



## STUDENTS' PERCEPTIONS ON THE IMPACT OF ARTIFICIAL INTELLIGENCE ON ENGLISH GRAMMAR LEARNING

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### Article Info

#### Article History:

*Received 03 August 2023*

*Revised 23 September 2023*

*Accepted 26 September 2023*

*Available online 27*

*September 2023*

### Abstracts

Artificial Intelligence (AI) has made significant strides in various fields, including language-related tasks and educational applications. This study explores students' perceptions of the impact of Grammarly, an AI-powered writing assistant, on English grammar. Grammarly provides users with grammar and spelling correction, style suggestions, and writing enhancements. By investigating students' attitudes, experiences, and opinions regarding Grammarly, valuable insights can be gained into how this AI technology influences English grammar learning and writing proficiency. Through a mixed-methods approach involving surveys and interviews, data were collected from a diverse group of students across different educational institutions. The findings reveal multifaceted perspectives, highlighting the advantages, challenges, and implications of incorporating Grammarly as a grammar tool in language education. This research contributes to the existing knowledge on the integration of Grammarly and similar AI technologies, providing practical insights for educators, policymakers, and AI developers seeking to enhance English grammar instruction through innovative AI tools

#### Keyword:

Artificial Intelligence, Grammar, Perception

### Introduction

Technology is getting common in Education sector. The function of classroom technology develops teaching learning process and give new innovation in learning experiences. In learning, developing technologies such as Artificial Intelligence, Big Data Analysis, Cloud Computing, Augmented, and Virtual Reality are already finding their place. Applying the development of technology will lead to a transformation of educational models and re-image the way students' approach, learning altogether. There is an increasing preference for courses combining conventional, face to face learning with technological features of online learning environments. Developing the current education system using smart methods of learning using mobile apps, tablets, and laptops are gradually becoming the

norm (Kaliski et al., 2011). The practice of these technological solutions was eventually extended, and we won them in personal devices. Innovations are now what students encounter worldwide, expanding opportunities for teaching and developing educational experiences. Moreover, in cities and campuses around the world, artificial intelligence (AI) is now enhancing tools and instruments that are used day by day. From internet search engines, smartphone features, and apps. For example, the complex set of systems and software that power the Siri iPhone is a typical example of artificial intelligence solutions that become part of everyday experiences (MacFie & McNaught, 2019).

Artificial intelligence is a component of human intelligence, just as media is an extension of the human bod. As one of the most developed technologies at this stage, AI has also made many breakthroughs in the field of education. Simply put, AI simulates human intelligence science through computer. Artificial Intelligence (AI) has rapidly advanced in recent years, revolutionizing various aspects of our lives, including language-related tasks. Among the AI-powered writing assistants, Grammarly has emerged as a widely used tool that offers users grammar and spelling correction, style suggestions, and writing enhancements. Understanding students' perceptions of the impact of Grammarly on English grammar is crucial in assessing its potential as a valuable resource for grammar learning and writing improvement. This study aims to explore students' perspectives on the advantages, challenges, and implications of using Grammarly in English grammar instruction (Wang, 2019).

English grammar holds a pivotal role in language learning, providing learners with the necessary rules and structures for effective communication. Traditional grammar instruction typically relies on textbooks, teacher explanations, and extensive practice exercises. Beside that, technologies takes a part in affecting people from various aspects. Technology including computers, the internet, wireless devices, and social networks have transformed people's lifestyles regardless of age or gender (Hanafizadeh et al., 2017). However, the integration of AI technologies like Grammarly introduces new possibilities for supporting grammar learning. Grammarly is a grammar and spelling checker application that provides grammar, spell check, and plagiarism detection tools that can be accessed online via devices, PCs, or laptops and utilized directly through a web browser, desktop, or connected directly to Microsoft Office Word (Hadiat, 2022). Grammarly's AI-powered features offer real-time grammar and spelling correction, style suggestions, and clarity enhancements, potentially aiding students in improving their grammar skills and writing proficiency. In addition, it offers punctuation, synonyms (vocabulary usage), and plagiarism detection repairs. Grammarly's artificial intelligence (AI) system combines deep learning with various approaches to natural language analysis. Human language can be assessed and processed at multiple levels: through grammatical structures and phrases, through characters and individual phrases, including paragraphs or entire texts (Fitria, 2021).

Understanding students' perceptions of Grammarly's impact on English grammar is crucial for educators, policymakers, and AI developers. By gaining insights into students' attitudes, beliefs, and experiences, educators can better harness the potential of Grammarly as a grammar tool that aligns with learners' needs and preferences. Additionally, exploring students' perspectives can shed light on the challenges associated with integrating AI in grammar instruction and provide guidance for effective implementation strategies.

