

# Exploring Junior High School English Teachers' Perceptions of the Benefits and Challenges of Artificial Intelligence Integration in English Language Teaching

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## Abstrak

Penelitian ini bertujuan untuk mengeksplorasi persepsi guru Bahasa Inggris tingkat sekolah menengah pertama terhadap manfaat dan tantangan integrasi Artificial Intelligence (AI) dalam pembelajaran Bahasa Inggris di Ogan Ilir, Indonesia. Penelitian ini menggunakan pendekatan mixed-method dengan melibatkan 80 guru melalui kuesioner serta dua guru sebagai partisipan wawancara mendalam. Hasil penelitian menunjukkan bahwa guru memiliki persepsi positif terhadap integrasi AI, terutama dalam meningkatkan efektivitas pembelajaran, mendukung personalisasi belajar, meningkatkan keterlibatan siswa, dan memperbaiki keterampilan bahasa. Namun demikian, guru juga mengidentifikasi sejumlah tantangan, termasuk kekhawatiran etis, ketergantungan berlebihan pada AI, keterbatasan infrastruktur, isu privasi data, serta ketidakpastian terhadap peran profesional guru. Temuan ini menegaskan pentingnya pengembangan profesional yang terstruktur, kebijakan etis yang jelas, serta dukungan infrastruktur digital yang merata guna mewujudkan integrasi AI yang berkelanjutan dan berorientasi pada peran manusia dalam pendidikan.

**Kata kunci:** Artificial Intelligence, Pembelajaran Bahasa Inggris, Persepsi Guru, Teknologi Pendidikan, Integrasi AI, Pendidikan Rural

## Abstract

This study investigates junior high school English teachers' perceptions regarding the benefits and challenges of integrating Artificial Intelligence (AI) into English Language Teaching (ELT) in Ogan Ilir, Indonesia. Using a mixed-method approach, quantitative data were collected from 80 teachers through structured questionnaires, while qualitative insights were obtained from semi-structured interviews with two selected participants. The findings indicate that teachers demonstrate positive perceptions toward AI integration, particularly in enhancing instructional effectiveness, supporting personalized learning, increasing student engagement, and improving language skills. However, teachers also identify substantial challenges, including ethical concerns, overreliance on AI tools, infrastructure limitations, data privacy issues, and uncertainties regarding professional roles. The study highlights the contextual realities of AI adoption in rural educational settings and emphasizes the importance of structured professional development, ethical governance, and equitable digital infrastructure. These findings contribute to the broader discourse on sustainable and human-centered AI integration in English language education within developing contexts.

**Keywords:** Artificial Intelligence, English Language Teaching, Teachers' Perception, Educational Technology, AI Integration, Rural Education

## 1. INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) has significantly reshaped educational landscapes worldwide. AI technologies are increasingly embedded in teaching and learning processes, offering adaptive learning systems, automated feedback, intelligent tutoring, and data-driven instructional support. In the context of English Language Teaching (ELT), AI-powered tools such as large language models, automated writing evaluators, and speech-recognition applications have transformed how teachers design instruction and how students interact with language content (Kasneji et al., 2023; Wei, 2023). These

### History:

Received : 1 March 2026  
Revised : 1 March 2026  
Accepted : 2 March 2026  
Published : 2 March 2026

**Publisher:** Horizon Edukasi Prima Indonesia

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technological developments reflect a broader shift toward digitally mediated, personalized, and learner-centered education.

Globally, educational institutions are encouraged to adopt AI responsibly to enhance teaching effectiveness while maintaining ethical and pedagogical integrity. International policy frameworks emphasize the importance of human-centered AI integration, ensuring that technology supports rather than replaces the essential role of teachers (UNESCO, 2023; OECD, 2023). These frameworks highlight that AI should function as a supportive pedagogical partner that enhances instructional quality, fosters inclusion, and promotes equitable access to learning opportunities.

