

CHAPTER II

LITERATURE REVIEW

This chapter presents the theoretical and empirical foundations of the study. It reviews relevant literature related to teachers' perceptions, Artificial Intelligence (AI), and the integration of AI in English Language Teaching (ELT). Furthermore, this chapter discusses the benefits and challenges of using AI in English language teaching and examines previous studies relevant to the research topic. The chapter concludes with a summary of the literature review, which highlights the relationship between the theoretical concepts and previous studies that underpin the present study

2.1 Theoretical Description

This section outlines the key concepts related to the use of Artificial Intelligence (AI) in English Language Teaching (ELT). As AI becomes increasingly integrated into educational practices, it is important to understand how teachers perceive and respond to its use in the classroom.

Teachers' perception is a central concept in this study, referring to how educators interpret and evaluate the use of AI in teaching. (Robbins & Judge, 2017) define perception as the process of organizing and interpreting information to give meaning to the environment². This perception influences teachers' decisions in selecting teaching strategies and integrating technology.

AI, as explained by (Norvig & Russell, 2021), refers to systems capable of performing tasks that require human intelligence. In ELT, AI supports learning through features such as automated feedback, interactive communication, and personalized instruction.

However, the implementation of AI also presents challenges. (Ertmer & Ottenbreit-Leftwich, 2021) highlight that teachers' readiness, along with technical, ethical, and infrastructural issues, affects successful integration.

Overall, this section provides a concise framework linking teachers' perceptions, AI use, and implementation challenges as the basis for analyzing the study findings.

2.1.1 Perception

Perception is a fundamental concept in psychology and education that explains how individuals understand and interpret the reality around them. In the educational context, teachers' perceptions play a significant role in determining how they view and respond to instructional innovations, including the use of AI in ELT. Perception is not merely related to what is seen or experienced, but also to how those experiences are subjectively interpreted by individuals.

Theoretically, perception is defined as the process by which individuals select, organize, and interpret information to construct an understanding of their environment. (Robbins & Judge, 2017) state that perception is an active process of interpreting stimuli to produce meaning. This definition suggests that perception is inherently subjective, as it is influenced by individuals' prior experiences, values, and expectations. In line with this view, (Daft, 2018) emphasizes that perception is an interpretive mechanism that enables individuals to understand reality based on their own perspectives. Therefore, in the context of this study, teachers' perceptions of AI cannot be separated from their personal experiences and understanding of the technology.

The formation of perception involves several interconnected cognitive stages. According to (Greenberg & Baron, 2023), the perceptual process consists of three main stages: selection, organization, and interpretation. The selection stage occurs when individuals choose specific stimuli to focus on, while the organization stage involves structuring the information in a meaningful way. The interpretation stage is the process of assigning meaning to the information based on prior knowledge and experience. In the context of AI use, teachers go through these stages when they encounter information or experiences related to technology, which ultimately shape their perceptions of AI in ELT.

Furthermore, teachers' perceptions are influenced by various factors that can be categorized into internal and external factors. Internal factors include individual experiences, knowledge, attitudes, and beliefs. (Woolfson, 2025) explains that individuals' prior experiences and beliefs strongly influence how they interpret new information. In this case, teachers who have positive experiences with technology are more likely to develop favorable perceptions toward the use of AI.

On the other hand, external factors include the work environment, institutional support, educational policies, and the availability of facilities. Research by (Akram et al., 2022) shows that institutional support and access to technology training significantly influence teachers' perceptions in adopting digital technologies. This suggests that teachers' perceptions are shaped not only by individual factors but also by the social and organizational context in which they operate.

Moreover, teachers' perceptions have direct implications for classroom practices. Positive perceptions toward an innovation tend to encourage teachers to adopt and integrate it into their teaching, while negative perceptions may act as barriers. (Ertmer & Ottenbreit-Leftwich, 2021) argue that teachers' beliefs and perceptions are key factors in determining the success of technology integration in education. Therefore, in the context of AI-based ELT, teachers' perceptions will influence how they select instructional strategies, methods, and learning media.

