



Students' Perception Toward the Use of Artificial Intelligence-Based Applications in English Learning at SMP Negeri 18 Surakarta

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Abstract. The rapid development of Artificial Intelligence (AI) has increasingly influenced English language learning, particularly through applications such as ChatGPT, Gemini, and Google Translate. This study aimed to investigate students' perceptions toward the use of AI-based applications in English learning and to identify the perceived benefits and challenges of these applications. A descriptive qualitative approach was employed, involving 90 seventh-grade students of SMP Negeri 18 Surakarta as primary respondents, supported by interviews with 3-5 students. Data were collected through an open-ended questionnaire distributed via Google Form and analyzed using the Miles and Huberman model, comprising data reduction, data display, and conclusion drawing, guided by the Technology Acceptance Model (TAM). The findings show that students hold positive perceptions toward AI, reporting high levels of perceived usefulness, perceived ease of use, positive attitude, and strong behavioral intention to continue using AI. AI was found to help students understand lessons, complete assignments, and build vocabulary and grammar skills, while increasing motivation and confidence. However, challenges such as prompt-writing difficulties, technical problems, and risks of overdependence were also identified. The study implies that AI can effectively support English learning when used responsibly and with adequate pedagogical guidance.

Keywords: Artificial Intelligence; English Learning; Perceived Ease of Use; Perceived Usefulness; Technology Acceptance Model.

1. BACKGROUND

The rapid advancement of digital technology in the era of the Industrial Revolution 5.0 has significantly transformed education, shifting classroom practices toward more flexible, personalized, and student-centered learning environments relevant to Generation Z learners. One of the most influential innovations in this transformation is Artificial Intelligence (AI), a technology capable of understanding language, generating responses, translating texts, and providing personalized feedback. AI-based applications such as ChatGPT, Gemini, and Google Translate have been increasingly integrated into learning activities, including answering questions, assisting writing, correcting grammar, translating texts, and supporting interactive learning. According to UNESCO (2021), digital technologies and intelligent systems have strong potential to improve educational quality through personalized learning pathways, real-time feedback, and data-driven instructional support.

In English as a Foreign Language (EFL) learning, AI provides meaningful contributions through grammar correction, pronunciation guidance, vocabulary suggestions, and interactive conversation simulations (Godwin-Jones, 2021). Zhu & Wang (2024) argue that intelligent technologies enable interactive and contextualized learning experiences that improve students' understanding of language materials. However, the successful implementation of AI in education depends not only on its technological capability but also on users' acceptance and

perception (Ouyang & Jiao, 2021). Students may perceive AI as a helpful learning assistant, yet also experience concerns related to accuracy, dependency, and academic integrity. At the junior high school level, students are in a transitional developmental stage in which critical thinking, self-regulation, and digital responsibility are still developing. Kessler (2018) emphasizes that digital learning technologies should function as supportive tools that enhance active engagement rather than replace meaningful interaction. Without proper guidance, students may become overly dependent on AI-generated responses, reducing independent problem-solving and authentic language practice.

In the Indonesian context, the adoption of AI-based applications continues to increase alongside broader access to smartphones and internet connectivity. At SMP Negeri 18 Surakarta, AI applications have begun to be used as supplementary tools in English learning; however, it remains unclear whether students perceive AI as helpful, motivating, challenging, or problematic. Previous studies on AI in language learning have mostly focused on higher education or senior high school contexts and emphasized measurable learning outcomes such as writing skills and grammar mastery (Godwin-Jones, 2021; Zhu & Wang, 2024), while research specifically examining junior high school students' perceptions of AI applications remains limited, particularly in the Indonesian context. Moreover, many studies have treated students' perceptions as a secondary variable rather than the primary focus of analysis, despite its crucial role in determining technology acceptance and the sustainability of use (Ouyang & Jiao, 2021).

Considering this gap, this study aims to investigate students' perceptions toward the use of AI-based applications, particularly ChatGPT, Gemini, and Google Translate, in English language learning at SMP Negeri 18 Surakarta, as well as to identify the perceived benefits and challenges of these applications from students' perspectives.

2. THEORETICAL STUDY

Technology Acceptance Model (TAM)

This study is grounded in the Technology Acceptance Model (TAM) proposed by Davis (1989), which explains that technology acceptance is determined by four main constructs: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude Toward Using (ATU), and Behavioral Intention (BI). Perceived Usefulness refers to the extent to which a person believes that using a technology enhances performance, while Perceived Ease of Use concerns the belief that a technology can be used with minimal effort (Davis, 1989). Attitude Toward Using, adapted from the Theory of Reasoned Action (Fishbein & Ajzen, 1975), reflects an

individual's positive or negative feelings toward performing the target behavior, whereas Behavioral Intention represents a person's intention to continue using the technology in the future. In this study, these four constructs are used to examine how junior high school students perceive AI-based applications, including ChatGPT, Gemini, and Google Translate, in English learning.

