



The Impact of Using Grammarly on Students' Performance in Writing

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Abstract

Writing acquisition is considered one of the most crucial targets for learners of English as a Foreign Language (EFL). It is widely accepted that the role of Artificial Intelligence (AI) is increasingly obvious in various fields, especially language. The increasing number of EFL learners has led to a number of intervention studies that have attempted to investigate the effect of Grammarly, an AI-powered writing assistant, on students' writing proficiency. A small number of studies have focused on Grammarly's influence on the EFL Iraqi university students' essay writing. Hence, the main aim of this study is to examine the impact of Grammarly intervention on improving EFL Iraqi university students' essay writing. This study was a quantitative study which adopted the quasi-experimental design. Thirty students (female: 15; male: 15) were recruited. A pre-post essay writing test and a questionnaire were used to collect the data. One-Sample Test was administered to compare the mean scores of pre and post of the treatment group in the essay writing skills. Moreover, analysis of the questionnaire item-by-item was achieved to know Iraqi EFL students' attitudes towards using Grammarly tool for enhancing their essay writing skills. The key findings of the study showed a statistically significant improvement in students' performance, favoring the post-test result. The students also showed a positive attitude towards employ Grammarly to enhance their essay writing. Key words: Grammarly, essay writing.

Introduction

Mastering writing skill is regarded as one of vital objectives for EFL learners. It goes beyond merely putting ideas on paper; it demands clear organization and a well-structured format. Fitria

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(2021) and Muluk et al, (2022) argued that writing is more complex compared with other language skills as it requires structuring ideas and thoughts in a logical and coherent manner. Hence, many students face difficulties in articulating their thoughts in written English. With the growth of Artificial Intelligence technologies, AI-powered writing assistants are emerging to enhance students' writing skills. According to Gikandi and Morrow (2020), AI tools contribute significantly to the development of writing proficiency as they offer automated feedback through the writing process. Grammarly is one of these writing tools that have been an integral aspect of the writing. It has demonstrated significant potential in enhancing students' writing proficiency, particularly in English as a Foreign Language (EFL) context (Perdana & Farida, 2019). Evidence in favour of this proposal comes from Shaina's et al (2024) review, which showed that Grammarly is a valuable resource for improving the writing skills and confidence of ESL/EFL students. Moreover, Raskova (2023) agreed that Grammarly provides a range useful features that make it an effective tool for boosting students' writing efficiency and overall satisfaction in their writing skills. These features are including grammar and spelling checks, vocabulary and punctuation. It also provides plagiarism detection. Furthermore, Grammarly is adjusting to personal writing styles and offering modified suggestions. Together, it is widely accepted that, Grammarly, an AI-powered writing tool, is a comprehensive resource for enhancing writing efficiency, accuracy and overall quality of written content.

Several studies have been conducted to examine Grammarly's effectiveness in improving EFL students' writing (Ghufron & Rosyida, 2018; Alshahrani, 2023; Jomaa & Jibroo, 2024; Al-Qahtani, 2024; Rababah & Talafha, 2024). For instance, Ghufron and Rosyida (2018) carried out a quasi-experimental study including Indonesian EFL students. The students involved in this study were divided into two groups: an experimental group that used Grammarly in error reduction and improved mechanics in spelling and punctuation, whereas the control group did not. The results showed that the performance of the experimental group in writing

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was better than that of the control group which received teacher feedback. Based on these research results, the authors argued that Grammarly helps in handling the technical aspects of writing.

In a similar vein, Alshahrani (2023) investigated the impact of Grammarly on Saudi EFL students' academic writing tasks at the University of Bisha,. The findings revealed that Grammarly plays a key role in reduction of mechanical errors and grammatical accuracy improvement. Furthermore, the students reported that they are more confident in identifying and correcting errors on their own.

