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## Students' Perceptions of Using ChatGPT in English Learning at SMA Negeri 5 Pematangsiantar

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### Abstrak

Penelitian ini bertujuan untuk mengetahui persepsi siswa terhadap penggunaan ChatGPT dalam pembelajaran Bahasa Inggris di SMA Negeri 5 Pematangsiantar. Penelitian ini menggunakan metode deskriptif kualitatif. Populasi penelitian ini adalah siswa kelas XI, dengan jumlah partisipan sebanyak 36 orang yang dipilih secara purposive sampling. Pengumpulan data dilakukan dengan menggunakan kuesioner dan wawancara. Hasil penelitian ini menunjukkan bahwa dari total 720 responden, 170 responden (22,28%) memilih "sangat setuju", 470 responden (61,60%) memilih "setuju", 99 responden (12,97%) memilih "tidak setuju", dan hanya 24 responden (3,14%) memilih "sangat tidak setuju". Hal ini menunjukkan bahwa sekitar 83,88% dari keseluruhan tanggapan siswa terhadap penggunaan ChatGPT dalam pembelajaran Bahasa Inggris bersifat positif. Temuan ini memperkuat kesimpulan bahwa ChatGPT berfungsi sebagai alat bantu pembelajaran yang efektif untuk meningkatkan keterampilan Bahasa Inggris siswa di SMA.

Kata Kunci: *Persepsi, ChatGPT, Pembelajaran Bahasa Inggris*

## Abstract

This research aims to determine the students' perceptions of using ChatGPT in English learning at SMA Negeri 5 Pematangsiantar. This research used a qualitative descriptive method. The population of this study consisted of class XI students, with a total of 36 participants selected through purposive sampling. The data were collected using a questionnaire and interview. The results of this study show that out of a total of 720 responses, 170 (22.28%) selected "strongly agree," 470 (61.60%) selected "agree," 99 (12.97%) selected "disagree," and only 24 (3.14%) selected "strongly disagree." This indicates that approximately 83.88% of the overall student responses toward using ChatGPT in English learning were positive. These findings strengthen the conclusion that ChatGPT serves as an effective learning aid for improving students' English skills at SMA.

Keywords: *Perceptions, ChatGPT, English Learning*

## INTRODUCTION

The rapid development of technology has brought significant changes to every aspect of human life, including education. In today's world, technology is no longer just a tool it has become a companion in our daily learning journeys. Education, as one of the most important sectors, is undergoing a major transformation driven by innovations in digital tools and platforms (McCarthy, et al, 2023). Students and teachers alike are increasingly relying on technology not only to access information but also to engage in more personalized, flexible, and meaningful learning experiences (Haleem, et al, 2022).

One of the most transformative innovations in education is the use of Artificial Intelligence (AI), a technology capable of performing tasks that once required human intelligence, such as understanding language, making decisions, and offering real-time feedback (Asoke, 2024). AI provides new pathways for enhancing critical thinking, collaboration, communication, and creativity skills that are essential for success in the 21st century. It enables the automation of routine tasks, facilitates differentiated instruction tailored to individual learners, and provides immediate support for problem-solving and knowledge acquisition (Tan, et al, 2024).

In recent years, AI has provided new opportunities for students to learn more independently, interactively, and personally. Students are no longer confined to traditional textbooks or rigid classroom methods; instead, they can now explore learning experiences that adapt to their needs and learning styles (Alone, 2024). Technologies like AI-based tutors, virtual classrooms, and smart content recommenders have revolutionized the way knowledge is consumed and applied (Lin, et al, 2023). Among the various AI technologies

emerging today, ChatGPT, developed by OpenAI has introduced new possibilities for supporting education (Al-Jahwari & Yousif, 2024).

ChatGPT, through conversational interactions, assists users in finding information, clarifying concepts, and practicing communication skills, offering a more human-like learning experience (Koubaa, et al, (2023); Sabrina, et al, (2024); Sa'adah, et al, (2025)). By simulating natural conversation, ChatGPT can help students in tasks ranging from answering grammar questions to generating sample essays. Its design encourages exploration, autonomy, and continuous improvement, fostering a more engaging and supportive learning environment for diverse student populations (Prasetya & Syarif, (2023); Rezai, et al, (2024); Deng, et al, (2024)).

