technological gaps that still exist, especially in rural areas or with limited resources. Teachers in the area face

challenges in accessing and implementing AI technology, which impacts teaching quality. The research to be done has much in common with the research by Clark and Mishra (2021) in terms of highlighting the technological gaps and challenges faced by teachers in areas with limited resources. However, the research will focus more specifically on AI and learning English, and will offer more detailed strategies and solutions to address these challenges. With a more AI-focused approach, the study is expected to provide more relevant insights and practical recommendations for English language teachers facing an evolving technological age.

5. Research by McKnight et al. (2020) revealed that many teachers are concerned about AI replacing their role as educators. The study found that this fear is especially strong among teachers who lack a deep understanding of AI technology and its potential as an aid, not a replacement. By comparing these two studies, we can see that although there are many similarities in the topics discussed, the research that will be done has a more specific focus on English language teachers and covers a broader range of aspects of the problem.
6. Research by Selwyn et al. (2021) found that many teachers feel less confident in using AI technology in the classroom. They often need further training to effectively integrate these technologies into their teaching practice. This research and the research by Selwyn et al. (2021) have something in common in highlighting the challenges faced by teachers in using AI technology and the need for training. However, this research may offer a deeper perspective on the specific context of the use of AI in learning English and may include additional challenges and more detailed strategies to address such problems.
7. The study by Luckin et al. (2018) showed that although AI has the potential to support personalized learning, teachers still face challenges in adapting this

technology to meet students ' individual needs. This is often due to the limitations of AI algorithms that are not always able to adapt to each student's unique context. This research and the study of Luckin et al. (2018) have much in common in terms of focusing on the potential of AI and the challenges faced in technology integration. However, this study may be more specific in the context of learning English and provide a more detailed insight into the specific needs and strategies of English language teachers. Meanwhile, the study by Lucking et al., (2018) offers a broader perspective on the challenges and potential of artificial intelligence in the educational context in general.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This study uses the type of quantitative survey research with a cross-sectional approach. The cross-sectional approach was chosen because the context was collected at a single point in time, that is, when the survey was conducted.

3.2 Location And Time Of Research

The research was be conducted at Nurul Hasanah's first high school (SMP), which is located in Jalan Amal Bakti No.69 B Tembung Kec. Percut Sei Tuan. Data collection is planned for two months, from September to October 2024. As for the selected location has characteristics that are relevant to the topic of this research. For example, research focuses on the integration of AI in English language education, and Nurul Hasanah's private high school has already started using AI in the learning process or has plans to do so.

3.3 Population And Sample

3.3.1 Population

The population in this study is the entire English teacher who teaches at Nurul Hasanah Private High School as many as 4 English teacher.

3.3.2 samples

Samples were taken using purposive sampling technique. Sample selection criteria are:

- a) English teachers who have taught for at least 3 years.

- b) Teachers who have experience using technology in the learning process.

The number of targeted samples is 4 English teachers.

3.4 Research Instruments

The main instrument used in this study is the questionnaire. The gridquestionnaire consists of several parts, namely:

Table 3.1 Research Questionnaire Table

No.	Statement	Assessment Statement				
		1	2	3	4	5
1	Limited access to technology is the biggest challenge in using AI in English language learning.					
2	I do not have enough training to use AI technology in English language learning.					
3	Lack of understanding of how AI works in education					
4	Difficulty integrating AI technology with school curriculum					
5	5 Lack of support from school or education policies related to AI					
6	AI technology cannot understand the context of English language learning well.					
7	AI technology does not provide significant benefits for English language learning.					
8	The use of AI technology in English language learning makes teachers' jobs more difficult.					
9	Lack of time to learn and adapt AI in learning					
10	Concerns about the accuracy and ethics of using AI in education					

3.5 Context Collection Procedures

1. Preparation : drawing up a questionnaire.
2. Dissemination of questionnaires : send questionnaires to English teachers who are samples of the study, either in person or by email.
3. Questionnaire collection : collect questionnaires that have been filled by respondents
4. Context processing : analyzing the results of the questionnaire

3.6 Context Analysis Techniques

The Context obtained from the questionnaire were analyzed using descriptive and inferential statistical techniques. Descriptive statistical techniques are used to describe the characteristics of respondents and survey results. Inferential statistical techniques are used to test research hypotheses. The context analysis techniques of survey research usually involve the following steps to interpret and present the results of the questionnaire:

- 1. Context cleaning and Inspection:**

- a) This initial stage involves cleaning the context to ensure that all responses have been filled in correctly and that no context is missing or incomplete.
- b) Examining context also includes identifying and addressing outliers or input errors that may have occurred during the context collection process.