AI-Based Applications in English Language Learning

AI-based applications refer to digital tools that utilize artificial intelligence to adapt learning content, analyze performance, and provide instant feedback (Luckin & Holmes, 2016). Among the most widely used applications in education are ChatGPT, Gemini, and Google Translate, which support students in practicing writing, improving grammar, expanding vocabulary, translating texts, and simulating conversations. One of the main advantages of AI is personalized learning; AI systems can analyze students' strengths and weaknesses and adjust materials accordingly, thereby reducing learning gaps (Holmes et al., 2019). Immediate feedback is another benefit, allowing students to identify and correct mistakes in real time, which is essential for language acquisition (Godwin-Jones, 2021). AI also plays a role in increasing motivation through interactive and low-anxiety learning activities (Deci & Ryan, 2000). Nevertheless, the use of AI also raises ethical considerations related to accuracy, overdependence, and academic integrity, requiring students to develop digital literacy and critical evaluation skills (Kessler, 2018).

Review of Related Research

Several previous studies have examined the role of AI in language learning. Godwin-Jones (2021) found that AI-powered grammar checkers and automated writing evaluation systems help learners identify linguistic errors and revise their work efficiently, although the study focused on higher education and did not explore students' perceptions. Zhu & Wang (2024) reported that AI technologies enhance students' motivation, engagement, and interaction in EFL settings, but their research was conducted among senior high school and university students. Ouyang & Jiao (2021) identified perceived usefulness, ease of use, and trust as key factors influencing students' acceptance of AI, while Kessler (2018) emphasized that AI should function as a supportive tool rather than replacing teachers or students' cognitive processes. Holmes et al., (2023) examined AI implementation in personalized learning and learning analytics, focusing more on conceptual frameworks than students' actual experiences.

In the Indonesian context, Halim et al., (2026) found that university students generally hold positive perceptions of AI, while Syahriyanti et al., (2024) reported that AI tools contributed positively to vocabulary development, grammar awareness, and writing fluency

among senior high school students, despite challenges such as misinformation and unequal access to technology. Tiana et al., (2025) demonstrated that AI-based applications can improve junior high school students' speaking skills and confidence, Faisal et al., (2026) found generally positive teacher acceptance of AI accompanied by some remaining anxiety, highlighted both the benefits and risks of overreliance on AI tools such as ChatGPT, Gemini, and Google Translate, and On et al., (2024) found that students perceive AI as helpful in improving language skills through immediate feedback and efficient revision processes. Based on these studies, AI demonstrates strong potential to enhance English learning through immediate feedback, increased motivation, learner autonomy, and personalized instruction. However, most previous research has been conducted in higher education or senior high school settings, and studies specifically examining junior high school students' perceptions of AI applications, particularly within the Indonesian context, remain limited. This study addresses this gap by focusing on how junior high school students at SMP Negeri 18 Surakarta perceive and experience the use of ChatGPT, Gemini, and Google Translate in English language learning. Building on this rationale, it is expected that students hold generally positive perceptions toward AI applications and perceive tangible benefits in supporting their English learning process, particularly regarding comprehension, motivation, engagement, and independent learning.

3. RESEARCH METHOD

This study employed a descriptive qualitative approach, which aims to explore and understand the meanings individuals assign to a social phenomenon (Creswell & Poth, 2017). This design was considered appropriate for describing and interpreting students' perceptions toward the use of AI-based applications in English learning in a detailed and contextual manner. The research was conducted at SMP Negeri 18 Surakarta, Central Java, Indonesia, from January to March 2026, involving 90 seventh-grade students as respondents, consisting of 50 female students (55.6%) and 40 male students (44.4%). The school was selected because it has integrated digital technology, including AI-based tools such as ChatGPT, into its English language instruction. Data were obtained from primary and secondary sources. Primary data consisted of responses from an open-ended questionnaire distributed through Google Form to 90 students, supported by interviews with 3-5 students who were purposively selected to provide deeper insights. Secondary data included textbooks, scientific journals, and school documents related to AI in education. The questionnaire covered indicators derived from the Technology Acceptance Model (Davis, 1989), namely Perceived Usefulness, Perceived Ease

of Use, Attitude Toward Using, and Behavioral Intention, while interviews were used to clarify and enrich the questionnaire data. Data were analyzed using the interactive model of Miles and Huberman, consisting of data reduction, data display, and conclusion drawing. Data reduction involved selecting and categorizing relevant responses related to students' perceptions of AI applications. Data display presented the reduced data in narrative descriptions and tables organized around themes such as positive and negative perceptions, perceived benefits, and challenges. Conclusions were drawn gradually through continuous comparison and verification of the data to ensure validity and consistency. To ensure the validity and trustworthiness of the findings, this study applied triangulation by comparing data from questionnaires, interviews, and relevant theories and previous studies (Guest et al., 2012), persistent observation through repeated and careful examination of the data, and member checking by reconfirming interpretations with several respondents (Tracy, 2024).