ChatGPT, with its wide accessibility through platforms such as websites, apps, and integrations with various digital services allows students to learn anytime and anywhere (Shihab, et al, (2023); Naamati, (2024); Novita & Yusof, (2024)). This ease of access breaks down traditional barriers to education, especially for students in remote areas or those with limited resources. It provides instant explanations, encourages language practice, and helps students reflect on their progress not as a replacement for teachers, but as an additional support that empowers students to take ownership of their learning journey. Moreover, ChatGPT supports peer-to-peer learning by facilitating collaboration and communication among students.

However, the mere availability of advanced technology does not guarantee its successful adoption in the learning process. As humans, students naturally evaluate new tools based on how helpful and approachable they seem. According to the Technology Acceptance Model (TAM) by Davis (1989), two key factors determine whether users are willing to adopt a new technology: Perceived Usefulness (PU) the belief that the technology will improve their performance and Perceived Ease of Use (PEOU) the belief that the technology will be easy and effortless to use (Kelly & Palaniappan, (2023); Yuyu'Palangan & Frederik, (2024); Harsanto, et al, (2023)). These factors heavily influence the behavioral intention and actual usage of technology in educational settings.

If students perceive ChatGPT as beneficial for enhancing their English skills and find it easy to interact with, they are more likely to embrace and utilize it effectively (Wang, (2025); Qu & Wu, (2024); Almogren et al, 2024). For instance, students who find ChatGPT helpful in clarifying English grammar rules or providing vocabulary suggestions are more motivated to use it regularly in their studies. On the contrary, if they experience difficulties, technical issues, or feel disconnected from the technology, even the most sophisticated tools may be

abandoned. This emphasizes the importance of designing user-friendly, supportive, and culturally responsive AI systems that align with students' educational needs and expectations.

Understanding students' perceptions, therefore, is not only about measuring satisfaction but about acknowledging the human experience behind technology adoption their hopes, frustrations, motivations, and challenges. It is critical to examine how students interact with ChatGPT in real-world settings, what benefits they perceive, what obstacles they encounter, and how they navigate the opportunities and limitations of the technology. Such understanding can inform improvements in AI design, instructional practices, and policy development to enhance the educational value of technology.

Although research on AI applications in education has expanded rapidly, studies specifically examining students' perceptions of ChatGPT in English learning contexts remain scarce (Stöhr, et al, (2024); Obenza, et al, (2024); Adiyono, et al, (2025). Most existing research has focused on general AI tools like ChatGPT, leaving a gap in understanding how ChatGPT is received by students in real educational settings. Considering the unique features and platforms through which ChatGPT operates, it is crucial to investigate its specific impact and user experience among high school learners who represent a significant and growing segment of technology adopters in education.

Recognizing this gap, the present study seeks to explore students' perceptions of using ChatGPT in the English learning process at SMA Negeri 5 Pematangsiantar. By focusing on perceived usefulness and perceived ease of use, this research aims to shed light on students' real experiences, offering insights for educators, developers, and policymakers to ensure that technology truly serves its purpose supporting, not replacing, the human spirit in learning. The results of this study are expected to contribute to the development of more effective AI-based educational tools and strategies that are inclusive, empowering, and aligned with students' aspirations for academic success and personal growth.

## RESEARCH METHOD

This research is a survey research in qualitative. The data gathered from the questionnaire was statistically calculated using Spreadsheet Software (MS Excel). Subsequently, the questionnaire data was presented in numbers, using numerical representations, and elaborated upon using descriptive paragraphs or qualitative analysis. Bogdan and Taylor (1975) in Sari (2022:20) define qualitative research as a research approach that gathers descriptive data on individuals or their behaviour. The researcher

employed a closed-ended questionnaire to obtain information regarding how students feel about using ChatGPT when learning English. The questionnaire allowed the students to provide organized answers, hence making it easier for extensive analysis. The questionnaire had 20 statements which were clustered into two broad dimensions according to the Technology Acceptance Model (TAM) of Davis: Perceived Usefulness (PU)—it quantifies how helpful ChatGPT is in improving the English language ability of the students, and Perceived Ease of Use (PEOU)—quantifying how convenient it is for students to employ ChatGPT in learning English