In conclusion, perception theory provides a comprehensive conceptual foundation for understanding how teachers evaluate and respond to the use of AI in ELT. The relationship between the perceptual process, influencing factors, and its implications for teaching practices forms the basis of analysis in this study, particularly in exploring teachers' experiences and perspectives through a qualitative approach.

2.1.2 Teachers' Perceptions in Education

Teachers' perceptions in the educational context represent cognitive and affective constructs that reflect how teachers understand, evaluate, and respond to various aspects of the teaching and learning process. These perceptions do not stand independently; rather, they are closely related to teachers' beliefs regarding teaching, learning, and their roles in the classroom. Therefore, understanding the concept of teachers' perceptions cannot be separated from the study of teachers' beliefs as a foundation for pedagogical decision-making.

Conceptually, teachers' beliefs and perceptions are interconnected elements that shape instructional practices. (Helenrose & Gill, 2015) explain that teachers' beliefs represent relatively stable subjective understandings about teaching and learning processes, while perceptions refer to interpretations of specific situations encountered in instructional contexts. Thus, perception can be viewed as the

contextual manifestation of teachers' underlying beliefs. In line with this perspective, (Rubie-Davies, 2018) emphasizes that teachers' beliefs influence their expectations and how they evaluate students' abilities and potential, which ultimately affects classroom interactions.

The relationship between teachers' perceptions and classroom decision-making is a critical aspect in educational studies. Teachers' perceptions influence how they design, implement, and evaluate the teaching and learning process. (Darling-Hammond et al., 2017) argues that teachers' pedagogical decisions are strongly shaped by how they understand students' needs, learning objectives, and the learning environment. In this regard, teachers' perceptions function as a cognitive filter that determines the selection of instructional strategies, methods, and media. Furthermore, research by (Ertmer & Ottenbreit-Leftwich, 2021) shows that teachers' perceptions of technology directly influence the level of technology adoption and integration in classroom practices. This suggests that, in the context of AI use, teachers' perceptions play a crucial role in determining the extent to which such technology is effectively utilized in teaching.

Several previous studies have examined teachers' perceptions in various educational contexts, including technology integration. A study by (Saeidi & Meihami, 2023) found that English teachers' perceptions of digital technology are influenced by their experience of use, level of digital literacy, and institutional support. The findings suggest that teachers with positive perceptions tend to be more innovative in integrating technology into language teaching. In addition, research by (Huang et al., 2025) revealed that teachers' perceptions of AI in education are shaped by their understanding of its benefits and risks, including ethical considerations and pedagogical readiness. These findings highlight that teachers' perceptions of AI are complex and multidimensional. Teachers who hold positive perceptions toward instructional innovations tend to create more interactive and adaptive learning environments. Therefore, teachers' perceptions have implications not only for teaching practices but also for the overall quality of learning.

Based on the discussion above, it can be concluded that teachers' perceptions are a key element that connects beliefs, experiences, and instructional

practices. These perceptions influence classroom decision-making and determine the success of educational innovations, including the use of AI in English language teaching. Therefore, examining teachers' perceptions is highly relevant in this study, particularly to gain an in-depth understanding of how teachers interpret and implement AI technology within the teaching context.

2.1.3 Artificial Intelligence (AI)

Artificial Intelligence (AI) represents one of the most rapidly advancing technological innovations, exerting a significant influence across various sectors, including education. In the context of learning, AI is utilized to support more effective, adaptive, and individualized instructional processes. Therefore, a comprehensive understanding of AI is essential as a foundational basis for analyzing teachers' perceptions of its use in English language teaching.