- 2. Descriptive Analysis:**

- a) This analysis is used to describe sample characteristics, such as frequency distribution, mean, median, and standard deviation of key variables.
- b) An example of a frequently used technique is to calculate the percentage of responses on each Likert scale option for each questionnaire question.

CHAPTER IV

RESEARCH RESULT AND DISCUSSION

4.1 Research result

This chapter presents the findings of the study conducted at Nurul Hasanah Junior High School regarding the challenges faced by English teachers in integrating Artificial Intelligence (AI) into the teaching and learning process. Data were collected using a questionnaire instrument consisting of 10 closed statements rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The respondents were four English teachers selected using purposive sampling.

4.2 Quantitative Analysis of Teacher Perceptions

The following table summarizes the average responses to each statement:

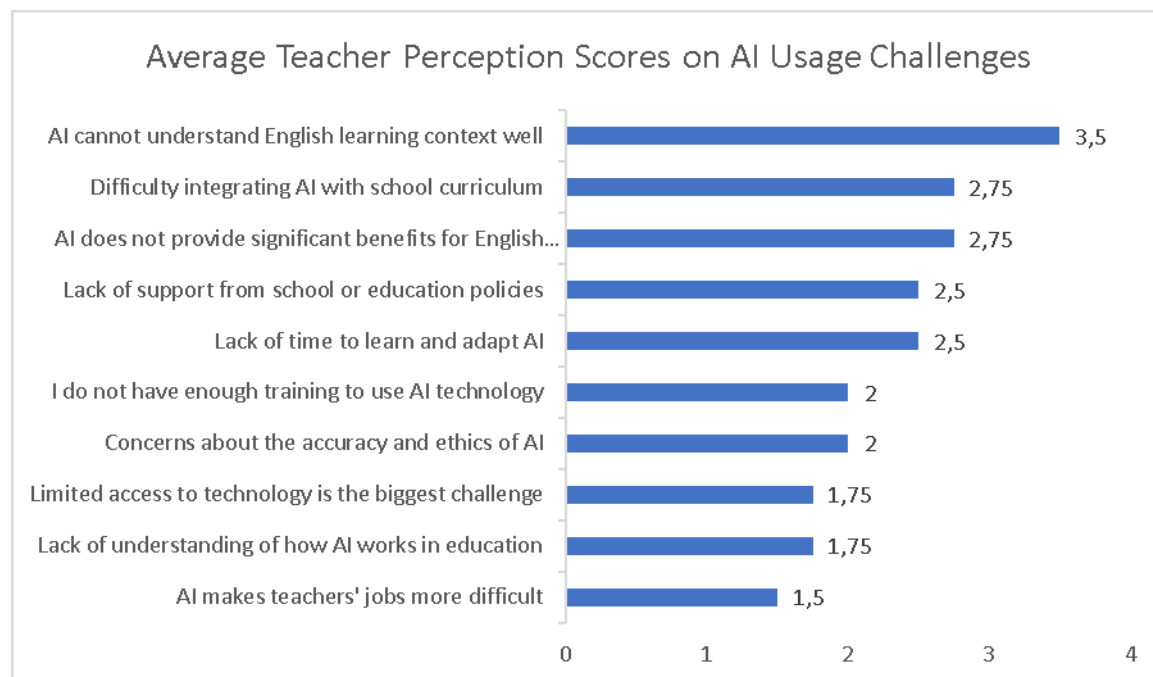
Table 4.1 Results of Teacher Perception Survey

No	Statement	Mean Score	Interpretation
1	Limited access to technology is the biggest challenge	1.75	Strongly Disagree
2	I do not have enough training to use AI technology	2	Disagree
3	Lack of understanding of how AI works in education	1.75	Strongly Disagree
4	Difficulty integrating AI with school curriculum	2.75	Neutral
5	Lack of support from school or education policies	2.5	Disagree
6	AI cannot understand English learning context well	3.5	Agree
7	AI does not provide significant benefits for English learning	2.75	Neutral
8	AI makes teachers' jobs more difficult	1.5	Strongly

			Disagree
9	Lack of time to learn and adapt AI	2.5	Disagree
10	Concerns about the accuracy and ethics of AI	2	Disagree

Source: Research Results. 2025

To better understand teacher perceptions, the average scores are presented in the following bar chart:



4.1 Bar Diagram

The bar chart illustrates the average perception scores given by teachers regarding various challenges they encounter in utilizing Artificial Intelligence (AI) in educational contexts. The mean scores range from 1.5 to 3.5 on a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). These scores provide an overview of how teachers perceive the readiness, obstacles, and contextual challenges of integrating AI technologies into teaching and learning.