Likert scale table based on Rensis Likert (1932)

Table 1. Table of Likert Scale

|                        |   |
|------------------------|---|
| Strongly Agree (SA)    | 4 |
| Agree (A)              | 3 |
| Disagree (D)           | 2 |
| Strongly Disagree (SD) | 1 |

The research uses online questionnaires to collect the data for this research. The following are some of the techniques the research conducted when gathering data: 1). Formulating questions from the research questions to complete the questionnaire on a 4-point Likert scale. 2). Creating the online form using Google Forms and its testing for functionality. 3). Sampling the class by selecting one class (e.g., X-1) and providing notice to participants. 4). Distribution of the questionnaire via email, WhatsApp, or school websites with a deadline. 5). Collecting answers and checking back with participants for complete and valid data. 6). Analysis of data by converting answers to a spreadsheet and using statistical methods in interpreting it. 7). Drawing conclusions by synthesizing results and matching them with the research goals.

Table 2. Participant Questionnaire Sheet

| No  | STATEMENT   |
|---|---|
| Perceived Usefulness (PU) – How ChatGPT Helps in Learning English |   |
| 1   | ChatGPT helps me learn and remember new English words more easily.                |
| 2   | The explanations ChatGPT gives for words and phrases are clear and useful.        |
| 3   | ChatGPT makes learning English grammar simpler and easier to understand.          |
| 4   | I feel more confident using English after practicing with ChatGPT.                |
| 5   | ChatGPT helps me improve my writing skills by giving suggestions and corrections. |
| 6   | I can form better English sentences thanks to ChatGPT's explanations.             |

|   |  |
|---|--|
| 7   | ChatGPT gives me opportunities to practice speaking English in a fun way.      |
| 8   | Using ChatGPT has improved my ability to understand spoken English.            |
| 9   | ChatGPT makes learning English more engaging and enjoyable.                    |
| 10  | Overall, I think ChatGPT is an effective tool for improving my English skills. |
| Perceived Ease of Use (PEOU) – How Easy It Is to Use ChatGPT for Learning |  |
| 11  | ChatGPT is simple and easy to use for learning English.                        |
| 12  | I don't have trouble understanding how to use ChatGPT.                         |
| 13  | The instructions and responses from ChatGPT are clear and easy to follow.      |
| 14  | I can quickly find the information I need when using ChatGPT.                  |
| 15  | ChatGPT explains things in a way that's easy for me to understand.             |
| 16  | I like that I can use ChatGPT to learn English at my own pace.                 |
| 17  | I don't need advanced technical skills to use ChatGPT for learning English.    |
| 18  | I can access ChatGPT anytime and anywhere when I need help with English.       |
| 19  | It's convenient to use ChatGPT as a learning tool.                             |
| 20  | Overall, ChatGPT is both easy to use and useful for improving my English.      |

## RESULT AND DISCUSSION

### Data Analysis

This section presents the descriptive component of the data collection conducted by the researcher on the students of SMA Negeri 5 Pematangsiantar. A questionnaire was administered to the students to explore their perceptions of how the use of ChatGPT enhanced their English learning. The questionnaires consisted of 10 statements related to Perceived Usefulness (PU) and 10 statements related to Perceived Ease of Use (PEOU). The students' responses to the questionnaire were used to determine the impact of using ChatGPT on the improvement of their English learning experience.

Therefore, the findings from the data presented in this chapter. The data were evaluated using a qualitative approach with a 4-point Likert scale: SA (Strongly Agree), A (Agree), D (Disagree), and SD (Strongly Disagree).