Conceptually, AI is defined as the capability of computer systems to perform tasks that typically require human intelligence, such as thinking, learning, and decision-making. (Norvig & Russell, 2021) define AI as the study of rational agents that can act based on their perception of the environment to achieve specific goals. This definition highlights that AI is not merely a passive tool, but a system capable of adapting through learning from data. Similarly, (Kaplan & Haenlein, 2019) describe AI as a system's ability to correctly interpret external data, learn from such data, and use the acquired knowledge to achieve goals in a flexible manner. Thus, in the educational context, AI can be understood as an intelligent technology that supports dynamic and responsive learning processes.

In education, AI can be categorized into several types based on its functions and applications. One of the primary forms is Intelligent Tutoring Systems (ITS), which are designed to provide personalized instruction through adaptive feedback tailored to individual learners' needs. Another important component is Natural Language Processing (NLP), which enables systems to understand and generate human language, making it particularly useful in language learning applications. (Holmes et al., 2019) explain that AI in education also includes learning analytics, which involves the use of data to analyze students' learning behaviors in order to improve instructional quality. In addition, machine learning technologies allow

systems to continuously improve through ongoing data analysis, enabling more accurate and personalized learning recommendations.

As a concrete implementation in ELT, AI technologies have been applied in various tools that support language skills development. AI-based ChatGPT can be used to enhance speaking skills through interactive conversational simulations, while automated grammarly checking tools assist students in improving their writing through instant feedback. Furthermore, automated assessment systems enable teachers to evaluate students' performance more quickly and efficiently. These examples demonstrate that AI is not merely theoretical but has been practically integrated into real teaching and learning activities.

The development of AI in educational environments has shown significant growth alongside advancements in digital technology. Rose Luckin argues that AI has evolved from being merely a supporting tool to becoming a collaborative partner in the learning process (Luckin, 2018). This transformation is driven by advances in computing power, the availability of large-scale data, and the increasing demand for more personalized and flexible learning. In addition, (UNESCO, 2023) emphasizes that the integration of AI in education is part of a global digital transformation aimed at enhancing access, quality, and effectiveness of learning.

Furthermore, research by (Aliyeva et al., 2022) demonstrates that AI holds great potential to improve learning quality through real-time feedback and more accurate data analysis. However, the effective use of AI in education requires teachers' readiness, both in terms of technological competence and pedagogical understanding. Therefore, how teachers perceive this technology becomes a crucial factor in determining the success of its implementation in the classroom.

In conclusion, AI is not only a supporting tool but also an intelligent system capable of facilitating adaptive, interactive, and personalized learning processes. The classification of AI types, its practical applications in ELT, and its growing role in education highlight its strategic importance in transforming learning practices. Consequently, a clear understanding of this concept is essential as a theoretical foundation for examining teachers' perceptions of AI use in ELT.

2.1.4 Artificial Intelligence in English Language Teaching (ELT)

English Language Teaching (ELT) is a field of study that focuses on the process of teaching and learning English as a foreign or second language. ELT encompasses not only the mastery of linguistic components such as grammar and vocabulary, but also the development of core language skills, including listening, speaking, reading, and writing. (Richards & Rodgers, 2020) explain that ELT is a pedagogical practice involving various approaches, methods, and techniques designed to enhance learners' communicative competence. Therefore, ELT is not limited to structural knowledge of the language but also emphasizes the ability to use English effectively in real-life communication contexts.

Along with the advancement of digital technology, ELT practices have undergone significant transformation, particularly through the integration of AI in the learning process. The incorporation of AI in ELT enables more adaptive, interactive, and learner-centered instruction. (Beatty, 2022) states that the use of technology in language learning, including AI, can improve instructional effectiveness by providing immediate feedback and creating more flexible learning environments. In addition, (Warschauer et al., 2023) highlights that the integration of digital technology in language education enhances student engagement and expands access to authentic learning resources.

