

# The Utilization of Artificial Intelligence in English Language Learning in the Nahdlatul Wathan Environment

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## ABSTRACT

The rapid development of artificial intelligence has transformed various aspects of education, including English language teaching. This study aims to describe the utilization of artificial intelligence in English language teaching within the Nahdlatul Wathan educational environment, examine teachers' perceptions of its use, and identify the supporting factors, challenges, and future opportunities associated with its implementation. A qualitative approach with a case study design was employed in three Nahdlatul Wathan secondary schools, namely SMAS NW Pendem, SMK NW Janapria, and MAS NW Lenggarak, located in Janapria District, Central Lombok Regency. The participants consisted of three English teachers and two school leaders selected through purposive sampling. Data were collected through semi-structured interviews, observations, and document analysis and were analyzed using the interactive model of Miles, Huberman, and Saldaña. The findings reveal that artificial intelligence is primarily utilized as a supporting tool for developing instructional materials, designing assessments, enhancing vocabulary and grammar instruction, and assisting writing activities. Teachers generally expressed positive perceptions of AI while emphasizing the need for information verification and responsible use. The study suggests that artificial intelligence can support innovation in English language teaching when integrated critically, ethically, and under the guidance of teachers as the primary actors in the educational process.

*Perkembangan kecerdasan artifisial telah mendorong perubahan dalam berbagai aspek pendidikan, termasuk pembelajaran Bahasa Inggris. Penelitian ini bertujuan untuk mendeskripsikan pemanfaatan kecerdasan artifisial dalam pembelajaran Bahasa Inggris di lingkungan Nahdlatul Wathan, menganalisis persepsi guru terhadap penggunaannya, serta mengidentifikasi faktor pendukung, penghambat, dan peluang pengembangannya. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus yang dilakukan pada SMAS NW Pendem, SMK NW Janapria, dan MAS NW Lenggarak di Kecamatan Janapria, Kabupaten Lombok Tengah. Informan penelitian terdiri atas tiga guru Bahasa Inggris dan dua informan dari unsur pimpinan sekolah yang dipilih secara purposif. Data dikumpulkan melalui wawancara semi-terstruktur, observasi, dan dokumentasi, kemudian dianalisis menggunakan model Miles, Huberman, dan Saldaña. Hasil penelitian menunjukkan bahwa kecerdasan artifisial dimanfaatkan sebagai alat bantu dalam penyusunan materi, pembuatan evaluasi, pengembangan kosakata dan tata bahasa, serta pendampingan keterampilan menulis. Guru memiliki persepsi yang positif terhadap penggunaan AI, meskipun tetap menyoroti pentingnya verifikasi informasi dan pengawasan terhadap penggunaannya. Temuan ini menegaskan bahwa AI berpotensi mendukung inovasi pembelajaran Bahasa Inggris apabila diintegrasikan secara kritis, etis, dan tetap menempatkan guru sebagai aktor utama dalam proses pendidikan.*

**Keywords:** artificial intelligence, English language teaching, teacher perceptions, Nahdlatul Wathan

## Introduction

The rapid advancement of Artificial Intelligence (AI) has emerged as one of the most transformative technological developments in contemporary education. Recent progress in machine learning, natural language processing, and generative AI has enabled the development of learning systems that are increasingly adaptive, personalized, and responsive to students' diverse needs. AI-powered technologies are now capable of generating instructional materials,

providing automated feedback, facilitating assessment processes, and supporting more flexible learning experiences than traditional instructional approaches. As these technologies become more accessible, the integration of AI into educational settings has expanded significantly and has become a major focus of educational research worldwide (Crompton & Burke, 2023; UNESCO, 2023). Furthermore, the emergence of generative AI platforms has accelerated scholarly interest in understanding how these technologies influence teaching and learning practices across different educational contexts.