4. RESULTS AND DISCUSSION

Data were collected from 90 seventh-grade students of SMP Negeri 18 Surakarta through an open-ended questionnaire distributed via Google Form during January-March 2026, supported by interviews with 3-5 students. The results are presented according to the four constructs of the Technology Acceptance Model, namely Perceived Usefulness, Perceived Ease of Use, Attitude Toward Using, and Behavioral Intention, followed by a discussion linking the findings with the relevant theories and previous research.

Respondents' Profile and AI Application Preference

The respondents consisted of 50 female students (55.6%) and 40 male students (44.4%). As shown in Table 1, ChatGPT was the most frequently used AI application among both genders (61 students, 67.8% of the total sample), followed by Google Translate (20 students, 22.2%) and Gemini (9 students, 10.0%).

Table 1. Respondents' Profile and AI Application Preference.

Gender	ChatGPT	Gemini	Google Translate	Total	Percentage
Male	27	6	7	40	44.4%
Female	34	3	13	50	55.6%
Total	61	9	20	90	100%

Source: Questionnaire results (2026), n = 90.

ChatGPT was preferred by both genders because of its ability to provide direct answers, detailed explanations, and interactive support for various English-related tasks, while female students used Google Translate relatively more often, possibly related to vocabulary and reading comprehension needs. These findings are consistent with the Technology Acceptance

Model (Davis, 1989), which states that a technology is more likely to be adopted when it is perceived as useful and easy to use.

Students' Perceived Usefulness of AI

Perceived Usefulness concerns the extent to which students believe that AI improves their learning performance (Davis, 1989). As shown in Table 2, most students perceived AI as helpful in understanding English lessons (91.1%), completing assignments faster (64.4% "yes" and 34.4% "sometimes"), and finding vocabulary meanings (64.4% "yes" and 34.4% "sometimes").

Table 2. Students' Perceived Usefulness (PU) of AI in English Learning.

Indicator	Positive (%)	Moderate (%)	Negative (%)
AI helps understand English lessons	91.1	-	8.9
AI helps complete assignments faster	64.4	34.4	1.1
AI helps find vocabulary meanings	64.4	34.4	1.1

Source: Questionnaire results (2026), $n = 90$.

These findings indicate a high level of Perceived Usefulness, as AI provides quick access to explanations, examples, and corrective feedback that support students' comprehension and productivity. This finding is in line with Luckin & Holmes (2016) and Holmes et al., (2019), who state that AI can support personalized learning and improve learning performance through instant feedback and adaptive assistance.

Students' Perceived Ease of Use of AI

Perceived Ease of Use refers to students' belief that AI applications can be operated without much effort (Davis, 1989). Table 3 shows that all respondents (100%) considered AI applications easy or very easy to use, and more than half reported minimal difficulty in understanding how AI works, writing prompts, or navigating the AI interface. Technical problems, such as unstable internet connections and application errors, were reported by a relatively small proportion of students (16.6%).

Table 3. Students' Perceived Ease of Use (PEOU) of AI.

Indicator	Positive (%)	Moderate (%)	Negative (%)
Ease of using AI applications	100.0	-	0.0
Understanding of how AI works	58.9	41.1	-
Absence of difficulty in writing prompts	52.2	43.3	4.4
Understanding of the AI interface	60.0	40.0	-
Absence of technical problems/errors	56.7	26.7	16.6

Source: Questionnaire results (2026), $n = 90$. Note: for the last two indicators, "Positive" denotes the absence of difficulty/problems.

These results indicate that AI applications generally have user-friendly and accessible interfaces suitable for junior high school students, which strongly supports the Perceived Ease

of Use component of TAM and increases the likelihood of sustained technology acceptance (Davis, 1989).

Students' Attitude, Confidence, and Satisfaction toward AI

Attitude Toward Using reflects students' positive or negative feelings toward using AI (Davis, 1989). As shown in Table 4, most students reported positive feelings (happy or excited) while using AI, believed that AI made English learning more interesting, felt more confident in learning English, and expressed satisfaction with AI-generated answers.

Table 4. Students' Attitude, Confidence, and Satisfaction toward AI.

Indicator	Positive (%)	Moderate (%)	Negative (%)
Positive feelings while using AI	55.5	41.1	3.3
AI makes learning more interesting	58.9	41.1	-
Increased confidence in learning English	53.3	46.7	0.0
Satisfaction with AI-generated answers	84.5	-	15.5

Source: Questionnaire results (2026), n = 90.