In the context of ELT, AI supports various aspects of the learning process, ranging from content delivery to assessment. AI technologies allow systems to adjust the level of instructional materials, provide automated feedback, and continuously monitor students' learning progress. (Zhang et al., 2022) argues that the integration of AI in language learning enhances teaching effectiveness through personalized learning and real-time data analysis. This suggests that AI functions not only as a supporting tool but also as a system capable of facilitating a comprehensive learning experience.

The implementation of AI in ELT can be observed through various tools that have been utilized in ELT practices. One example is AI-powered chatbots that use Natural Language Processing (NLP) to simulate conversations with users. These tools can be used to develop speaking and listening skills through interactive communication that resembles real-life situations. Additionally, grammar checking

applications assist learners in improving their writing skills by providing automatic corrections and suggestions for grammatical errors, enabling more independent learning with immediate feedback.

Furthermore, automated feedback systems represent another application of AI in ELT, allowing teachers to assess students' work more efficiently, particularly in writing tasks. (Litman, 2024) explains that automated feedback systems can improve assessment efficiency while providing consistent responses to students' performance. In addition, speech recognition technology is used to evaluate students' pronunciation in speaking activities, helping them improve their accuracy more effectively.

In conclusion, the integration of AI in ELT reflects a significant transformation in language learning practices. AI facilitates more personalized, interactive, and efficient learning through various tools that support language skill development. Therefore, understanding the concept of ELT, the integration of AI, and its practical applications is essential in this study to analyze how teachers perceive the use of such technology in English language teaching.

2.1.5 Benefits of Using AI in Teaching English

The use of AI in ELT offers significant benefits in enhancing the quality of the learning process. This technology functions not only as a supporting tool but also as a system capable of improving instructional effectiveness, facilitating personalized learning, increasing student engagement, and developing language skills comprehensively. Therefore, examining the benefits of AI is essential to understand its contribution within the context of ELT.

One of the primary advantages of AI in ELT is the improvement of instructional effectiveness. AI enables teachers to manage learning more efficiently through the automation of various tasks, such as assessment and feedback provision. (Asriyanti Taliki et al., 2025) states that AI can enhance the efficiency of the learning process by providing fast and accurate data analysis, allowing teachers to make more informed pedagogical decisions. In addition, the use of AI helps reduce teachers' administrative workload, enabling them to allocate more time to student interaction and guidance.

In addition to improving teaching effectiveness, AI also supports personalized learning. This technology allows systems to adjust learning materials, pace, and difficulty levels according to individual students' needs. Rose Luckin explains that AI has the capability to create adaptive learning experiences by considering each learner's characteristics and progress (Luckin, 2018). As a result, students can engage in learning experiences that are more relevant and aligned with their abilities, which ultimately contributes to improved learning outcomes.

Another important benefit of AI in ELT is the enhancement of student engagement in the learning process. AI technologies, such as interactive chatbots and game-based applications, create more engaging and interactive learning environments. (Warschauer et al., 2023) emphasizes that the use of digital technology in language learning increases student participation by providing more dynamic and contextual learning experiences. Higher levels of engagement are crucial, as they contribute to students' motivation and success in language acquisition.

Furthermore, AI plays a significant role in improving students' language skills comprehensively, including listening, speaking, reading, and writing. In listening and speaking, technologies such as speech recognition enable students to practice pronunciation and comprehension interactively. In reading and writing, AI provides automated feedback on grammatical and structural errors. (Zhai, 2025) states that the use of AI in language learning enhances students' linguistic competence through continuous practice and immediate feedback. With timely and accurate feedback, students can correct their mistakes directly and gradually improve their language proficiency.

In conclusion, the integration of AI in ELT provides multiple benefits, including improved instructional effectiveness, support for personalized learning, increased student engagement, and comprehensive language skill development. These advantages demonstrate that AI has strong potential to transform English language teaching into a more adaptive, interactive, and learner-centered process. Therefore, understanding these benefits is essential as a foundation for analyzing teachers' perceptions of AI use in the learning process.