Table 2. Students Result in Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

| Variable                  | Statement | SA<br>(4) | A<br>(3) | D<br>(2) | SD<br>(1) | Total |
|---------------------------|-----------|-----------|----------|----------|-----------|-------|
| Perceived Usefulness (PU) | 1         | 10        | 22       | 3        | 1         | 36    |
|                           |           | 28%       | 61%      | 8%       | 3%        | 100%  |
|                           | 2         | 8         | 20       | 7        | 1         | 36    |
|                           |           | 22%       | 56%      | 19%      | 3%        | 100%  |

|                                 |     |     |     |     |      |      |
|---------------------------------|-----|-----|-----|-----|------|------|
| Perceived Ease<br>of Use (PEOU) | 3   | 11  | 17  | 7   | 1    | 36   |
|                                 |     | 31% | 47% | 19% | 3%   | 100% |
|                                 | 4   | 9   | 17  | 9   | 1    | 36   |
|                                 |     | 25% | 47% | 25% | 3%   | 100% |
|                                 | 5   | 7   | 23  | 5   | 1    | 36   |
|                                 |     | 19% | 64% | 14% | 3%   | 100% |
|                                 | 6   | 9   | 21  | 5   | 1    | 36   |
|                                 |     | 24% | 60% | 13% | 3%   | 100% |
|                                 | 7   | 10  | 16  | 8   | 2    | 36   |
|                                 |     | 28% | 44% | 22% | 6%   | 100% |
|                                 | 8   | 7   | 21  | 7   | 1    | 36   |
|                                 |     | 20% | 58% | 19% | 3%   | 100% |
|                                 | 9   | 6   | 22  | 7   | 1    | 36   |
|                                 |     | 17% | 61% | 19% | 3%   | 100% |
|                                 | 10  | 5   | 27  | 3   | 1    | 36   |
|                                 |     | 14% | 75% | 8%  | 3%   | 100% |
|                                 | 11  | 6   | 22  | 7   | 1    | 36   |
|                                 |     | 18% | 70% | 3%  | 3%   | 100% |
|                                 | 12  | 11  | 21  | 3   | 1    | 36   |
|                                 |     | 31% | 58% | 8%  | 3%   | 100% |
| 13                              | 7   | 23  | 5   | 1   | 36   |      |
|                                 | 19% | 64% | 14% | 3%  | 100% |      |
| 14                              | 10  | 22  | 3   | 1   | 36   |      |
|                                 | 27% | 62% | 8%  | 3%  | 100% |      |
| 15                              | 8   | 22  | 5   | 1   | 36   |      |
|                                 | 22% | 61% | 14% | 3%  | 100% |      |
| 16                              | 7   | 20  | 5   | 4   | 36   |      |
|                                 | 19% | 56% | 14% | 11% | 100% |      |
| 17                              | 9   | 21  | 5   | 1   | 36   |      |
|                                 | 25% | 58% | 14% | 3%  | 100% |      |
| 18                              | 12  | 21  | 2   | 1   | 36   |      |
|                                 | 33% | 58% | 6%  | 3%  | 100% |      |
| 19                              | 9   | 23  | 2   | 1   | 36   |      |
|                                 | 26% | 65% | 6%  | 3%  | 100% |      |
| 20                              | 9   | 29  | 1   | 1   | 36   |      |
|                                 | 14% | 80% | 3%  | 3%  | 100% |      |

The table above illustrated the students' responses to the questionnaire. The number of statements provided comes from the students' perceptions regarding Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) of using ChatGPT. Among the 36 students who responded to 10 PU statements, a total of 360 responses concerning perceived usefulness were recorded: 82 indicated strong agreement (Strongly Agree - SA), suggesting that the students found the impact of ChatGPT on their learning to be highly significant; 210 indicated agreement (Agree - A), showing that the majority of students perceived a positive effect of ChatGPT in supporting their English learning; 66 were neutral (Disagree - D), indicating that these students neither agreed nor disagreed about ChatGPT's impact on their learning; and 12 showed strong disagreement (Strongly Disagree - SD), reflecting that a small portion of students had a negative perception regarding the use of ChatGPT for learning enhancement.

In the context of perceived ease of use (PEOU), data from the 36 students who responded to 10 statements resulted in a total of 360 responses: 98 selected strongly agree (SA), 234 selected agree (A), 40 selected neutral (D), and 8 selected strongly disagree (SD). These findings indicated that the majority of students found ChatGPT easy to use in supporting their learning process.