These findings support Holmes et al., (2019), who state that AI can create engaging learning experiences through personalized support and immediate feedback, and align with Deci & Ryan (2000) view that confidence and motivation increase when learners feel competent and supported in their learning process.

Students' Behavioral Intention to Use AI

Behavioral Intention represents students' willingness to continue using AI in the future (Davis, 1989). Table 5 shows that most students intended to keep using AI, were willing to try new AI features, and believed that AI would be used more frequently in education in the future. However, only 32.2% stated that they would use AI consistently without teacher assignments, suggesting that AI use is still partly driven by academic tasks rather than fully autonomous learning.

Table 5. Students' Behavioral Intention (BI) to Use AI.

Indicator	Positive (%)	Moderate (%)	Negative (%)
Intention to use AI again	58.9	41.1	-
Use of AI without teacher assignment	32.2	55.6	12.2
Willingness to try new AI features	58.9	35.6	5.5
Belief in future use of AI in education	71.1	26.7	2.2

Source: Questionnaire results (2026), n = 90.

This finding is consistent with UNESCO (2021) view that AI can promote learner autonomy, although the results also suggest that stronger encouragement is still needed for students to use AI independently beyond classroom requirements.

The findings of this study show that students at SMP Negeri 18 Surakarta hold positive perceptions toward the use of AI-based applications in English learning across all four TAM constructs. This finding is consistent with Davis (1989), who explains that technology acceptance is influenced by perceived usefulness and perceived ease of use, and is supported by Luckin & Holmes (2016) and Holmes et al., (2019), who argue that AI can enhance learning through personalized support, adaptive feedback, and intelligent tutoring. In the Indonesian context, these results are consistent with Syahriyanti et al., (2024) and Anggraeni (2025), who found that AI tools such as ChatGPT, Google Translate, and Gemini contribute positively to vocabulary development, grammar awareness, and writing fluency.

In terms of benefits, the results show that AI helps students understand lessons, complete assignments more efficiently, expand vocabulary, and improve grammar, while also increasing motivation, confidence, and interest in learning English. These benefits are in line with UNESCO (2021), which emphasizes AI's potential to improve education through personalized learning, instant feedback, and better access to learning resources.

However, the study also identifies several challenges, including difficulties in writing effective prompts, technical problems such as unstable internet connections, occasional inaccuracy of AI-generated responses, and the risk of overdependence on AI. These challenges are consistent with Kessler (2018), who warns that excessive reliance on AI may reduce students' critical thinking and problem-solving skills, and with Ouyang & Jiao (2021), who state that although positive perceptions increase technology acceptance, unresolved concerns about accuracy and dependency may still constrain optimal use. Ethical concerns related to plagiarism and the misuse of AI-generated content further highlight the importance of digital literacy and responsible use in AI-assisted English learning (Zhu & Wang, 2024).

Overall, the discussion suggests that AI has been well accepted as a supplementary learning tool among junior high school students, but its effectiveness depends on adequate pedagogical guidance to help students use AI critically, ethically, and independently, rather than as a substitute for their own thinking and effort.

5. CONCLUSION AND SUGGESTIONS

This study concludes that students at SMP Negeri 18 Surakarta generally hold positive perceptions toward the use of Artificial Intelligence-based applications, particularly ChatGPT, Gemini, and Google Translate, in English language learning. Students perceive AI as useful and easy to use, reporting that it helps them understand lessons, complete assignments, expand vocabulary, and improve grammar, while also increasing their motivation, confidence, and

satisfaction. These findings support the Technology Acceptance Model (Davis, 1989), which explains that perceived usefulness and perceived ease of use influence technology acceptance and behavioral intention to continue using a technology.

At the same time, several challenges were identified, including difficulties in writing effective prompts, occasional technical problems, inaccurate AI-generated responses, and the risk of overdependence on AI, which, if left unaddressed, may reduce students' critical thinking and independent problem-solving abilities. These findings suggest that although AI provides considerable benefits for English learning, its use needs to be guided carefully so that it functions as a supportive tool rather than a replacement for students' own effort, creativity, and critical thinking.

Based on these conclusions, students are encouraged to use AI responsibly by verifying AI-generated information against other learning sources and by developing effective prompt-writing skills, while maintaining academic honesty. Teachers are suggested to guide students in using AI ethically and effectively, integrate it into vocabulary, grammar, and writing activities, and remain the primary facilitators of classroom interaction and critical thinking development. Schools are expected to provide adequate technological facilities and to develop clear guidelines for AI use in learning to prevent misuse and overdependence. This study is limited to seventh-grade students of a single school and focuses on descriptive qualitative data; therefore, future researchers are recommended to conduct studies with larger and more diverse samples, examine specific language skills in greater depth, and consider experimental or mixed-method designs to further measure the effectiveness of AI in supporting English language learning.

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