Similarly, Jomaa and Jibroo (2024) conducted a study to investigate whether Grammarly positively affects reducing essay writing errors among Kurdish EFL students at the University of Duhok, Iraq. The study focused on Grammarly's influence on different aspects of writing, including error types, minimizing these errors and students' attitudes towards the feedback provided by Grammarly. Based on data analysis, the researchers suggested that Grammarly significantly decreases spelling errors, improves grammar and enhances vocabulary usage. Students also mentioned that Grammarly's feedback promoted their engagement and confidence.

In a subsequent study, Al-Qahtani (2024) confirmed the conclusions drawn from studies on the writing skills of Saudi EFL students. She adopted a mixed-methods approach to examine the advantages of using Grammarly in writing and to explore students' perceptions of this AI-based writing tool in improving their writing skills. The findings indicated that Grammarly is effective in enhancing students' grammatical accuracy writing proficiency. There is also a strong positive perception among the students regarding the use of Grammarly.

A similar conclusion was reached by Rababah and Talafha (2024) who carried out a study with 60 Jordanian EFL students. The participants were assigned to two groups: the control (30) and the experimental (30) groups. The experimental group using Grammarly during their writing tasks, whereas the control group did not. The researchers concluded that Grammarly significantly diminishes basic errors and fosters independent learning among students.

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In a more recent study, Tran (2025) confirmed the conclusions drawn from studies mentioned previously. She investigated how Grammarly influences the writing skills of EFL students. She also highlighted to the benefits and challenges of using Grammarly. The researcher concluded that Grammarly intervention promoted students' writing skill.

Taken together, the results of these reviewed studies suggest that Grammarly, as an additional tool, plays a key role in improving students' writing skills since it is beneficial in minimizing mechanical and grammatical mistakes and delivering instant feedback.

Methodology of the study

Aim of the study

The main purpose of the study is to investigate the efficiency of using Grammarly tool on improving three stage Iraqi EFL students' writing essay skills at English Department - Basic Education College- Misan University. Moreover, this study attempts to investigate students' attitudes towards the Grammarly tool in improving essay writing.

Research design

This study was a quantitative which adopted quasi- experimental design (Pre-test and Post-test design). The students were exposed to pre-post testing (Table 1). The intervention was based on using Grammarly. This intervention continued for three weeks. Throughout this study, students were encouraged to utilize this tool in their writing in terms of spelling, punctuation, grammar and vocabulary. They were advised to review their essays based on Grammarly's feedback.

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Table 1. Study Design
Participants and research context

Group Type	Pre-test	Intervention	Post-test
Quasi-experimental	Essay Writing	Grammarly in the writing process	Essay Writing

The population of the study comprised students in the third stage at the English Department- Basic Education College- Misan University. From this population, 30 Students (Female: 15; Male: 15) were recruited.

Questions of the study

This paper seeks to address the following questions:

1. Does Grammarly have an impact on Iraqi EFL students' performance in essay writing?
2. What are Iraqi EFL students' attitudes towards using Grammarly for enhancing their writing? And if there are significant differences between the students' attitudes and the gender?

Measures

This study employed two types of data collection instruments. The first type was tests: pre and post essay writing tests were administered in order to determine the effectiveness of Grammarly intervention. In these tests, the students asked to write an essay about a given topic. This intervention was conducted over a three-week period. The essays were rated in terms of content, organization, grammatical accuracy, vocabulary, spelling and punctuation. The total score of the test is 50.

Secondly, an attitudinal survey was conducted to assess students' perspectives on utilizing Grammarly tool after the experimental group's intervention. The survey included Likert-scale items to evaluate the effectiveness, efficiency and satisfaction associated with this AI tool. It was adapted from Vu (2024). It consisted of ten items. The students were asked to choose one of five points scale Likert scale (1= strongly disagree, 2= disagree, 3= uncertain, 4= agree, 5= strongly agree).

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Results

Results for Research Question 1 Does the Grammarly have an impact on Iraqi EFL students' performance in essay writing?

To address this research question, One-Sample Test was conducted to compare the mean scores of pre and post of the treatment group in writing essay. The presented results in Table 2 showed that the mean of the students' performance in pretest is (29.36), while in the post test is (36.13). There are also significant statistical differences ($p = 0.00$) between the mean scores of the performance of students in pre and posttests. It can be concluded that students' performance improved in the post-test compared to the pre-test.