The results above represented the entire group of students, with 36 students serving as the primary representation of ChatGPT users in the English learning environment. These students showed positive responses regarding the impact of using ChatGPT, particularly in terms of its usefulness and ease of use. Although a small number of students expressed disagreement or neutral attitudes, the majority indicated that ChatGPT helped them accelerate their understanding of materials, improve their English skills, and provided a more interactive learning experience.

This representation helped generalize the findings to a larger group and ensures that the conclusions drawn are relevant and applicable to the use of ChatGPT as a learning aid in English education. The students who provided these responses come from diverse learning backgrounds and styles, offering a comprehensive view of the various methods that can support technology-assisted learning. Their feedback highlights general trends as well as individual differences, enriching the overall understanding of the educational benefits gained from using ChatGPT in learning.

## Research Findings

This section presents the results of the research on students' perceptions of the use of ChatGPT in English learning at SMA Negeri 5 Pematangsiantar. Data were collected through a structured questionnaire consisting of 16 statements related to the aspects of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) and 10 additional statements regarding students' perceptions of the effectiveness and ease of ChatGPT. The responses were analyzed to understand the extent to which ChatGPT was effective in supporting the English learning process among students.

The following are the findings based on each statement:

1. ChatGPT helps me learn and remember new English words more easily.

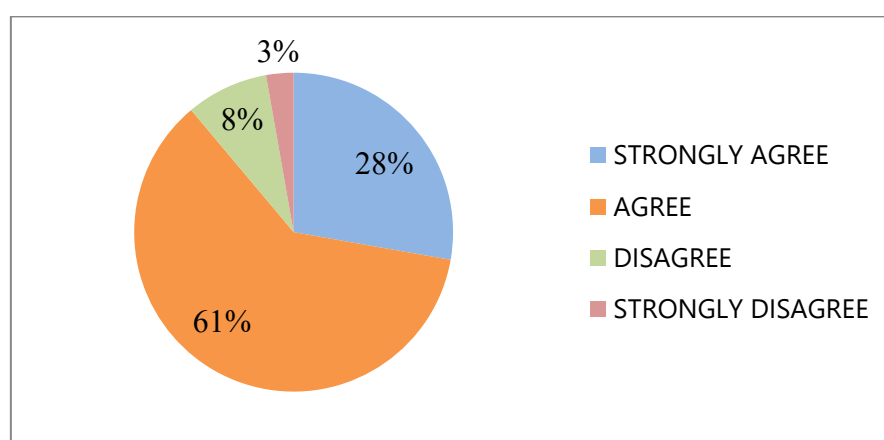


Figure 1. Perceived Usefulness Results

The data represented in Figure 4.1 reveals that among the 36 students surveyed, 10 students (28%) strongly agreed that ChatGPT helps them learn and remember new English words more easily, while 22 students (61%) agreed with this statement. In contrast, only 3 students (8%) disagreed and just 1 student (3%) strongly disagreed. These findings demonstrate that a significant majority of students (89% in total) perceive ChatGPT as beneficial for English vocabulary acquisition. The predominantly positive feedback suggests that many students find ChatGPT to be an effective technological tool that supports their vocabulary learning process, potentially due to its interactive and responsive nature. It indicates that AI-powered language tools like ChatGPT may serve as valuable supplements to traditional vocabulary learning methods in educational settings.

