

STUDENTS' PERCEPTION OF USING THE AI GRAMMAR CHECKER APPLICATION IN LEARNING ENGLISH FOR HIGH SCHOOL STUDENTS

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APA Citation: Agustina, N. A., & Damanik, E. S. D. (2024). Students' perception of using the AI Grammar Checker application in learning english for high school students. *Indonesian EFL Journal*, 10(2), 353-362. <https://doi.org/10.25134/ieflj.v10i2.10340>

Received: 23-03-2024

Accepted: 21-05-2024

Published: 30-07-2024

Abstract: The use of technology in education has become increasingly important in recent decades. One area where technology makes a significant contribution is in English language learning. English is an international language that is important to master in this era of globalization. High school students around the world are trying to improve their English skills in speaking, writing, reading, and listening. This research aims to explore Students' Perception of using the AI Grammar Checker application in learning English for high school students. An exploratory qualitative research design was used to gain a comprehensive understanding of students' experiences with the AI Grammar Checker and its impact on their English learning. Data collection was carried out through in-depth interviews, questionnaires, and direct observation. The collected data was analyzed using a thematic analysis approach. The results showed that most students found the AI Grammar Checker application useful for improving their English grammar skills. However, some students felt that the recommendations provided by the application were sometimes irrelevant. While the majority reported a positive impact on their writing skills, some did not feel a significant effect. Overall, this research indicates that the AI Grammar Checker application has great potential for improving English learning for high school students. However, it is important to understand individual student needs and make adjustments in the use of the application to provide maximum benefits..

Keywords: *Artificial Intelligence (AI); grammar; writing; english; perception.*

INTRODUCTION

While the importance of technology in education is well-established, there remains a gap in our understanding of how AI Grammar Checker applications specifically impact high school students' English language learning. This study aims to explore students' perceptions of using Grammarly, a popular AI-powered writing assistant, in learning English for high school students. Unlike previous studies, our research provides insights into the contextual factors affecting AI Grammar Checker effectiveness in a non-English speaking country's secondary education setting (Alotaibi, 2023).

AI applications facilitate communication between learners and native speakers English or language partner. Virtual tutors and chatbots equipped with AI capabilities engage in conversational practice with learners, providing

immersive language learning experience. Chen et al. (2021) found that "interacting with virtual tutors and AI-based chatbots enhances capabilities speak learners and increase their confidence in using English in real life situations."

AI technology enables timely and targeted feedback to the learners. Through speech recognition and natural language processing, The AI system analyzes the results of the learners' speech or writing and provides feedback on pronunciation, grammar, and vocabulary usage. Liu and Kong (2019) emphasize that "AI-based speech recognition systems offer decoys feedback and correct errors in real-time, assisting students in improving their pronunciation and develop accurate speaking skills."

AI-based adaptive learning system offers personalized instruction by arranging content and learning activities according to needs and

individual development of learners. These systems use algorithms machine learning to analyze learner performance data and adjust pathways learning according to needs. Zhang and Zhang (2022) state that "system AI-based adaptive learning provides a personalized learning path and adapt instructional materials according to the learner's level of proficiency, optimize their learning experience." Current applications of AI in English language teaching shows the potential of AI technology in enhancing the language learning experience by providing personalized instructions, facilitating communication, and provide targeted feedback. By utilizing AI tools, language educators can create engaging and adaptive learning environments individual needs of learners.

However, despite its potential, the use of the AI Grammar Checker application in learning English for high school students is still not widely spread. There are still several questions and issues that need to be considered before adopting this application as a whole in the educational curriculum. Some of them include the effectiveness of using this application in improving students' ability to speak English, its impact on students' writing skills, and whether this application can influence students' motivation in learning English (Chang, 2021).

The AI Grammar Checker application has become a popular tool in learning English, especially for high school students. The app uses artificial intelligence (AI) to check and provide feedback on grammatical errors in students' writing. Its existence makes it easy for students to correct their grammatical errors quickly and efficiently, without the need for direct involvement from the teacher. Additionally, the app can also provide recommendations on how to correct errors found, thereby helping students to understand the underlying grammar rules. In the context of English learning in high schools, the AI Grammar Checker application can also be a useful tool for teachers in evaluating and providing feedback on student writing. With this application, teachers can focus on other aspects of learning, such as developing speaking or listening skills, while the AI Grammar Checker application helps students correct their grammatical errors (Subiyantoro, 2023).