Table 2. Descriptive statistics and significant differences between pre and post scores of the experimental group in writing essay

Test	N	Mean	Std. Deviation	df	t	Sig.
Pre-test	30	29.36	6.19	29	25.96	.00
Post-test	30	36.13	4.86	29	40.64	.00

Results for Research Question 2: What are Iraqi EFL students' attitudes towards using Grammarly for enhancing their writing? And if there are significant differences between the students' attitudes and the gender?

The second research question concerned Iraqi EFL students' attitudes towards using Grammarly for enhancing their essay writing. To address this question, analysis of the questionnaire item-by-item was achieved (see Table 3). It can be concluded that most students believe that Grammarly expands their grammatical knowledge (Q3: Mean: 1.97). Furthermore, they recorded that the use of Grammarly is essay (Q1: Mean: 1.80) and it is easy access

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(Q2: Mean: 1.67). The Grammarly also helps students enhance their vocabulary (Q4: Mean: 1.47).

In addition, the students thought that using Grammarly boosts their confidence in their writing essay (Q8: Mean: 1.47). While in question 9, the students feel that there is a significant improvement in their expression in writing after using Grammarly (Mean: 1.53).

In question 7, most students agreed that Grammarly helps them become more precise when addressing spelling mistakes in their writing (Mean: 1.27). From the students' point of view, using Grammarly helps identify and correct punctuation and word choice mistakes (Q6: Mean: 1.37) and grammatical errors easily (Q5: Mean: 1.40). The students reported that they will continue using Grammarly in their writing (Q10: Mean: 1.50). It can be concluded that the students showed a positive attitude towards using Grammarly to develop their essay writing. Additionally, the chi-square analysis showed that there are no significant differences between all the questionnaire items and gender (see Table 3).

Table3. Response Frequencies for Questionnaire Items

Questions	Male					Female					Mean	Chi square	
	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree		Value	Si g.
Q1	8	4	1	2	0	6	6	3	0	0	1.80	3.6	0.2
Q2	8	5	1	1	0	9	3	2	1	0	1.67	0.8	0.8
Q3	6	6	2	0	1	7	3	4	0	1	1.97	4.4	1.7
Q4	9	5	1	0	0	9	5	1	0	0	1.47	2.9	1.0
Q5	9	5	1	0	0	12	1	2	0	0	1.40	3.4	0.1
Q6	11	3	1	0	0	10	4	1	0	0	1.37	0.1	0.9
Q7	10	5	0	0	0	12	3	0	0	0	1.27	0.6	0.4
Q8	9	5	0	1	0	10	4	1	0	0	1.47	2.1	0.5
Q9	10	4	1	0	0	8	4	3	0	0	1.53	1.2	0.5
Q10	6	8	1	0	0	9	5	1	0	0	1.50	1.2	0.5

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Discussion

The primary research question of this study is whether the Grammarly has an impact on Iraqi EFL students' performance in essay writing. Quasi-experimental design was used to address this main research question. Thirty Iraqi university students were recruited in this study. This section is devoted to discussing the findings which have emerged from the data.

The first research question examined the effectiveness of Grammarly, an automated writing evaluation tool, to promote Iraqi EFL students' essay writing. The results of the One-Sample Test indicated that students performed better on the post-test compared to the pre-test. The analysis also revealed a statistically significant difference, favoring the post-test results. In other words, the Grammarly positively influences the essay writing skills of Iraqi EFL students. More specifically, there was a significant reduction in errors related to spelling, punctuation, grammar and vocabulary usage. It could be said that Grammarly makes a unique contribution to improving in various technical aspects of writing by offering automated feedback. However, it is less effective in addressing higher-order writing skills which require human evaluation such as content and organization.