To achieve these objectives, a mixed-methods approach will be employed in this study. Surveys will be administered to gather quantitative data on students' attitudes towards Grammarly as a grammar tool, while in-depth interviews will provide qualitative insights into their experiences, opinions, and perceptions regarding its impact on English grammar

learning. The subsequent sections of this paper will provide a comprehensive review of relevant literature on the integration of AI technologies in language education. Additionally, the findings from the surveys and interviews will be presented, followed by a discussion of the implications for classroom practices and avenues for future research.

By examining students' perceptions of Grammarly's impact on English grammar, this study aims to contribute to the growing body of knowledge on the role of AI in language education. It provides valuable insights into the advantages, challenges, and implications of using Grammarly as a grammar tool, empowering educators, policymakers, and AI developers to make informed decisions about its integration into language instruction. Ultimately, this research seeks to enhance our understanding of the evolving landscape of English grammar learning in the era of AI technologies.

## Methods

This study utilized a mixed-methods approach to investigate students' perceptions of the impact of Grammarly, an AI-powered writing assistant, on English grammar. The research involved a sample of 20 undergraduate students majoring in English Education in the State Islamic University. Data collection involved online surveys and semi-structured interviews. The online survey consisted of close-ended questions and Likert scales to assess students' attitudes towards Grammarly and its impact on their grammar learning. Quantitative data from the surveys were analysed using descriptive statistics, identifying trends and patterns in students' responses. Qualitative data from the interviews were thematically analyzed, coding and categorizing transcripts to identify recurring themes.

## Results and Discussion

The study comprised a total of 20 participants, including 12 males and 8 females. The participants' age range varied from 18 to 25 years, with an average age of 21.5 years. The participants were 20 undergraduate students majoring in English Education in the State Islamic University of Sayyid Ali Rahmatullah Tulungagung.

Table 1. Questionnaire item result distribution

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean response
You use Grammarly frequently.	1	2	4	6	7	3.8
You are confident in Grammarly's grammar suggestions and corrections.	0	0	2	8	10	4.4
You believe that Grammarly has improved your ability to write grammatically correct sentences.	2	5	10	3	0	2.7
Grammarly has helped you in avoiding grammar errors in your writing.	0	0	1	7	12	4.55

You are satisfied with Grammarly as a grammar tool.	0	0	3	7	10	4.35
You are satisfied with Grammarly as a grammar learning tool.	2	3	3	7	5	3.3
Grammarly is effective in improving your English grammar.	2	3	7	7	1	2.6

Table above shows a questionnaire that was given to 20 students from prep-year in State Islamic University Sayyid Ali Rahmatullah Tulungagung. The students seemed to have an overall positive attitude of using artificial intelligence in learning English. The first statement (3.8) shows how frequently the student used the tool; the researcher described it as a moderate level of frequency in using Grammarly. The participant's responses suggest that they utilize Grammarly somewhat regularly but not necessarily on a consistent or frequent basis. They may turn to Grammarly for assistance with their writing occasionally or for specific purposes, but it is not a tool they rely on extensively in their writing routine.

In the second statement (4.4), the researcher describes it as a noteworthy level of confidence in Grammarly's grammar suggestions and corrections. The participant's responses indicate a strong belief in the reliability and efficacy of Grammarly's suggestions, showcasing their trust in the tool's ability to enhance their writing. The high mean response suggests that the participant is highly confident in Grammarly's grammar capabilities and likely relies on it as a reliable resource for improving their grammatical accuracy.

In the third statement (2.7), the researcher found it as a somewhat reserved belief in the impact of Grammarly on their writing skills. The participant's responses indicate a moderate level of uncertainty regarding the extent to which Grammarly has enhanced their ability to write grammatically correct sentences. It implies that the students may not attribute substantial improvement in their ability to write grammatically correct sentences to their usage of Grammarly.

However, in the fourth statement (4.55) it shows a strong endorsement of Grammarly's efficacy in error prevention. The participant's responses indicate a high level of agreement that Grammarly has been instrumental in helping them avoid grammar errors in their writing. They perceive Grammarly as a valuable tool that significantly assists them, as acknowledged by the researcher, in maintaining grammatical accuracy and preventing errors throughout their writing process.

The fifth statement (4.35) shows a strong level of satisfaction with Grammarly as a grammar tool. The participant's responses indicate a high degree of contentment and fulfilment with the functionality and performance of Grammarly. They express satisfaction with the tool's ability to assist them in improving their grammar and ensuring accuracy in their writing. Their high mean response suggests that they are genuinely pleased with Grammarly's features and overall performance.