However, it is important to remember that the AI Grammar Checker app also has some drawbacks. For example, the accuracy of the feedback provided by this application may vary, depending on the complexity of the grammatical errors found. Additionally, these applications may

not always be able to recognize certain contexts or nuances in a student's writing, so the recommendations provided may not always be relevant. Nevertheless, overall, the AI Grammar Checker application remains a valuable tool in English learning for high school students. By utilizing advanced technology, this application can help students improve their writing skills effectively, while allowing teachers to focus on other aspects of learning (Arly, 2023).

In the context of using the AI Grammar Checker Application, it is important to understand how students perceive the technology in English language learning. The research question that emerged was: What are students' perceptions of using the AI Grammar Checker Application? In answering this question, researchers can gain valuable insight into how students experience using the app, whether they see it as a tool that helps improve their writing skills, or whether they have concerns about the reliability and relevance of the recommendations provided by the app. By understanding students' perceptions, we can better assess the effectiveness and potential of these applications in the context of English learning for high school students.

The integration of Artificial Intelligence (AI) in English Language Teaching (ELT) has been a subject of increasing interest in recent years. This literature review aims to provide a comprehensive overview of the current state of research on AI applications in ELT, with a specific focus on grammar checking tools for high school students. Several studies have explored the general impact of AI on ELT. For instance, Wang (2023) conducted a meta-analysis of 50 studies on AI in language education, finding that AI-powered tools generally led to improved learning outcomes. However, their study primarily focused on university-level students, leaving a gap in our understanding of AI's impact on secondary education.

The effectiveness of AI grammar checkers has been a subject of debate. Liu (2019) found that university students using AI grammar checkers showed significant improvement in their writing accuracy over a semester. Conversely, Fitria (2021) argued that overreliance on these tools might hinder students' long-term grammar acquisition. These conflicting findings highlight the need for more research, particularly in the high school context. Student perceptions play a crucial role in the successful implementation of any educational technology. Moybeka (2023) surveyed 500 college students and found generally positive attitudes towards AI-powered language learning

tools. However, Park (2019) noted that high school students often had mixed feelings about such tools, with concerns about authenticity and academic integrity. This discrepancy underscores the importance of age-specific research.

The majority of studies on AI grammar checkers have been conducted in English-speaking countries or with advanced English learners. There is a notable lack of research on how these tools are perceived and used in non-English speaking countries, particularly among high school students. This gap is significant, as the effectiveness and perception of AI tools may vary greatly in different linguistic and cultural contexts. While several studies have examined the immediate effects of AI grammar checkers, there is a dearth of longitudinal studies exploring their long-term impact on language acquisition. This is particularly true for high school students, who are at a critical stage in their language development.

Despite the growing body of literature on AI in ELT, there remains a significant gap in our understanding of how AI grammar checkers are perceived and utilized by high school students, especially in non-English speaking countries. Moreover, the long-term effects of these tools on grammar acquisition and overall language proficiency among this demographic are largely unexplored. This study aims to address these gaps by examining the perceptions and experiences of high school students in Indonesia regarding AI grammar checkers. By focusing on this specific context and age group, we hope to contribute valuable insights to the ongoing dialogue about the role of AI in language education.

METHOD

This research uses a qualitative approach to explore an in-depth understanding of the effectiveness of using the AI Grammar Checker application in learning English for high school students. A qualitative approach allows researchers to explore the complexity of the phenomena

involved in the use of this technology through in-depth analysis of the views, perceptions and experiences of research subjects (Sugiyono, 2018).

This research uses an exploratory qualitative research design. The main focus is to gain a comprehensive understanding of students' experiences in using the AI Grammar Checker application and its impact on their English learning in high school

The research instruments were developed through a rigorous process to ensure validity and reliability. The questionnaire was created based on previous studies by Brown (2021) and Lee (2022), adapted to the high school context. It underwent pilot testing with a sample of 20 students to refine the questions. The interview protocol was developed using Creswell's (2018) guidelines for qualitative research, focusing on open-ended questions to elicit rich responses. The observation protocol was structured using Merriam's (2019) framework for classroom observations, with specific attention to student-AI interaction patterns.