In the field of English Language Teaching (ELT), AI has created new opportunities that were previously difficult to achieve through conventional pedagogical approaches. The increasing availability of chatbots, automated writing evaluation systems, speech recognition tools, machine translation technologies, and generative AI applications has enabled learners to engage in more interactive and personalized learning experiences. These technologies support the development of reading, writing, speaking, and listening skills by providing immediate and continuous feedback. Previous studies have demonstrated that AI can enhance learner motivation, engagement, and language proficiency by offering individualized learning support that is available anytime and anywhere (Li et al., 2023; Edmett, 2024). Consequently, AI has become an important component of contemporary language education and is increasingly viewed as a valuable learning partner rather than merely a technological tool.

The emergence of generative AI platforms such as ChatGPT, Gemini, Copilot, Grammarly, and QuillBot has further expanded the possibilities for AI integration in ELT. Teachers can utilize these technologies to design instructional materials, generate assessment tasks, develop classroom activities, and provide contextualized language examples. Simultaneously, students can employ AI tools to expand vocabulary knowledge, improve grammatical accuracy, strengthen writing skills, and obtain explanations tailored to their individual learning needs. Recent research indicates that AI-supported language learning environments can facilitate more student-centered learning experiences while promoting greater learner autonomy and self-regulation (Hockly, 2023; Al-Khresheh, 2024). As a result, AI is increasingly recognized as a technology that supports knowledge construction and language development through dynamic interactions between learners and digital systems.

Despite its considerable potential, the implementation of AI in education also raises several pedagogical and ethical concerns. Existing studies have highlighted issues related to information accuracy, academic integrity, data privacy, algorithmic bias, and students' overreliance on technology. In addition, the growing use of AI has generated debates regarding the changing role of teachers within the educational process. However, contemporary scholarship consistently emphasizes that AI should not be viewed as a replacement for teachers but rather as a complementary tool that enhances instructional effectiveness. Teachers continue to play a central role in facilitating learning, guiding students' critical thinking, and ensuring that educational objectives are achieved in meaningful and ethical ways (Chan & Tsi, 2023; Crompton & Burke, 2023). Therefore, understanding how educators utilize and perceive AI remains a crucial area of investigation.

Within Islamic educational institutions, the integration of AI presents a more complex challenge than mere technological adoption. Islamic education is fundamentally concerned not only with the acquisition of knowledge and skills but also with the cultivation of moral character, spirituality, and social responsibility. Consequently, the implementation of educational technologies must be carefully aligned with the values and principles that underpin Islamic educational practices. In this context, AI should be understood not simply as a digital

innovation but as part of a broader pedagogical process shaped by institutional culture, educational goals, and religious values. Investigating AI adoption within Islamic educational settings is therefore essential for understanding how technological innovation can coexist with faith-based educational traditions.

Nahdlatul Wathan (NW), one of the largest Islamic educational organizations in West Nusa Tenggara, Indonesia, provides a particularly relevant context for examining these issues. Through its extensive network of schools, madrasahs, Islamic boarding schools, and higher education institutions, Nahdlatul Wathan has played a significant role in educational development and community empowerment. NW educational institutions function not only as centers of academic learning but also as spaces for transmitting Islamic values and fostering character development among students. As digital transformation continues to reshape educational practices, NW schools face increasing demands to adapt to technological innovations while maintaining their religious and cultural identity. This situation makes the Nahdlatul Wathan educational environment an important context for exploring the integration of AI into language learning practices.

In Central Lombok Regency, particularly in Janapria District, several NW secondary schools actively offer English language instruction, including SMAS NW Pendem, SMK NW Janapria, and MAS NW Lengarak (Nahdlatul Banin NW). Although these institutions operate within a similar sociocultural environment, they represent different educational streams, namely general secondary education, vocational education, and Islamic senior secondary education. Such institutional diversity provides a valuable opportunity to investigate how AI is utilized across different educational settings within the same organizational and cultural framework.