In ELT classrooms, AI tools have demonstrated potential in facilitating grammar correction, vocabulary enhancement, pronunciation training, and automated formative assessment. Research indicates that AI-assisted learning environments can improve student motivation and language proficiency when integrated with appropriate pedagogical guidance (Hooda et al., 2022; Sarica & Deneme Gençoğlu, 2025). Intelligent feedback systems provide immediate correction and scaffolded suggestions, enabling students to engage in self-regulated learning and reflective practice. Consequently, AI has become increasingly attractive to English teachers seeking to improve instructional efficiency and learner engagement.

Despite its pedagogical potential, AI integration in education also presents complex challenges. Concerns regarding academic integrity, data privacy, algorithmic bias, and overreliance on AI-generated content have become central debates in contemporary educational research (Dwivedi et al., 2023; Zhai et al., 2024). The accessibility of generative AI tools such as ChatGPT raises questions about originality, critical thinking development, and students' independent problem-solving skills. These ethical and cognitive concerns require educators to adopt AI thoughtfully and strategically.

Teacher perception plays a decisive role in determining whether technological innovation is successfully adopted in classroom practice. Studies show that positive attitudes toward AI are strongly associated with teachers' self-efficacy, digital literacy, and institutional support (Yao & Wang, 2024; Alenezi, 2024). When teachers perceive AI as useful and manageable, they are more likely to integrate it into instructional routines. Conversely, uncertainty, insufficient training, and limited infrastructure may hinder adoption, particularly in developing or rural educational settings.

In many developing countries, disparities in digital infrastructure and professional training create uneven opportunities for AI implementation. Research has identified the digital divide as a significant barrier to equitable AI integration, especially in regions with limited internet connectivity and insufficient technological resources (Afzal et al., 2023; Opesemowo, 2024). Rural schools often face structural constraints that influence teachers' readiness to experiment with advanced technologies. Therefore, examining AI adoption in local contexts is essential for understanding how global technological trends translate into practical classroom realities.

Indonesia represents a rapidly developing educational system that is increasingly engaging with digital transformation initiatives. However, empirical evidence regarding AI integration in Indonesian ELT classrooms, particularly at the junior high school level, remains limited. Most existing studies focus on higher education contexts or urban institutions, leaving rural secondary schools underrepresented in scholarly discourse (Chung & Jeong, 2024; Al-

Zahrani, 2024). Understanding teachers' perceptions in regions such as Ogan Ilir is therefore crucial to provide context-sensitive insights into AI adoption challenges and opportunities.

Furthermore, AI integration generates what scholars describe as an "AI paradox," where technology simultaneously empowers and destabilizes educational practice (Holmes & Tuomi, 2022). On one hand, AI enhances instructional efficiency and personalization; on the other hand, it may create professional anxiety and ethical dilemmas. Teachers may experience ambivalence, recognizing AI's benefits while worrying about diminished autonomy or altered professional identity. This dynamic tension underscores the importance of investigating both perceived advantages and perceived challenges in a balanced manner.

Given these considerations, this study aims to explore junior high school English teachers' perceptions of the benefits and challenges of AI integration in ELT within the context of Ogan Ilir, Indonesia. By employing a mixed-method approach, the research seeks to capture both statistical trends and in-depth experiential insights. The findings are expected to contribute to the broader discourse on sustainable, ethical, and human-centered AI adoption in English language education, particularly within developing and rural educational environments.

## **2. METHOD**

This study employed a mixed-method research design to obtain a comprehensive understanding of junior high school English teachers' perceptions regarding the integration of Artificial Intelligence (AI) in English Language Teaching (ELT). A mixed-method approach was selected because it enables the combination of quantitative breadth and qualitative depth, allowing researchers to triangulate findings and strengthen interpretative validity (Creswell & Plano Clark, 2021; Johnson et al., 2020). By integrating numerical trends from survey data with contextual insights from interviews, this design provides a holistic picture of teachers' attitudes, experiences, and concerns related to AI implementation.

The research followed a convergent mixed-method model in which quantitative and qualitative data were collected within the same phase and analyzed independently before being integrated during interpretation. This model is particularly effective for perception studies because it allows statistical measurement of general tendencies while also capturing nuanced narratives that explain underlying motivations or apprehensions (Guetterman & Fetters, 2022; Tashakkori et al., 2021). In the context of educational technology adoption, such integration is essential to understand not only levels of acceptance but also contextual factors influencing implementation.