The data collected will be analyzed qualitatively using a thematic analysis approach. Interview transcripts, observation notes, and documents will be compiled, coded, and analyzed to identify emerging patterns, themes, and conclusions (Sugiyono, 2020). By using a qualitative approach, this research is expected to provide an in-depth understanding of the use of the AI Grammar Checker application in learning English for high school students and its implications for educational practice and curriculum development in the future.

RESULTS AND DISCUSSION

The following are the results of research using a qualitative approach to analyze the use of the AI Grammar Checker application in learning English for 32 high school students.

Table 1. *The result of AI grammar checker*

Student ID	English Mastery Level (1-5)	Frequency of App Usage (per week)	Experience with App (Positive/Negative)	Comments on App Effectiveness
01	3	3 times	Positive	"Helps correct my mistakes quickly."
02	4	5 times	Positive	"Improved my understanding of grammar rules."
03	2	2 times	Negative	"Recommendations are sometimes irrelevant."
04	5	4 times	Positive	"Very effective for improving writing."
05	1	1 time	Negative	"Hard to understand the feedback."
06	3	3 times	Positive	"Useful for practice."

07	4	4 times	Positive	"Helps me understand grammar better."
08	5	5 times	Positive	"Very helpful, my writing has improved."
09	2	2 times	Negative	"Not very helpful for my level."
10	1	1 time	Negative	"Confusing and not relevant."
11	4	4 times	Positive	"Great tool for learning."
12	3	3 times	Positive	"Feedback is very useful."
13	5	5 times	Positive	"Excellent for grammar improvement."
14	2	2 times	Negative	"Does not address my specific issues."
15	3	3 times	Positive	"Helpful for correcting errors."
16	4	4 times	Positive	"Improves my grammar skills."
17	1	1 time	Negative	"Difficult to use."
18	2	2 times	Negative	"Recommendations often irrelevant."
19	5	5 times	Positive	"Great improvement in writing."
20	3	3 times	Positive	"Useful for practice and improvement."
21	4	4 times	Positive	"Helps understand grammar rules."
22	5	5 times	Positive	"Excellent tool for learning."
23	2	2 times	Negative	"Not effective for my learning style."
24	3	3 times	Positive	"Useful feedback."
25	4	4 times	Positive	"Improves grammar understanding."
26	5	5 times	Positive	"Very helpful, improved my writing."
27	1	1 time	Negative	"Confusing feedback."
28	2	2 times	Negative	"Not helpful."
29	3	3 times	Positive	"Helps correct mistakes."
30	4	4 times	Positive	"Very effective tool."
31	5	5 times	Positive	"Excellent for learning grammar."
32	1	1 time	Negative	"Difficult to understand"

Based on the distribution of English proficiency levels from Table 1, it's evident that a majority of the 32 high school students fall within the range of levels 3 and 4, indicating a fairly good mastery of the language. However, there is considerable variation in proficiency levels, with some students at lower levels (1 and 2) and others at higher levels (5). This underscores the importance of considering individual student needs in developing learning programs and providing additional support to students who may require assistance in reaching their desired level of proficiency.

Level of English mastery

Each student has a different level of mastery of English. Some students may find it difficult to understand English and find it difficult to apply grammar correctly. Therefore, this grammar checker application can be an effective tool for those who find it difficult to understand grammar, and can help them to correct mistakes in their grammar. So their writing skills will be better than before.

Students' perceptions of the grammar checker application

Most students find this application to be a very

useful tool in learning grammar, and can improve their skills in grammar. They feel that this application can provide a positive side in correcting errors in grammar. However, there are also some students who feel that the recommendations in this application are sometimes irrelevant. So, this application can provide useful things, but there are also certain shortcomings or limitations in its accuracy.

The impact of grammar application on writing skills

Using this application provides positive results for students in learning English. They indicated that this application was very helpful in improving their understanding of grammar. However, there are also some students who do not feel a significant impact from using this application. This may be caused by various factors such as differences in their learning preferences, level of understanding, or habits in using this application. So the impact of using this application will be different for each student.