Although research on AI in education has expanded considerably in recent years, the majority of existing studies have concentrated on measuring the effectiveness of AI technologies in improving learning outcomes, student motivation, or technology acceptance in public schools and higher education institutions. Comparatively little attention has been devoted to exploring teachers' lived experiences of utilizing AI in English language instruction within Islamic educational settings. Furthermore, studies focusing specifically on Nahdlatul Wathan schools remain scarce within the existing body of literature. Consequently, there is limited understanding of how teachers utilize AI, how they perceive its role in language learning, and what factors facilitate or hinder its implementation in faith-based educational environments. This gap highlights the need for context-sensitive research that examines AI integration from the perspectives of educators working within Islamic educational institutions.

Addressing this gap, the present study offers two primary contributions. First, it investigates the utilization of AI in English language learning within Nahdlatul Wathan schools, a context that has received limited scholarly attention despite its educational significance. Second, rather than focusing solely on the effectiveness of AI technologies, this study seeks to provide an in-depth understanding of teachers' experiences, perceptions, and challenges regarding AI integration in classroom practices. By adopting a qualitative perspective, the study aims to generate contextualized insights into the implementation of AI within Islamic educational environments and contribute to the growing body of literature on AI-assisted language learning. Accordingly, this study aims to describe how artificial intelligence is utilized in English language teaching within the Nahdlatul Wathan educational environment, examine teachers' perceptions of AI integration, and identify the factors that support and hinder its implementation in classroom practices. The findings are expected to contribute to the

development of AI-related research in Islamic education and provide practical recommendations for enhancing technology-supported English language learning in Nahdlatul Wathan schools.

## Methods

This study employed a qualitative approach with a case study design to obtain an in-depth understanding of the utilization of artificial intelligence in English language teaching within the Nahdlatul Wathan educational environment. A qualitative approach was considered appropriate because it enables researchers to explore participants' experiences, perceptions, and interpretations of a particular phenomenon within its natural setting (Creswell & Poth, 2018). The case study design was selected as the study focused on a contemporary phenomenon occurring within a bounded real-life context and required a comprehensive understanding of the social, cultural, and institutional factors surrounding it (Yin, 2018). The research was conducted in three Nahdlatul Wathan secondary schools located in Janapria District, Central Lombok Regency, West Nusa Tenggara, namely SMAS NW Pendem, SMK NW Janapria, and MAS NW Lengarak (Nahdlatul Banin NW). These schools were purposively selected because they represent different educational streams and have integrated digital technologies into their instructional practices. The participants consisted of three English teachers and two supporting informants from school leadership, including principals and vice principals for curriculum affairs. Participants were selected using purposive sampling based on their direct involvement and experience in utilizing artificial intelligence within teaching and learning activities (Creswell & Poth, 2018).

Data were collected through semi-structured interviews, classroom observations, and document analysis. Semi-structured interviews were conducted to explore participants' experiences regarding the use of artificial intelligence, their perceptions of AI integration, and the factors that facilitate or hinder its implementation in English language teaching. This technique provided sufficient flexibility for participants to express their views and experiences while allowing the researcher to maintain focus on the objectives of the study (Merriam & Tisdell, 2016). Classroom observations were carried out to examine how artificial intelligence was utilized during instructional activities, how teachers and students interacted within AI-supported learning environments, and how various AI-based applications were incorporated into classroom practices. In addition, relevant documents, including lesson plans, teaching materials, students' assignments, and school records, were reviewed to complement and strengthen the findings obtained from interviews and observations (Sugiyono, 2023; Suhirman et al., 2022).