The participants of this study were 80 English teachers from various junior high schools in Ogan Ilir, South Sumatra, Indonesia. The quantitative sample was selected using purposive sampling, targeting teachers who had at least basic familiarity with digital instructional tools. Purposive sampling is appropriate in technology-integration research because it ensures that respondents possess relevant exposure to the phenomenon under investigation (Etikan & Bala, 2020; Campbell et al., 2020). From the 80 respondents, two teachers were voluntarily selected for in-depth interviews based on their teaching experience, digital engagement level, and willingness to elaborate on AI-related practices.

Data were collected through two primary instruments: a structured questionnaire and semi-structured interviews. The questionnaire consisted of statements measuring perceived

benefits and perceived challenges of AI integration in ELT, using a five-point Likert scale ranging from strongly disagree to strongly agree. The instrument was adapted from contemporary AI-in-education perception frameworks and adjusted to align with the Indonesian junior high school context (Alenezi, 2024; Chung & Jeong, 2024). Prior to distribution, the questionnaire underwent content validation by educational technology experts to ensure clarity, relevance, and contextual appropriateness.

The qualitative instrument involved semi-structured interviews designed to explore teachers' lived experiences, ethical considerations, instructional adaptations, and professional concerns related to AI use. Semi-structured interviews allow flexibility while maintaining alignment with research objectives, enabling participants to articulate perspectives in their own words (Kallio et al., 2021; Rubin & Rubin, 2022). Interview sessions were conducted face-to-face, audio-recorded with consent, and transcribed verbatim to preserve authenticity and minimize interpretive distortion.

Quantitative data were analyzed using descriptive statistics to calculate mean scores and determine overall perception trends regarding AI benefits and challenges. Descriptive analysis is commonly used in perception research to identify central tendencies and interpret levels of agreement (Field, 2022; Pallant, 2020). The mean values were categorized to indicate low, moderate, or high perception levels. This statistical overview provided a structured foundation for interpreting teachers' general attitudes toward AI integration.

Qualitative data were analyzed using thematic analysis to identify recurring patterns and conceptual categories emerging from interview transcripts. Thematic analysis is a flexible yet rigorous approach suitable for exploring subjective experiences in educational research (Braun & Clarke, 2021; Nowell et al., 2021). The analysis process involved data familiarization, initial coding, theme generation, theme review, and refinement. Through this process, themes related to pedagogical enhancement, ethical awareness, infrastructure constraints, and professional identity were systematically identified and interpreted.

To ensure trustworthiness, the study employed triangulation by comparing questionnaire findings with interview narratives. Triangulation enhances credibility by confirming whether qualitative insights align with quantitative trends (Tracy, 2020; Creswell & Poth, 2022). Additionally, member checking was conducted by sharing summarized interpretations with interview participants to confirm accuracy. These procedures strengthened the reliability and internal validity of the research findings.

Ethical considerations were carefully observed throughout the study. Participants were informed about the purpose of the research, voluntary participation, confidentiality measures, and the right to withdraw at any time. No identifying information was disclosed in the reporting process. Ethical research practices are particularly crucial in studies involving technology use, where issues of privacy and professional identity may arise (Akgun & Greenhow, 2022; Dwivedi et al., 2023).

Through this methodological framework, the study aimed to generate robust empirical evidence regarding how English teachers in a rural Indonesian context perceive AI integration in ELT. The combination of quantitative measurement and qualitative exploration allows for a balanced understanding of both enthusiasm and hesitation surrounding AI adoption in secondary education settings.

### **3. RESULT AND DISCUSSION**

The quantitative findings of this study indicate that junior high school English teachers in Ogan Ilir demonstrate an overall positive perception toward the integration of Artificial Intelligence (AI) in English Language Teaching (ELT), while also maintaining cautious awareness of its challenges and implications. The mean score for perceived benefits ( $M = 3.94$ ) reflects a high level of agreement that AI contributes positively to instructional effectiveness and student learning outcomes. Meanwhile, the mean score for perceived challenges ( $M = 3.78$ ) suggests that although teachers recognize significant obstacles, their concerns do not outweigh their optimism regarding AI adoption. These findings confirm that teachers view AI as a valuable pedagogical ally that enhances teaching practices while requiring careful implementation and professional mediation.