2.1.6 Challenges of Using AI in Teaching English

Although AI offers various benefits in ELT, its implementation also faces several challenges that need careful consideration. These challenges are not only related to technical aspects but also include teachers' readiness, ethical concerns, and infrastructure limitations. Understanding these issues is essential to provide a balanced perspective on the integration of AI in the context of ELT.

One of the primary challenges in the use of AI is its technical limitations. Despite rapid advancements, AI systems are not yet fully capable of understanding complex language contexts, particularly in terms of pragmatics and cultural nuances. (Litman, 2024) explains that Natural Language Processing (NLP)-based systems still struggle to interpret implicit meanings and conversational context at a deeper level. In addition, inaccuracies in language processing or feedback generation may affect the quality of learning. Therefore, the use of AI still requires supervision and intervention from teachers as the main facilitators in the learning process.

Another significant challenge relates to teachers' readiness and their level of digital literacy. The integration of AI in education requires teachers to possess sufficient technological competence to effectively utilize available tools. (Ertmer & Ottenbreit-Leftwich, 2021) emphasize that teachers' beliefs, knowledge, and technological skills are key factors influencing the success of technology integration in teaching. Teachers who lack readiness or confidence in using technology may encounter difficulties in adopting AI effectively. Thus, professional development and training are crucial to support the successful implementation of AI in educational settings.

Furthermore, the use of AI in education raises several ethical issues that must be addressed, including data privacy, overreliance on technology, and academic integrity. UNESCO highlights that the use of AI should ensure the protection of users' personal data, especially students, to prevent misuse of information (UNESCO, 2023). On the other hand, easy access to AI may lead to excessive dependence, potentially reducing students' critical thinking skills and learning autonomy. Additionally, the use of AI in completing academic tasks raises concerns regarding plagiarism and the authenticity of students' work. Therefore,

clear policies and guidelines are necessary to ensure the ethical use of AI and maintain academic integrity.

Another important challenge is the limitation of infrastructure supporting the use of AI in schools. The implementation of AI requires access to digital devices, stable internet connectivity, and adequate technological support systems. (Selwyn, 2021) argues that unequal access to technology remains a major issue in digital integration in education, particularly in developing countries. Such limitations may hinder the optimal use of AI and create disparities in access to technology-based learning.

In conclusion, although AI has great potential to enhance the quality of ELT, its implementation is accompanied by complex challenges. Technical limitations, teachers' readiness, ethical concerns, and infrastructure constraints are critical factors that must be considered when integrating AI into educational practices. Therefore, understanding these challenges is essential for this study in order to analyze more deeply teachers' perceptions of AI use in ELT.

2.2 Previous Studies

Research on teachers' perceptions of AI in education, particularly in ELT, has been widely conducted by various researchers using different approaches and contexts. Reviewing previous studies is essential to identify key findings, similarities, differences, and research gaps that serve as the foundation for this study.

The study conducted by (Zhang et al., 2023) examined teachers' perceptions of AI in education using a quantitative approach. The findings revealed that most teachers held positive perceptions of AI's potential to improve teaching effectiveness, particularly in terms of assessment automation and personalized learning. However, the study also identified concerns regarding limited technical understanding and ethical issues in AI use.

Furthermore, the study by (Sharmin et al., 2021) investigated EFL teachers' perceptions of technology integration in language teaching using a mixed-methods approach. The findings showed that teachers generally had positive perceptions of technology because it enhanced student engagement and teaching effectiveness.

However, limited digital literacy and lack of training were identified as major barriers to implementation.

Another study conducted by (Asgap & Khatimah, 2024) focused on the implications of AI in education in general. The results showed that AI has great potential to improve learning quality through real-time data analysis and immediate feedback. However, the study also emphasized the importance of teachers' roles in controlling and guiding AI use to ensure alignment with pedagogical goals.