The collected data were analyzed using the interactive model proposed by Miles, Huberman, and Saldaña (2014), which consists of three interconnected stages: data condensation, data display, and conclusion drawing and verification. During the data condensation stage, the researcher selected, simplified, coded, and organized the data to identify meaningful patterns and themes. Subsequently, the data were presented through descriptive narratives and thematic matrices to facilitate interpretation and comparison across participants. The final stage involved drawing conclusions and continuously verifying emerging findings to ensure consistency and credibility. To enhance the trustworthiness of the study, source triangulation and technique triangulation were employed as recommended by Denzin (2017). Furthermore, member checking was conducted by returning preliminary interpretations

to participants to confirm the accuracy and authenticity of the researchers' interpretations of their experiences (Creswell & Poth, 2018).

## **Result and Discussion**

### **The Utilization of Artificial Intelligence in English Language Teaching**

The findings revealed that artificial intelligence has become one of the technologies utilized by English teachers within the Nahdlatul Wathan educational environment to support instructional activities. Its utilization encompasses various academic tasks, including the preparation of teaching materials, development of learning media, construction of quizzes and assessment instruments, and provision of language-learning exercises for students. Participants reported that AI-based applications enabled them to access a wider range of instructional resources more efficiently than conventional methods of information searching. Nevertheless, all instructional materials and assessment tools generated through AI were carefully reviewed, adapted, and validated by teachers before being implemented in classroom activities.

The utilization of artificial intelligence was also evident in efforts to enhance students' linguistic competencies, particularly in vocabulary development, grammar acquisition, and writing skills. Teachers employed various AI platforms to generate language examples, design grammar exercises, and assist students in improving sentence structure and word choice in writing tasks. According to the participants, these technologies provided alternative explanations and examples that facilitated a more contextual understanding of language concepts. In addition to serving as supplementary learning resources, AI tools were utilized to provide preliminary feedback on students' work before further evaluation and guidance were offered by teachers.

Despite the increasing use of artificial intelligence in instructional practices, participants consistently emphasized that AI was not regarded as the primary source of learning nor as a substitute for teachers. Teachers remained responsible for determining learning objectives, selecting relevant instructional content, and guiding students throughout the learning process. Within this context, artificial intelligence was perceived as a supporting tool that enhanced the effectiveness and efficiency of instruction while preserving the pedagogical functions of teachers. This finding suggests that AI integration within Nahdlatul Wathan schools has been implemented in a balanced manner by utilizing technological advantages without diminishing the importance of teacher-student interaction in the educational process.

The findings further indicate that the utilization of artificial intelligence is primarily directed toward strengthening the quality of instruction rather than replacing existing educational practices. This pattern is consistent with the perspective of Crompton and Burke (2023), who argue that AI serves as a supportive technology capable of enhancing instructional quality when appropriately integrated into teaching practices. The findings also corroborate previous studies by Li et al. (2023) and Hockly (2023), which demonstrate that AI can effectively support English language learning through the provision of learning resources, assessment development, and timely feedback. Therefore, the utilization of artificial intelligence within the Nahdlatul Wathan educational environment illustrates how technological innovation can be productively integrated into English language teaching while maintaining the central role of teachers as facilitators and primary guides of the educational process.

### **Teachers' Perceptions of the Utilization of Artificial Intelligence**

The findings revealed that English teachers within the Nahdlatul Wathan educational environment generally held positive perceptions toward the utilization of artificial intelligence in instructional activities. Participants viewed AI as a technological innovation capable of enhancing the effectiveness of teaching and learning processes, particularly in supporting lesson preparation, instructional material development, and assessment design. According to the participants, the availability of AI tools facilitated access to diverse information sources and helped reduce the administrative workload associated with instructional planning. Consequently, AI was perceived as a technology that could improve teachers' productivity while creating opportunities for innovation in English language teaching.

These positive perceptions were closely related to teachers' experiences of utilizing various AI-based platforms during instructional activities. Participants reported that technologies such as ChatGPT, Gemini, and Grammarly enabled them to obtain a wider range of instructional resources more efficiently than conventional approaches. Furthermore, AI was considered useful in adapting learning materials to accommodate the diverse needs of students. Its ability to generate language examples, create language-learning exercises, and suggest alternative learning activities was perceived as adding value to classroom instruction. These findings suggest that teachers' perceptions of AI were largely shaped by their direct experiences of employing the technology to support their professional responsibilities.