The findings reveal five dominant dimensions of perceived benefits: enhancement of instructional effectiveness, personalization of learning, increased student engagement, support for language skill development, and improvement in teaching efficiency. Teachers reported that AI tools, including generative language models and automated writing assistants, assist significantly in lesson planning, grammar correction, and formative feedback. These tools reduce teachers' administrative workload and allow them to allocate more time to meaningful instructional interactions. This supports contemporary perspectives that position AI as an augmentative technology designed to strengthen rather than replace human teaching practices (Holmes & Tuomi, 2022; OECD, 2023). The efficiency gained through automated feedback enables teachers to focus more on facilitating higher-order learning activities, collaborative exercises, and communicative language practice.

Personalized learning emerged as a particularly significant advantage of AI integration. Teachers agreed that AI enables adaptive instruction tailored to students' individual proficiency levels, learning pace, and specific needs. Interview participants explained that AI applications provide differentiated exercises and immediate corrective feedback, allowing learners to progress independently while receiving targeted instructional support. This individualized approach promotes learner autonomy, self-regulated learning, and inclusive education practices. These findings reinforce research indicating that AI-driven systems facilitate adaptive learning pathways and improve student engagement by addressing learner diversity effectively (Chung & Jeong, 2024; Alharbi, 2024). Teachers observed that students with varying levels of language proficiency benefit from personalized support without experiencing embarrassment or negative comparison with peers.

Student engagement was also identified as a major benefit. Teachers reported that AI-supported platforms increase student motivation due to their interactive, responsive, and sometimes gamified features. Students demonstrated greater enthusiasm in vocabulary acquisition, pronunciation practice, and writing tasks when supported by AI-based tools. AI-mediated feedback provides a non-judgmental learning environment, encouraging students to experiment with language production and build confidence in their communication abilities. This increased engagement contributes to more active participation and sustained involvement in language learning activities, ultimately supporting improved learning outcomes.

Another important finding concerns AI's role in enhancing students' language skill development. Teachers noted improvements in writing organization, vocabulary expansion, grammar accuracy, and pronunciation when AI tools were integrated into classroom practice. Automated grammar correction and speech recognition features provided immediate feedback that reinforced language accuracy and supported continuous skill development. These findings suggest that AI functions as a supplementary instructional scaffold that enhances, rather than replaces, teacher guidance. The integration of AI supports formative assessment practices and enables teachers to monitor student progress more efficiently while maintaining their central pedagogical role.

Despite these benefits, the findings also revealed several important challenges that highlight the complexity of AI integration in educational contexts. One of the primary concerns involves student overreliance on AI-generated content. Teachers expressed concern that students may depend excessively on AI tools to complete assignments, potentially reducing their critical thinking, creativity, and independent problem-solving abilities. This concern reflects the broader "AI paradox," in which technological efficiency may coexist with reduced cognitive engagement if AI is used without appropriate pedagogical guidance (Holmes & Tuomi, 2022). These findings emphasize the importance of teacher mediation in ensuring that AI supports meaningful learning rather than replacing essential cognitive processes.

Ethical and data privacy concerns also emerged as significant issues. Teachers expressed uncertainty regarding how student data are collected, stored, and used by AI platforms, as well as concerns about plagiarism and academic integrity. These findings demonstrate growing awareness among educators regarding ethical governance and responsible AI use in education. Teachers emphasized the importance of clear institutional policies, ethical guidelines, and regulatory frameworks to ensure safe and responsible AI implementation. Teachers' willingness to adopt AI appears strongly influenced by their trust in institutional safeguards and ethical protections.

Infrastructure limitations represent another major barrier to effective AI integration. Teachers highlighted inconsistent internet connectivity, unequal access to digital devices, and varying levels of technological readiness across schools. These structural constraints reflect broader challenges in integrating advanced technologies within developing and rural educational contexts. Even when teachers demonstrate positive perceptions and readiness to adopt AI, technological limitations may restrict consistent implementation. These findings underscore the importance of equitable technological investment and infrastructure development to ensure that AI integration supports educational equity rather than exacerbating existing disparities.