In addition, the study by (Zhai, 2025) examined the effect of teachers' perceptions of technology use on student learning outcomes. The results showed that positive teacher perceptions of technology significantly enhanced student motivation and engagement in learning. Conversely, negative perceptions tended to hinder optimal technology utilization.

Furthermore, the study by (Amal & Islahul, 2024) investigated teachers' perceptions of digital technology integration in classroom teaching using a qualitative approach. The findings revealed that institutional support, availability of facilities, and technology training were key factors influencing teachers' perceptions. Teachers who received adequate support tended to have more positive perceptions and were more ready to integrate technology into teaching practices.

Based on the previous studies discussed above, it can be observed that teachers generally hold positive perceptions toward the use of AI and other digital technologies in educational settings. Most studies reported that AI contributes to teaching effectiveness, personalized learning, student engagement, and instructional innovation. However, several challenges were also identified, including limited digital literacy, lack of training, ethical concerns, and technological constraints.

Although research on AI in education has increased significantly in recent years, many previous studies employed quantitative or mixed-method approaches that focused primarily on measuring teachers' attitudes, technology acceptance, or the effectiveness of AI-assisted learning. As a result, there is still limited understanding of how teachers perceive and experience the use of AI in their everyday teaching practices through in-depth qualitative investigation.

Furthermore, relatively few studies have specifically explored English teachers' perceptions of AI within the context of ELT at the secondary school level in Indonesia. Existing studies have also paid limited attention to the challenges encountered by teachers and the classroom implications resulting from the integration of AI into teaching practices. Therefore, this study sought to address these gaps by exploring English teachers' perceptions of AI use, as well as the challenges and classroom implications associated with its implementation in ELT at SMA Negeri 6 Bengkulu City. Through a qualitative approach, this study was expected to provide a more contextual and comprehensive understanding of AI integration in ELT from teachers' perspectives.

2.3 Summary of Literature Review

Based on the theoretical review and previous studies discussed, it can be concluded that teachers' perceptions are an important factor influencing how educational innovations, including AI, are understood and implemented in teaching and learning processes. Perception is not only related to how individuals receive information, but also how that information is interpreted based on their experiences, beliefs, and contextual environment. In an educational context, teachers' perceptions serve as a foundation for pedagogical decision-making, particularly in selecting teaching methods, strategies, and learning media.

The review of Artificial Intelligence shows that this technology has great potential to support more effective, adaptive, and personalized learning. Various types of AI, such as Intelligent Tutoring Systems, Natural Language Processing, and learning analytics, have been utilized in education to enhance learning quality. In the context of ELT, the integration of AI enables the development of language skills in a more interactive way through various tools such as chatbots, grammar checkers, and automated feedback systems. This demonstrates that AI is not only theoretical in nature but has also been practically implemented in English language learning.

In addition to its benefits, the use of AI in education also faces several challenges. Technical limitations, teachers' readiness, ethical issues, and infrastructure constraints are factors that may influence the successful implementation of AI. Therefore, the use of AI in education cannot be separated

from the role of teachers as facilitators who guide the use of technology to ensure it remains aligned with pedagogical goals.

Previous research findings indicate that, in general, teachers tend to have positive perceptions of the use of technology and AI in teaching, particularly in improving teaching effectiveness and student engagement. However, there are also various challenges affecting its implementation, such as limited digital literacy, lack of training, and insufficient institutional support. In addition, most previous studies have focused on quantitative or mixed-method approaches, with relatively few exploring teachers' lived experiences and perspectives in depth through qualitative research.

Thus, based on the overall literature review, it can be understood that teachers' perceptions of AI use in ELT are a complex phenomenon influenced by various internal and external factors. Therefore, this study focuses on exploring in depth how English teachers perceive the use of AI in teaching within a more specific context, namely at SMA Negeri 6 Bengkulu City. This summary serves as a conceptual basis that guides the study in answering the research questions and analyzing the findings obtained from the field.