Despite these positive views, participants also demonstrated a critical stance toward the use of artificial intelligence. Teachers acknowledged that AI-generated information was not always accurate and therefore required careful verification before being incorporated into instructional activities. In addition, participants expressed concerns that excessive reliance on AI could potentially reduce students' independent learning habits if not accompanied by adequate guidance and supervision. As a result, teachers believed that AI should be utilized responsibly and strategically while considering instructional objectives, student characteristics, and the educational values upheld within the school environment. This finding indicates that teachers' perceptions of AI were not characterized by unconditional acceptance but rather by a balanced consideration of both its benefits and potential risks.

The findings are consistent with previous studies indicating that positive teacher perceptions constitute a critical factor in the successful integration of technology in education (Crompton & Burke, 2023). Li et al. (2023) argue that teachers are more likely to embrace AI when it provides tangible benefits for instructional practices and professional tasks. Similarly, Chan and Tsi (2023) emphasize that effective AI integration depends on teachers' ability to balance technological utilization with pedagogical and ethical considerations. Therefore, the perceptions of teachers within the Nahdlatul Wathan educational environment suggest that artificial intelligence is regarded as an opportunity to enhance instructional quality, provided that its implementation remains under the professional guidance and decision-making authority of teachers.

### **Supporting and Inhibiting Factors in the Utilization of Artificial Intelligence**

The findings revealed that the utilization of artificial intelligence in English language teaching within the Nahdlatul Wathan educational environment was supported by several factors that facilitated the integration of technology into instructional activities. One of the most prominent factors was the ease of access to various learning resources and instructional materials provided by AI-based platforms. Participants reported that these technologies enabled them to obtain references, teaching examples, and ideas for material development

more efficiently than conventional methods of searching for educational resources. In addition, the availability of basic digital devices, such as smartphones and computers that were already used in educational activities, further supported the adoption of AI in everyday instructional practices.

Another supporting factor identified in this study was teachers' motivation to adapt to ongoing developments in educational technology. Participants viewed the utilization of AI as a form of innovation that could enhance instructional quality and diversify teaching strategies. Their desire to provide more engaging learning experiences encouraged them to explore and experiment with various AI-powered applications. In this regard, technology adoption was driven not only by external demands for digital transformation but also by teachers' professional commitment to improving the quality of educational services provided to students.

Despite these supporting factors, the study also identified several challenges that hindered the utilization of artificial intelligence in instructional practices. Participants reported that one of the primary obstacles was limited knowledge regarding the effective use of AI technologies in educational settings. Although many teachers were familiar with AI-based applications, they did not always possess the same level of competence in utilizing the available features effectively. Furthermore, participants expressed concerns regarding the accuracy and reliability of AI-generated information. In some cases, information obtained from AI platforms required additional verification before it could be used as instructional material, thereby increasing the responsibility of teachers to critically evaluate the content produced by these technologies.

In addition to issues related to technological literacy and information accuracy, participants highlighted the potential risk of students becoming overly dependent on artificial intelligence. Teachers believed that excessive reliance on AI could reduce students' critical thinking skills, creativity, and independent learning habits if not accompanied by appropriate guidance and supervision. These concerns indicate that the successful integration of AI requires not only technological access but also responsible pedagogical practices. This finding is consistent with UNESCO (2023), which emphasizes the importance of responsible AI use in education. Similarly, Crompton and Burke (2023) argue that the effectiveness of AI implementation depends not only on technological availability but also on users' readiness to employ technology in a critical, ethical, and educationally meaningful manner.