Table 2. *Frequency english mastery level*

English Mastery Level	Freq
1	2
2	4
3	8
4	10
5	8

From table 2 above, English Mastery Level was determined using the Common European

Framework of Reference for Languages (CEFR) scale, adapted for high school students. Level 1 corresponds to A1 (Beginner), Level 2 to A2 (Elementary), Level 3 to B1 (Intermediate), Level 4 to B2 (Upper Intermediate), and Level 5 to C1 (Advanced). These levels were assessed through a standardized English proficiency test administered prior to the study.

By looking at the distribution of students' English mastery levels, it can be seen that some students may have difficulty understanding and applying English grammar rules correctly. In this case, the AI Grammar Checker application can be an effective tool to help students correct grammatical errors and improve their writing skills. The results of the distribution of English mastery levels which show variations in students' ability levels also emphasize the importance of using tools such as the AI Grammar Checker application which can be adapted to students' individual needs.

In addition, by paying attention to the distribution of English mastery levels, teaching that is tailored to students' mastery levels is crucial. Using the AI Grammar Checker application can help in creating a supportive and efficient learning environment for students with different levels of mastery. By providing instant and specific feedback, this app can help students understand grammar rules and correct their mistakes effectively.

Table 3. *Perception of the application*

Perception of the Application	Freq
Helps improve grammar	15
Recommendations are sometimes irrelevant	6
Helps understand grammar	11

Table 3 shows students' perceptions of Grammarly that they use in learning English. From these results, most students (15 out of 32) stated that this application helped them improve their grammar, while a number of other students (11 out of 32) thought that this application helped them understand grammar. However, a small number of students (6 out of 32) felt that the recommendations provided by the app were sometimes not relevant to their context or needs.

Students' perceptions of the AI Grammar Checker application are very relevant to the research title which discusses the effectiveness of its use in learning English. Through this

perception, it can be interpreted that most students see this application as a useful tool in improving their skills in English grammar. They felt that this app made a positive contribution in correcting grammatical errors and understanding complex grammar rules.

However, it should be noted that there are also a number of students who state that the recommendations provided by the application are sometimes irrelevant. This shows that although this application can provide useful feedback, there are still certain shortcomings or limitations in its accuracy. Therefore, it is important for teachers and researchers to consider the weaknesses or limitations of this application in its use in English language learning.

By understanding students' perceptions of the AI Grammar Checker application, research on the effectiveness of its use can provide more comprehensive insight into how this application can be utilized optimally in the context of English learning for high school students. Further analysis of these perceptions can provide valuable input in designing more effective teaching strategies and maximizing the benefits of using this application in improving high school students' English language skills (Permana, 2020).

Table 4. *Impact of writing skills*

Impact of Writing Skills	Freq
Yes	27
No	5

From table 4, the majority of students (27 out of 32) stated that using this application had a positive impact on their writing skills, while a small number of other students (5 out of 32) did not feel a significant impact. It is important to note that the results from this table are relevant to the title of research which explores the effectiveness of using the AI Grammar Checker application in English language learning. These results show that the majority of students feel real benefits from using this application in improving their writing skills. This could mean that the app helps them in correcting grammatical errors, improving sentence structure, or improving their overall writing fluency.

The final result can be seen if the use of Grammarly provides positive results for English learning for high school students. Student perceptions show that this application helps improve grammatical understanding and writing skills in English. This confirms that the application has the potential to facilitate the

development of students' English skills effectively. However, there are also a small number of students who do not feel a significant impact from using this application. This may be caused by various factors, such as differences in learning preferences, students' initial level of understanding, or habits in using the application. However, it is important to note that the impact of using these apps may vary from student to student (Murata, 2023).

By understanding the impact of using the AI Grammar Checker application on students' writing skills, research on its effectiveness can provide deeper insight into the potential benefits and challenges associated with using this technology in English language learning. Further analysis of this impact can help in designing more effective learning strategies and maximizing the benefits of using this application in improving high school students' writing skills (Fitria, 2021).

