

## **Changes in Students' Writing Style After Using a Grammar Checking App: A Reflective Qualitative Study**

**Asla Alayya**

English Department, STAIN Mandailing Natal, Panyabungan, Madina, Sumut, Indonesia

Email: [alayyaasla@gmail.com](mailto:alayyaasla@gmail.com)

**Nur Indah Ramadhani Nasution**

English Department, STAIN Mandailing Natal, Panyabungan, Madina, Sumut, Indonesia

Email: [indah05.1510@gmail.com](mailto:indah05.1510@gmail.com)

**Salsabila Lubis**

English Department, STAIN Mandailing Natal, Panyabungan, Madina, Sumut, Indonesia

Email: [lubissalsabila33@gmail.com](mailto:lubissalsabila33@gmail.com)

**Nikmatul Wahidah**

English Department, STAIN Mandailing Natal, Panyabungan, Madina, Sumut, Indonesia

Email: [wahidahnikmatul@gmail.com](mailto:wahidahnikmatul@gmail.com)

**Muhammad Hasyimsyah**

English Department, STAIN Mandailing Natal, Panyabungan, Madina, Sumut, Indonesia

Email: [Muhhammad.hasyimsyahbatubara@gmail.com](mailto:Muhhammad.hasyimsyahbatubara@gmail.com)

### **ABSTRACT**

Students' writing growth has been greatly impacted by the incorporation of grammar-checking software into language learning, especially in English as a Foreign Language (EFL) contexts. This study focuses on the linguistic and cognitive aspects of writing in order to examine how students' writing styles alter after utilizing a grammar-checking program. (This study employed a qualitative reflective design, involving twenty five undergraduate students taking an academic writing course. Semi-structured interviews, reflective diaries, pre- and post-writing assignments, and document analysis were used to gather data. To find patterns of change in grammatical accuracy, lexical diversity, sentence complexity, coherence, and writing autonomy, the data were subjected to thematic analysis. The results show that using grammar-checking software greatly enhances students' writing, especially by improving grammatical accuracy, expanding vocabulary, and encouraging more intricate sentence patterns. Students also exhibit higher levels of engagement with the editing process and metacognitive awareness. However, the study also highlights some disadvantages, like an excessive dependence on automated feedback and a poor critical comprehension of grammatical principles. Grammar-checking software is therefore a useful tool for enhancing writing quality, but to guarantee deeper learning and critical engagement, its use should be accompanied by instructional support.

**Keywords:** grammar checking application, writing style, academic writing, digital learning, qualitative study

## ABSTRAK

Pertumbuhan kemampuan menulis mahasiswa telah sangat dipengaruhi oleh penggunaan perangkat lunak pemeriksa tata bahasa (grammar-checking software) dalam pembelajaran bahasa, khususnya dalam konteks Bahasa Inggris sebagai Bahasa Asing (EFL). Penelitian ini berfokus pada aspek linguistik dan kognitif dalam menulis untuk mengkaji bagaimana gaya menulis mahasiswa berubah setelah menggunakan program pemeriksa tata bahasa. Penelitian ini menggunakan desain reflektif kualitatif yang melibatkan dua puluh lima mahasiswa sarjana yang mengikuti mata kuliah Academic Writing. Data dikumpulkan melalui wawancara semi-terstruktur, jurnal reflektif, tugas menulis sebelum dan sesudah penggunaan aplikasi, serta analisis dokumen. Data kemudian dianalisis secara tematik untuk mengidentifikasi pola perubahan dalam akurasi tata bahasa, keragaman kosakata, kompleksitas kalimat, koherensi, dan kemandirian menulis. Hasil penelitian menunjukkan bahwa penggunaan perangkat lunak pemeriksa tata bahasa secara signifikan meningkatkan kualitas tulisan mahasiswa, terutama dalam meningkatkan akurasi tata bahasa, memperluas kosakata, dan mendorong penggunaan pola kalimat yang lebih kompleks. Mahasiswa juga menunjukkan tingkat keterlibatan yang lebih tinggi dalam proses penyuntingan serta peningkatan kesadaran metakognitif. Namun, penelitian ini juga menyoroti beberapa kelemahan, seperti ketergantungan yang berlebihan pada umpan balik otomatis dan rendahnya pemahaman kritis terhadap prinsip-prinsip tata bahasa. Oleh karena itu, perangkat lunak pemeriksa tata bahasa merupakan alat yang bermanfaat untuk meningkatkan kualitas tulisan, tetapi penggunaannya perlu disertai dengan dukungan instruksional agar dapat menjamin pembelajaran yang lebih mendalam dan keterlibatan kritis mahasiswa.