## 2. ChatGPT is simple and easy to use for learning English.

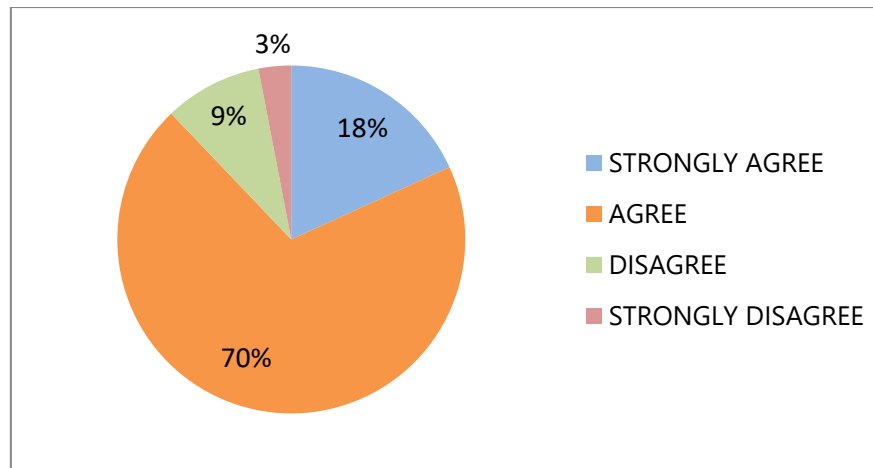


Figure 2. Perceived Ease of Use Results

Regarding the ease of use of ChatGPT in the context of English learning, the majority of students also gave a positive assessment. A total of 23 students (70%) agreed that ChatGPT was simple and easy to use for learning English. In addition, 6 students (18%) strongly agreed with this statement, indicating that the interface and way ChatGPT works were considered intuitive and not difficult for most users. However, there was a small number of students who had different experiences, with 4 students (9%) disagreeing and 1 student (3%) strongly disagreeing. This may be due to differences in digital literacy levels or preferences for different user interfaces. However, overall, the majority of students (88% combined) felt that ChatGPT was an easy-to-access and easy-to-use tool to support their English learning.

### Discussion

The researcher has discussed and examined the research topic regarding students' responses toward the use of ChatGPT in enhancing English learning. The researcher distributed questionnaires to the students to collect data. This research covered two key aspects: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) in the context of using ChatGPT in English learning activities.

Most students gave positive responses towards the use of ChatGPT as a learning medium for English. Students' perspectives on the role of ChatGPT in improving their English skills were gathered through data analysis, which revealed that the majority of responses fell into the "strongly agree" and "agree" categories for both the usefulness and ease of use aspects. A small number of students expressed disagreement, and only a few selected

"strongly disagree," indicating that overall negative perceptions of using ChatGPT for learning were minimal.

The statements regarding Perceived Usefulness focused on how ChatGPT helped students understand English materials, expand their vocabulary, improve reading and writing skills, and comprehend grammatical structures. Although some students answered "disagree" and "strongly disagree," it does not necessarily reflect a wholly negative experience. Rather, it indicated a variation in individual experiences depending on their familiarity with technology or learning preferences. Most students indicated that using ChatGPT enriched their learning experience and made learning English more interactive and engaging.

The statements related to Perceived Ease of Use highlighted how easily students could access, navigate, and interact with ChatGPT. Most students found ChatGPT very easy to use, from understanding prompts, entering questions, to receiving helpful answers. Although there were a few "disagree" responses, the number was very small compared to the positive responses. It showed that the students could use ChatGPT without major technical difficulties or confusion in system navigation.

The use of technology like ChatGPT in English learning has fostered greater enthusiasm among students in developing their language skills in a more innovative way. This method offered a different learning atmosphere compared to traditional methods, thus attracting students to actively use English in real contexts. Here, students learned not only through theory but also through direct communication experiences with AI, enriching their vocabulary, improving sentence structures, and boosting their confidence in using English.

The results of this research show that out of a total of 720 responses, 170 (22.28%) selected "strongly agree," 470 (61.60%) selected "agree," 99 (12.97%) selected "disagree," and only 24 (3.14%) selected "strongly disagree." It indicated that approximately 83.88% of the overall student responses toward using ChatGPT in English learning were positive. These findings strengthen the conclusion that ChatGPT serves as an effective learning aid for improving students' English skills at SMA Negeri 5 Pematangsiantar.

The researcher concluded that all aspects related to Perceived Usefulness and Perceived Ease of Use have been successfully identified in this study. Its conclusion is supported by Morgan's theory (1987) in Nurhayati (2020:7), which states that perception is the total result of an individual's sensory experiences toward various stimuli. Students' perceptions of ChatGPT as an English learning medium demonstrated that they felt

supported in expanding their vocabulary, understanding language usage contexts, and building better English literacy skills.