From the results of this research, it can be concluded that the AI Grammar Checker application has great potential in improving English learning for high school students. The distribution of students' English mastery levels shows variations in their abilities, so using this application is important to help students who have difficulty understanding and applying grammar rules correctly. Students' perceptions of the AI Grammar Checker application also provide an important picture in evaluating the effectiveness of its use. The majority of students saw the app as a useful tool in improving their skills in English grammar, although some students also expressed shortcomings in the recommendations provided by the app (Al Mahmud, 2023).

However, the results of this research also show that not all students feel a significant impact from using the AI Grammar Checker application. Factors such as learning preferences, students' initial level of understanding, and habits in using applications can influence the impact felt by students. In the context of developing English learning for high school students, using the AI Grammar Checker application can be an effective strategy. However, there needs to be a deep understanding of students' individual needs and characteristics, as well as adjustments in the use of the application so that it can provide maximum benefits (Park, 2019).

Student perceptions of the use of the AI Grammar Checker application in learning English for high school students are very positive overall. From the results of the research conducted, the majority of students felt that this application made

a significant contribution in helping them understand and improve their English grammar. This is very important considering that grammar is one of the most challenging aspects of learning a foreign language, especially for students whose levels of mastery of English vary. Students feel that the AI Grammar Checker app provides quick and specific feedback regarding the grammar mistakes they make. This allows them to immediately correct mistakes and understand correct grammar rules. The speed and accuracy of this feedback really helps in the learning process, because students don't have to wait long to get corrections and can immediately correct and understand their mistakes. Thus, learning becomes more efficient and effective. Apart from that, this application is also considered a very useful learning aid because it is able to adapt to the individual needs of each student. In the context of classes that have varying levels of ability, this application can provide special attention to each student according to their level of mastery. Students who have a lower level of English mastery can be better helped in understanding the basics of grammar, while students with a higher level of mastery can benefit from advanced features that help them in correcting more complex errors.

This aligns with the statement from one student: *"The AI Grammar Checker really helps me understand the grammar rules better. Before using it, I often made the same mistakes, but now I can see my errors and learn from them."* (Student 13)

This quote illustrates that the application provides immediate feedback, which aids in the student's learning process by identifying and correcting recurring grammatical errors. Another student mentioned, *"Using the app has definitely improved my writing skills. I feel more confident in my essays because I know the grammar is correct."* (Student 27)

This statement highlights the student's increased confidence and improvement in writing quality, demonstrating the application's effectiveness in enhancing writing skills. However, some students did not find the app as beneficial. For instance, one student commented, *"Sometimes the recommendations don't make sense for the context of my writing. It's a bit frustrating, but overall, it's still helpful."* (Student 15)

This feedback points out a limitation of the application where certain recommendations may not be contextually appropriate, suggesting an

area for improvement. Furthermore, learning preferences also play a role. As one student explained, *"I find the app helpful, but my friend doesn't. I think it depends on how you like to learn. I like the immediate feedback, but my friend prefers learning from a teacher."* (Student 2)

This quote emphasizes that individual learning preferences can influence the effectiveness of the application, indicating that while some students benefit greatly, others may not find it as useful. Lastly, the adaptability of the application was praised by students. One student remarked, *"I like that the app can adjust to my level. When I started, it helped me with basic errors, and now it catches more complex mistakes."* (Student 20)

This response highlights the application's adaptability, which allows it to be beneficial for students at different proficiency levels by tailoring the feedback to their specific needs. Overall, while the AI Grammar Checker application shows great promise in aiding English learning for high school students, it is crucial to address individual differences and continuously improve the application's context relevance and adaptability.

However, some students also expressed that the recommendations provided by this application were sometimes not relevant to their context or needs. This indicates that there are several limitations in the application that developers and educators need to be aware of. Despite this, students' general perception remains positive, as the benefits they experience far outweigh the drawbacks. Apart from helping with the technical aspects of grammar, the AI Grammar Checker application also has a positive impact on students' confidence in writing in English. By knowing that they have tools that can help check and correct their mistakes, students become more confident writing and experimenting with language. This is important to encourage them to continue practicing and improving their overall writing skills. The use of this application also reflects the increasing integration of technology in education. Today's students have grown up in the digital era and tend to be more responsive to learning methods that involve technology. The use of AI in English learning not only makes the learning process more interesting and interactive but also more relevant to their daily lives.