### **Opportunities for the Development of Artificial Intelligence-Supported English Language Teaching within the Nahdlatul Wathan Educational Environment**

The findings indicate that artificial intelligence offers considerable opportunities for supporting the development of English language teaching within the Nahdlatul Wathan educational environment. Participants perceived AI technologies as valuable tools for expanding access to learning resources that would otherwise be difficult to obtain efficiently. Various AI-powered platforms enable teachers to access instructional references, language examples, and diverse learning materials that can enrich students' learning experiences. Furthermore, the integration of AI creates opportunities for schools to develop more adaptive learning approaches that accommodate the diverse needs and abilities of students.

Another opportunity identified in this study relates to the promotion of students' independent learning. According to the participants, AI enables students to access learning support more flexibly beyond formal classroom hours. Students can utilize these technologies to learn new vocabulary, understand language structures, and receive feedback on their

assignments. Such opportunities may contribute to the development of more sustainable and self-directed learning habits. Nevertheless, participants emphasized that AI should continue to function as a supporting tool rather than replacing students' own efforts to develop critical thinking and problem-solving abilities.

The findings also highlight the importance of strengthening teachers' digital competencies as a strategic opportunity for maximizing the benefits of AI integration. Participants acknowledged that rapid technological developments require teachers to continuously enhance their ability to utilize emerging digital tools. Consequently, professional development programs and training related to the educational use of artificial intelligence were viewed as essential for supporting effective implementation. Such initiatives are expected not only to improve teachers' technical skills but also to strengthen their capacity to integrate AI into pedagogically meaningful instructional practices.

More broadly, the utilization of artificial intelligence presents an opportunity for Nahdlatul Wathan schools to advance digital transformation in education while maintaining the values that characterize Islamic educational institutions. The findings suggest that AI can serve as a valuable instrument for fostering instructional innovation, supporting teachers' professional growth, and enhancing educational quality when implemented in a responsible and purposeful manner. This finding is consistent with Holmes et al. (2022), who argue that AI has the potential to improve access to and quality of education when appropriately integrated into learning environments. Similarly, UNESCO (2023) emphasizes that human-centered AI can contribute positively to educational development while supporting the acquisition of competencies required in the twenty-first century.

## **Conclusion**

This study demonstrates that artificial intelligence has been utilized as a supporting technology in English language teaching within the Nahdlatul Wathan educational environment, particularly at SMAS NW Pendem, SMK NW Janapria, and MAS NW Lengarak. Its utilization encompasses the preparation of instructional materials, development of assessment instruments, enhancement of linguistic competencies, and support for students' writing skills. The findings indicate that teachers generally hold positive perceptions toward the use of artificial intelligence due to its ability to improve instructional efficiency and expand access to learning resources. Nevertheless, AI is not perceived as a substitute for teachers but rather as a complementary tool that supports educators' professional responsibilities. In addition to its perceived benefits, the implementation of artificial intelligence is influenced by several supporting and inhibiting factors, including teachers' motivation, the availability of digital devices, technological literacy, information reliability, and the potential for student overreliance on technology. Consequently, the findings underscore that effective AI integration requires a balanced approach that combines technological innovation with the continued strengthening of teachers' pedagogical roles within the learning process.

From a practical perspective, the findings may serve as a foundation for Nahdlatul Wathan schools to develop policies and professional development programs aimed at enhancing teachers' digital competencies and supporting the responsible and effective use of artificial intelligence in education. The study further suggests that AI-supported English language teaching should be directed toward fostering students' independent learning while maintaining critical thinking, creativity, and meaningful educational interactions. Academically, this research contributes to the growing body of literature on artificial intelligence in Islamic

educational contexts, an area that remains relatively underexplored. However, the study was limited to a small number of participants from three Nahdlatul Wathan schools in Janapria District, which restricts the broader generalizability of the findings. Future studies are therefore recommended to involve a wider range of schools, students, and educational stakeholders, while also examining the impact of artificial intelligence on learning outcomes, critical thinking skills, and educational transformation across diverse Islamic educational settings.

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