Although a small number of students faced challenges in using ChatGPT, overall, the use of this technology provided a pleasant, meaningful, and innovative learning experience for students. It showed that integrating AI-based technology into education, such as ChatGPT, holds great potential to be implemented in English learning at the senior high school level. The researcher recommended that the use of ChatGPT continue to be developed within the educational context, with appropriate guidance provided to help students maximize its benefits and address minor obstacles that may arise.

Researcher argued that ChatGPT serves as an effective tool for English language learning, helping students not only to expand their vocabulary but also to better understand English terms, improve their reading and writing skills, and strengthen their use of English in everyday communication. With a more intensive and strategic approach, the use of ChatGPT is expected to further improve the quality of English learning in the future.

## CONCLUSION

This research aims to determine students' perceptions regarding the use of ChatGPT in learning English. The results and discussion above evaluate students' perceptions regarding the use of ChatGPT in improving English language skills among eleventh grade students at SMA Negeri 5 Pematangsiantar. There are 20 statements in the questionnaire consisting of 10 statements regarding Perceived Usefulness (PU) and 10 Perceived Ease of Use (PEOU).

Learning English requires media innovation that is relevant to students' needs. One of these innovations is the use of AI-based technology such as ChatGPT. ChatGPT has become a new phenomenon in the world of education because of its ability to help students interact using English directly. As an AI-based tool, ChatGPT provides opportunities for students to learn English independently outside the classroom. Although not a pure educational application, ChatGPT is still able to enrich students' learning experiences by providing example sentences, new vocabulary, grammar explanations, and improving reading, writing, and speaking skills in English. The advantages of ChatGPT include ease of access, real-time language interaction, assistance in understanding language context, and opportunities to expand vocabulary and increase students' confidence in using English. Students' perceptions of the use of ChatGPT are very important, because their attitudes and motivations have a major impact on learning

success.

Students showed a positive response to the use of ChatGPT in learning English. Although ChatGPT is very helpful, students still need to get used to using this application actively so that their language skills continue to develop. Based on the results of the study, eleventh grade students at SMA Negeri 5 Pematangsiantar showed a high level of acceptance of ChatGPT as a tool in learning English. Most students felt that ChatGPT helped them understand new vocabulary, improve their use of grammar, and improve their writing and speaking skills. In addition, students also felt the benefits of ease of use and flexibility to learn anytime and anywhere. These findings indicate that ChatGPT can be an effective medium in supporting independent English learning, by creating a more interesting and interactive learning atmosphere without excessive pressure.

#### REFERENCES

- Adiyono, A., Al Matari, A. S., & Dalimarta, F. F. (2025). Analysis of Student Perceptions of the Use of ChatGPT as a Learning Media: A Case Study in Higher Education in the Era of AI-Based Education. *Journal of Education and Teaching (JET)*, 6(2), 306-324.
- Al-Jahwari, M., & Yousif, M. J. (2024). The Impact of AI Tools on Education: ChatGPT in Focus. *Artificial Intelligence & Robotics Development Journal*, 4(4), 314-336.
- Almogren, A. S., Al-Rahmi, W. M., & Dahri, N. A. (2024). Exploring factors influencing the acceptance of ChatGPT in higher education: A smart education perspective. *Heliyon*, 10(11).
- Alone, M. S. D. RE-IMAGINING EDUCATION: A FRAMEWORK FOR EDUCATIONAL TRANSFORMATION IN INDIA. *Re-imagining Education*, 10.
- Asoke, S., & Chinmoy, M. (2024). Artificial intelligence in education Revolutionizing Learning and Teaching. *Red Shine*, 88.
- Deng, R., Jiang, M., Yu, X., Lu, Y., & Liu, S. (2024). Does ChatGPT enhance student learning? A systematic review and meta-analysis of experimental studies. *Computers & Education*, 105224.
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable operations and computers*, 3, 275-285.
- Harsanto, W. A., Matondang, N., & Wibowo, R. P. (2023). The use of technology acceptance model (TAM) to analyze consumer acceptance towards e-commerce websites. A case of the Plantage. *id digital transformation solution. Journal of*

environmental and development studies, 4(2), 028-037.