The highest mean score (3.50) was found in the statement “AI cannot understand English learning context well.” This result indicates that teachers agree that AI systems currently face limitations in understanding the linguistic and contextual nuances of English language learning.

Moderate mean scores were observed for “Difficulty integrating AI with school curriculum” (2.75) and “AI does not provide significant benefits for English learning” (2.75). These results fall within the neutral category, suggesting that teachers are undecided about AI’s effectiveness and the ease of its integration into the curriculum.

Statements such as “Lack of time to learn and adapt AI” (2.50) and “Lack of support from school or education policies” (2.50) indicate slight disagreement, implying that teachers perceive these as moderate but not severe challenges.

Lower mean scores were found in “Concerns about the accuracy and ethics of AI” (2.00) and “I do not have enough training to use AI technology” (2.00), indicating disagreement with these statements. Teachers thus do not perceive insufficient training or ethical concerns as major obstacles to AI adoption.

The lowest mean scores appeared in “Limited access to technology is the biggest challenge” (1.75), “Lack of understanding of how AI works in education” (1.75), and “AI makes teachers’ jobs more difficult” (1.50). These fall into the strongly disagree category, suggesting that teachers reject the idea that AI complicates their work or that access to technology is a major issue.

4.3 Discussion

The results of the study showed that English teachers at SMP Nurul Hasanah faced several major challenges in integrating artificial intelligence (AI) into their learning. The findings indicate that teachers’ perceptions of AI challenges are moderate and context-dependent. The highest mean score (3.50) shows that teachers are concerned about AI’s limited contextual understanding, especially in language education, where nuanced comprehension and cultural relevance are essential. This suggests that while teachers see potential in AI, they remain skeptical about its ability to fully interpret complex linguistic contexts. The neutral scores (around 2.75) for curriculum integration and perceived usefulness imply that teachers are not entirely convinced about AI’s immediate pedagogical value. This is in line with the views of Luckin et al. (2018), who emphasized that although AI can support personalization of learning, its adaptation to diverse

learning contexts is still limited and requires active intervention from teachers. This may stem from a lack of structured frameworks or institutional guidance for AI implementation in classroom settings. Without clear models for how AI can enhance learning outcomes, teachers may hesitate to rely on it for instruction.

The moderate disagreement scores for policy support and time availability (2.50) suggest that teachers feel institutional and professional barriers exist but are not the main obstacles. The findings imply that while teachers might face workload pressures, they are still open to learning and adapting AI tools if appropriate support and time are provided. Interestingly, training and ethical concerns were not considered major issues (2.00). This could indicate a positive technological readiness among teachers, showing familiarity with digital tools and a willingness to explore AI without substantial ethical anxiety.

The lowest mean scores (1.50–1.75) indicate that teachers do not view AI as burdensome or limited by technology access. This contrasts with previous studies where access and digital literacy were major barriers. The result may reflect that most teachers in the study context already have sufficient technological infrastructure and baseline digital competence.

Overall, the results indicate that while teachers recognize the potential of Artificial Intelligence (AI) to enhance education, they still face significant challenges in its practical application. The most critical concern is AI's limited ability to understand the context of English language learning, particularly in grasping linguistic nuances, cultural meanings, and varied classroom situations. This limitation reduces teachers' confidence in using AI as an effective instructional tool. In addition, the lack of adequate training, institutional support, and clear integration strategies within the school curriculum further contribute to the hesitation among educators. Ethical concerns, accuracy issues, and accessibility constraints also add to the complexity of adopting AI in educational settings. Therefore, for AI to play a more effective role in English language teaching, it is essential to improve its contextual understanding, provide comprehensive teacher training, and establish supportive educational policies that encourage experimentation and innovation with AI technologies in classrooms.

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

5.1 Conclusions

Based on the research findings and in response to the research questions, the following conclusions can be drawn:

The findings demonstrate that although teachers acknowledge the potential benefits of Artificial Intelligence (AI) in education, its implementation remains constrained by several critical challenges. The most prominent issue identified is AI's limited capability to comprehend the contextual and linguistic intricacies of English language learning. This shortcoming hinders the effective integration of AI tools in classroom instruction and reduces educators' confidence in relying on such technologies for pedagogical purposes.

5.2 Suggestions

By observing the step-by-step process of how text is generated by AI, it becomes clear that providing more detailed and specific instructions or prompts leads to better alignment with what we want to achieve.

By continuing research in these areas, the education sector will be better positioned to navigate the evolving landscape of AI and optimize its benefits for language learning.

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