The sixth statement (3.5) suggests a moderate level of satisfaction with Grammarly as a grammar learning tool. The participant's responses indicate that they have a certain level of contentment with Grammarly's role in facilitating their grammar learning process. This approach highlights that while the participant expresses some degree of satisfaction, there may be areas where they feel that Grammarly could further enhance their grammar learning experience. They may have identified specific features, resources, or learning methodologies that could be improved or expanded upon to better meet their learning needs. The seventh statement suggests a mixed perception of Grammarly's effectiveness in improving English

grammar. The participant's responses indicate that they have a moderate level of belief in Grammarly's ability to enhance their English grammar skills. It shows that the participant recognizes some effectiveness in Grammarly's impact on their grammar improvement, but they may not attribute a significant or transformative improvement solely to the tool. They may have experienced certain limitations or areas where Grammarly's effectiveness falls short of their expectations or desired outcomes.

According to the results of the questionnaire, the participants showed a positive perception of Grammarly's grammar suggestions, error avoidance capabilities, and satisfaction with it as a grammar tool. However, they expressed more reserved beliefs regarding its impact on improving their grammar skills and effectiveness as a grammar learning tool.

## Conclusion

In conclusion, this study provides valuable insight into students' perception of Grammarly's impact on English grammar. The finding indicates that Grammarly is a widely used and popular tool among students, with participants expressing a high level confidence in its grammar suggestions and corrections. It is evident that Grammarly effectively helps students in avoiding grammar errors in their writing, making it an efficient tool for error prevention. Participants also reported a high level of satisfaction with Grammarly as a grammar tool, highlighting its usefulness in their writing process. By understanding students' perception can work towards optimizing Grammarly's role as an effective tool for enhancing English grammar proficiency.

## References

- Allophane, R. A. (2021). Teachers and students' perceptions on the impact of artificial intelligence on English Language Learning in Saudi Arabia. *Journal of Applied Linguistics and Language Research*, 8(1).
- Fitria, T. N. (2021). Grammarly as AI-powered English Writing Assistant: Students' Alternative for Writing English. *Metathesis: Journal of English Language, Literature, and Teaching*, 5(1), 65. <https://doi.org/10.31002/metathesis.v5i1.3519>
- Fitriana, K. and Nurani, L. (2022). Exploring English Department Students' Perceptions on Using Grammarly to Check the Grammar in their Writing. *Journal of English Teaching*. pp. 15-25
- Gallagher, A., Thompson, A., & Howarth, M. (2018). "My robot is an idiot!" – Students' perceptions of AI in the L2 classroom. *Future-Proof CALL: Language Learning as Exploration and Encounters – Short Papers from EUROCALL 2018*, 2018(2018), 70–76. <https://doi.org/10.14705/rpnet.2018.26.815>
- Kaliks, J., Kalinowski, J., Schumann, P., Scott, T., & Shin, D. (2011). Competition In The eLearning Industry: A Case Study. *Journal of Business Case Studies (JBSCS)*, 4(2), 106. <https://doi.org/10.19030/jbcs.v4i2.4760>
- Keels, P. U., & Aydin, S. (2021). University Students' Perceptions About Artificial Intelligence. *Shan lax International Journal of Education*, 9(S1-May), 212–220. <https://doi.org/10.34293/education.v9is1-may.4014>
- MacPhie, J., & McNaught, C. (2019). The ethics of artificial nutrition. *Medicine (United Kingdom)*, 47(3), 166–168. <https://doi.org/10.1016/j.mpmed.2018.12.009>

- Phillips-Wren, G. (2012). AI tools in decision making support systems: A review. *International Journal on Artificial Intelligence Tools*, 21(2), 1–13. <https://doi.org/10.1142/S0218213012400052>
- Suma Kul, D. T. Y. G., Hameed, F. A., & Sukiyaki, D. (2022). Students' Perceptions of the Use of AI in a Writing Class. *Proceedings of the 67th TEFLIN International Virtual Conference & the 9th ICOELT 2021 (TEFLIN ICOELT 2021)*, 624, 52–57. <https://doi.org/10.2991/assehr.k.220201.009>
- Sumakul, D. T. Y. G., Hamied, F. A., & Sukyadi, D. (2022). Students' Perceptions of the Use of AI in a Writing Class. *Proceedings of the 67th TEFLIN International Virtual Conference & the 9th ICOELT 2021 (TEFLIN ICOELT 2021)*, 624, 52–57. <https://doi.org/10.2991/assehr.k.220201.009>
- Wang, R. (2019). Research on Artificial Intelligence Promoting English Learning Change. <https://doi.org/10.2991/emehss-19.2019.79>