Hence, these findings support Grammarly as a powerful tool for enhancing learners' writing skills. Furthermore, these findings align with those of Ghuftron and Rosyida (2018), who discovered that Grammarly significantly enhanced students' writing skills, especially in mechanics, grammar, and word choice. Similar outcomes were reported by Alshahrani (2023), who noted improvements in students' writing abilities after they engaged with Grammarly intervention. This study concentrated on the role of Grammarly in academic writing across various tasks; however, the current study focuses on its role in essay writing. These results also support the findings of Jomaa and Jibroo (2024) which showed that using Grammarly led to remarkable decrease in reducing surface-level errors. Additionally, the results here confirm those of Al-Qahtani (2024) who suggested that integrating AI tools such as Grammarly into EFL pedagogy, particularly for advanced level-

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learners, can be highly beneficial. This alignment emphasizes the potential benefits of AI tools to significantly improve teaching and learning languages in higher education contexts. Furthermore, these findings are consistent with those reported by Rababah and Talafha (2024) who highlighted the significant advantages of Grammarly as one of the digital tools in EFL learning. Similar findings were obtained in a study by Tran (2025) that emphasized Grammarly's potential as an effective tool for improving writing skills.

The second research question sought to know the Iraqi EFL students' attitudes towards using Grammarly tool for enhancing their essay writing skills and whether there are significant differences between their attitudes and the gender. It is clear from analysis of the questionnaire item-by-item that students have a positive attitude towards using Grammarly in developing their writing skills. These findings imply that Grammarly is a supplementary tool for improving essay writing in EFL context. It is possible that these results can be accounted for by a range of Grammarly benefits for students, including corrections for grammar and spelling, improvement vocabulary, clarity and style. It also provides feedback for enhancing the quality of academic writing. These findings support those of Jomaa and Jibroo (2024) and Al-Qahtani (2024), who found that students demonstrated positive attitudes towards the use of the Grammarly tool.

The second research question also asked whether there are significant differences between gender and attitude towards using Grammarly to improve their ability in essay writing. The Chi-square analysis clearly confirms that there are no significant differences between the questionnaire items and gender. It can be inferred that gender did not have a significant impact on attitudes towards utilizing Grammarly, an automated writing evaluation tool, in developing the skills of essay writing. The possible explanation for this finding is that attitudes are generally defined as an individual's evaluation or opinion towards a particular object. Hence, it is crucial to determine the students' perceptions towards the usefulness and effectiveness of Grammarly in their writing process regardless of gender.

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Conclusion

This study sought to examine the effectiveness of using Grammarly on students' essay writing. Even though the efficiency of using Grammarly has been extensively investigated in relation to its key role in the writing process across different samples, little attention has been paid to Grammarly's influence on the EFL Iraqi university students' essay writing. Taken together, this study confirms previous findings and contributes additional evidence that suggests Grammarly has an impact on Iraqi EFL students' performance in essay writing skills. Furthermore, the study supports previous findings that reported favorable students' attitudes towards using Grammarly as a means to enhance their writing proficiency.

The findings of this study have a number of crucial pedagogical implications. First, it is crucial for the specialists in the field of education to take into account the supportive role of artificial intelligence in teaching and learning language in general and writing specifically as it makes this process more engaging and interactive. An additional educational implication that can be drawn from the current study is that, to improve learning outcomes in writing, it is recommended that teachers become familiar with specific artificial intelligence tools as supplementary tools, such like Grammarly, used in the context of writing to more effectively guide students in using these tools. Moreover, Grammarly helps students polish their writing by providing feedback on grammar, spelling, punctuation and style. However, it should be used alongside teacher guidance, which focuses on higher-order skills such as the development of argument and coherence.

The limitations of the study offer a number of potential directions for future research. First, the study only examined the impact of Grammarly as one of AI tools through pre and posttest data, without taking account to the long-term influences on students' writing development. Therefore, an empirical longitudinal study that tracks the same cohort over time and compares their performance could be very useful in assessing the students' progress. The second limitation is related to the small number of participants in the study. This may warrant caution in generalising the findings. Hence, future

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research should consider using a larger sample size to provide more information regarding the potential impact of Grammarly in writing skill.

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