The findings also revealed mixed emotional responses related to teachers' professional identity. While many teachers viewed AI as a supportive instructional partner, some expressed uncertainty and concern about how AI might reshape their professional roles. This ambivalence reflects the broader cultural and psychological dimensions of technological transformation in education. Teachers who perceived AI as a collaborative tool demonstrated greater openness and adaptability, whereas those who perceived potential threats to professional authority showed greater hesitation. These findings suggest that AI integration requires not only technological readiness but also psychological and professional support for teachers.

The discussion confirms that teachers in Ogan Ilir demonstrate a balanced perspective characterized by both optimism and caution. Their positive perception reflects recognition of AI's potential to enhance instructional effectiveness, support personalized learning, and improve student engagement and performance. At the same time, their concerns highlight the importance of ethical governance, professional development, and institutional support. AI integration is not merely a technical innovation but also a pedagogical and organizational transformation requiring thoughtful implementation.

Professional development plays a critical role in addressing these challenges and strengthening teacher confidence in AI integration. Training programs focused on AI literacy, pedagogical integration strategies, and ethical awareness can help teachers develop the knowledge and skills necessary to use AI effectively and responsibly. Such initiatives also support the development of teacher self-efficacy and professional agency in technology-enhanced learning environments.

Overall, the findings demonstrate that AI integration in ELT within Ogan Ilir reflects a dynamic interaction between technological opportunity and contextual limitation. Teachers recognize AI's transformative potential to enhance teaching and learning while remaining aware of its ethical, infrastructural, and pedagogical challenges. The coexistence of optimism and caution highlights the need for a human-centered approach that integrates technological innovation with ethical reflection, institutional readiness, and continuous professional development. AI in ELT should therefore be conceptualized as a complementary instructional resource embedded within teacher-guided pedagogical practice rather than as an autonomous instructional authority.

#### **4. CONCLUSION**

This study concludes that junior high school English teachers in Ogan Ilir generally hold positive perceptions toward the integration of Artificial Intelligence in English Language Teaching. Teachers recognize AI as a supportive instructional tool that enhances teaching effectiveness, facilitates personalized learning, increases student engagement, and strengthens language skill development. The quantitative findings demonstrate a high level of agreement regarding AI's pedagogical benefits, while qualitative insights reveal practical experiences that confirm its usefulness in classroom contexts.

At the same time, the study identifies significant challenges that must be addressed to ensure sustainable AI adoption. Concerns related to student overreliance, ethical risks, data privacy, infrastructure limitations, and professional identity transformation indicate that AI integration requires careful regulation and pedagogical supervision. Teachers do not reject AI; rather, they advocate for responsible, balanced, and structured implementation that maintains the central role of human educators.

The findings highlight that AI should be positioned as an instructional assistant rather than a replacement for teacher expertise. Successful integration depends on professional development, institutional policy support, and equitable access to digital infrastructure. When implemented thoughtfully, AI has the potential to complement pedagogical strategies and contribute to improved learning experiences in English language classrooms. Ultimately, the study emphasizes that technological innovation must be aligned with ethical awareness, contextual readiness, and human-centered educational values. By understanding teachers'

perceptions, stakeholders can design more responsive policies and training programs that empower educators while minimizing unintended consequences.

## 5. ACKNOWLEDGEMENT

The author would like to express sincere gratitude to all junior high school English teachers in Ogan Ilir who generously participated in this study. Their openness, honesty, and willingness to share experiences provided valuable insights that enriched the findings of this research. Appreciation is also extended to Universitas PGRI Palembang for providing academic guidance, institutional support, and a scholarly environment that facilitated the completion of this study. Constructive feedback from colleagues and academic mentors contributed significantly to improving the clarity and rigor of this research. Finally, the author acknowledges all individuals who offered support, encouragement, and assistance throughout the research process. It is hoped that this study will contribute meaningfully to the advancement of responsible and effective Artificial Intelligence integration in English language education.

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