- Kelly, A. E., & Palaniappan, S. (2023). Using a technology acceptance model to determine factors influencing continued usage of mobile money service transactions in Ghana. *Journal of Innovation and Entrepreneurship*, 12(1), 34.
- Koubaa, A., Boulila, W., Ghouti, L., Alzahem, A., & Latif, S. (2023). Exploring ChatGPT capabilities and limitations: A critical review of the nlp game changer. *Preprints. org*, 2023030438, 1-29.
- Lin, C. C., Huang, A. Y., & Lu, O. H. (2023). Artificial intelligence in intelligent tutoring systems toward sustainable education: a systematic review. *Smart Learning Environments*, 10(1), 41.
- McCarthy, A. M., Maor, D., McConney, A., & Cavanaugh, C. (2023). Digital transformation in education: Critical components for leaders of system change. *Social sciences & humanities open*, 8(1), 100479.
- Naamati-Schneider, L. (2024). Enhancing AI competence in health management: students' experiences with ChatGPT as a learning Tool. *BMC Medical Education*, 24(1), 598.
- Novita, P., & Yusof, M. R. (2024). University Students and ChatGPT: Redefining Learning in the Age of Artificial Intelligence. *English Language in Focus (ELIF)*, 7(1), 19-30.
- Obenza, B. N., Salvahan, A., Rios, A. N., Solo, A., Albuero, R. A., & Gabila, R. J. (2024). University students' perception and use of ChatGPT: Generative artificial intelligence (AI) in higher education. *International Journal of Human Computing Studies*, 5(12), 5-18.
- Prasetya, R. E., & Syarif, A. (2023). ChatGPT as a tool for language development: investigating its impact on proficiency and self-evaluation accuracy in Indonesian higher education. *Voices of English Language Education Society*, 7(3), 402-415.
- Qu, K., & Wu, X. (2024). ChatGPT as a CALL tool in language education: A study of hedonic motivation adoption models in English learning environments. *Education and Information Technologies*, 1-33.
- Rezai, A., Namaziandost, E., & Hwang, G. J. (2024). How can ChatGPT open promising avenues for L2 development? A phenomenological study involving EFL university students in Iran. *Computers in Human Behavior Reports*, 16, 100510.
- Sa'adah, M., Zainuddin, Z., & Hamdani, B. (2025). THE USE OF CHATGPT AS A SELF-LEARNING TOOL FOR ENGLISH LANGUAGE LEARNING AMONG UNIVERSITY STUDENTS. *Wiralodra English Journal (WEJ)*, 9(1), 182-197.
- Sabrina, S., Shafa, C. F., Ainun, A., Askia, N., Maisarah, P., & Susilawati, P. (2024).

- Effectiveness of ChatGPT vs. Perplexity AI in English Language Learning at the University of Serambi Mekkah. *IC-ITECHS*, 5(1), 983-992.
- Shihab, S. R., Sultana, N., & Samad, A. (2023). Revisiting the use of ChatGPT in business and educational fields: Possibilities and challenges. *BULLETT: Jurnal Multidisiplin Ilmu*, 2(3), 534-545.
- Stöhr, C., Ou, A. W., & Malmström, H. (2024). Perceptions and usage of AI chatbots among students in higher education across genders, academic levels and fields of study. *Computers and Education: Artificial Intelligence*, 7, 100259.
- Tan, X., Cheng, G., & Ling, M. H. (2024). Artificial Intelligence in Teaching and Teacher Professional Development: A Systematic Review. *Computers and Education: Artificial Intelligence*, 100355.
- Wang, Y. (2025). A Study on the Efficacy of ChatGPT-4 in Enhancing Students' English Communication Skills. *SAGE Open*, 15(1), 21582440241310644.
- Yayu'Palangan, C., & Frederik, R. (2024). Factors Influencing ChatGPT Adoption by Generation Z Students in Higher Education: Enhancing Academic Activities in Indonesia. *IEJST (Industrial Engineering Journal of the University of Sarjanawiyata Tamansiswa)*, 8(2), 0240203-0240203.