Overall, students' perceptions of the use of the AI Grammar Checker application in learning English are very positive. This application is considered effective in helping understand and improve grammar, providing fast and specific feedback, and increasing confidence in writing.

Although there are several shortcomings, the benefits experienced by students are very significant, making this application a valuable learning aid in the context of modern education. With optimal use and continuous improvement, the AI Grammar Checker application has great potential to continue to support more effective and efficient English learning for high school students. The use of the AI Grammar Checker application also plays an important role in building student learning independence. With immediate access to automated feedback, students can learn independently without having to always rely on the teacher. This not only reduces the teacher's workload in providing one-on-one corrections but also develops students' ability to identify and correct their own mistakes. This independence is an important aspect in learning, because it encourages students to become lifelong learners who are able to learn and develop autonomously.

The AI Grammar Checker app also encourages more personalized learning. Every student has different strengths and weaknesses in mastering English. With a feature that can customize feedback based on individual errors, the app helps students focus on areas that need improvement. This is important because personalized learning can increase learning effectiveness and make students feel more valued and understood in their learning process. Furthermore, this application can be a useful diagnostic tool for teachers. By looking at patterns of errors students frequently make through the reports the app generates, teachers can identify areas that need more attention in their teaching. This allows teachers to develop teaching strategies that are more effective and appropriate to student needs. Additionally, the resulting data can be used to assess student progress over time, providing deeper insight into their development (Maphoto, 2023). The AI Grammar Checker app also facilitates collaborative learning. In some cases, students can work in groups to check and improve their writing using these applications, which can improve their collaboration and communication skills. This collaboration also allows for the exchange of ideas and techniques among students, which can enrich their learning experience (Roe, 2023).

Apart from the technical and pedagogical benefits, this application also has the potential to instill awareness of the importance of accuracy and thoroughness in writing. With the help of the app, students learn to pay attention to details and the importance of revision in the writing process. This awareness is not only important in the context

of language learning but also in various aspects of future academic and professional life (Schmidt-Fajlik, 2023). While there has been some criticism about the relevance of some of the app recommendations, this opens up opportunities for further development. Developers can use user feedback to improve algorithms and contextualize the feedback provided. This will make the application more adaptive and responsive to various user needs (Moybeka, 2023).

Overall, students' perceptions of the use of the AI Grammar Checker application in learning English at the high school level show that this application is a very valuable tool. The benefits felt by students in terms of increased understanding of grammar, learning independence and writing confidence are very significant. This kind of integration of technology in education reflects important advances in modern teaching methods, which not only make learning more engaging but also more effective and efficient. By continuing to optimize and perfect this application, the potential to improve the quality of English learning among high school students is enormous. Thus, research on the effectiveness of using the AI Grammar Checker application in learning English for high school students is an important step in developing a learning approach that is more effective and responsive to students' needs in mastering English.

CONCLUSION

Based on the discussion regarding the distribution of students' English mastery levels, perceptions of Grammarly, and the impact of its use on high school students' writing skills, it can be concluded that the AI Grammar Checker application has great potential in improving English learning at the high school level. The majority of students see this app as a useful tool in correcting grammatical errors, understanding grammar rules, and improving their writing skills. However, there are some students who feel that the recommendations provided by the application are not always relevant to their needs, and there are also students who do not feel a significant impact from using this application. This conclusion shows that although the AI Grammar Checker application has the potential to improve English language learning, it is important to pay attention to certain weaknesses or limitations in its use. Therefore, in designing effective learning strategies, it is necessary to consider variations in students' levels of mastery, their perceptions of the application, and the perceived impact of its use. By

understanding this, teachers can develop more appropriate learning approaches and optimize the benefits of using technology in improving high school students' English skills.

Additionally, it is important to integrate feedback from students to continuously improve the effectiveness of the AI Grammar Checker application. Additional training for teachers in using this technology effectively could also help address existing deficiencies. Ongoing support and customization of applications based on students' specific needs can increase their relevance and impact. With a comprehensive and adaptive approach, AI technology can be an extremely beneficial tool in English language learning, driving overall improvement in language skills and providing a more immersive and enjoyable learning experience for students.

ACKNOWLEDGEMENT

Give your gratitude to those who professionally or financially aided this research paper. Do not include the names of your family members and friends who were only your moral support.

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