**Keywords:** aplikasi pemeriksa tata bahasa, gaya menulis, penulisan akademik, pembelajaran digital, studi kualitatif.

### A. Introduction

Globally, educational processes have undergone a fundamental transformation due to the swift progress of digital technology. Technological advancements in language learning have opened up new avenues for improving pupils' language proficiency, especially in writing. Writing is widely acknowledged as one of the most difficult and cognitively taxing language abilities, involving the combination of communicative ability, cognitive processes, and linguistic knowledge (Hyland, 2016). Students who are learning English as a foreign language (EFL) frequently have serious writing issues, such as grammatical errors, a small vocabulary, a lack of coherence, and trouble efficiently arranging ideas (Ferris, 2014). Limited exposure to the target language and a lack of practice and feedback opportunities frequently exacerbate these difficulties. The teaching of writing is mostly focused on instructor feedback, which is helpful but

frequently delayed and insufficient to address all facets of students' writing (Hyland & Hyland, 2006)

A major change in the way writing is taught and learned may be seen in the rise of grammar checkers. These artificial intelligence and natural language processing-driven programs offer instantaneous, automated feedback on a variety of writing related topics. Grammarly, ProWritingAid, and Ginger are examples of tools that may identify grammatical problems, make vocabulary suggestions, and improve sentence clarity (Kukulka Hulme, 2020).

The idea of learner autonomy, which highlights the significance of students taking charge of their own education, is consistent with the usage of grammar checkers (Little, 1991). These tools allow students to freely edit their writing and create self-regulated learning processes by offering immediate feedback (Zimmerman, 2002). Additionally, they

motivate students to participate more actively in the writing process, especially during the revision phase, which is sometimes overlooked in conventional writing education.

Automated feedback has been shown to improve writing performance and grammatical accuracy in earlier studies (Ebadi & Rahimi, 2017); Li, 2023), but writing development is more than just fixing mistakes. A crucial aspect of writing proficiency is writing style, which includes components like vocabulary selection, sentence construction, tone, coherence, and cohesiveness (Warschauer, 2010). Deeper cognitive and linguistic growth is reflected in changes in writing style, which show that pupils are not only fixing mistakes but also enhancing their capacity to communicate ideas clearly. Despite these advantages, there have been worries expressed about the possible drawbacks of grammar-checking software. According to some experts, students' comprehension of grammar norms and critical thinking skills may be hampered by an overreliance on automated tools (Yim & Warschauer, 2017). Students may turn into passive users who take corrections without considering their applicability or accuracy. Additionally, it is necessary to investigate the ways in which grammar checkers affect several facets of writing style, such as coherence, sentence complexity, and lexical diversity. This study attempts to offer a more thorough examination of writing growth, whereas other research has mostly concentrated on accuracy. In order to address the advantages and drawbacks of these tools, this study aims to investigate how students' writing styles are different after utilizing a grammar checker.

## **B. Research Method**

This study used a qualitative reflective research methodology to examine how using a grammar checker affected students' writing styles. Because it enables the researcher to thoroughly examine participants' experiences, perceptions, and cognitive processes—particularly with regard to writing development—a qualitative technique was selected (Creswell & Creswell, 2017). Students can communicate their learning experiences and metacognitive awareness through the reflective component of this methodology, which is crucial for comprehending how technology tools affect writing practices (Moon, 2006). In this context, a qualitative reflective design is a method that allows the researcher to look at both visible improvements in writing and the underlying cognitive processes by combining participants' comments on their learning experiences with the examination of their written texts.

Twenty-five college students enrolled in an academic writing course in the English Education Department made up the study's participants. To make sure that every participant had used grammar-checking software before, the participants were chosen by purposive sampling. To guarantee that the information gathered would be pertinent to the study's goals, this selection criterion was crucial.

To guarantee data triangulation, multiple methods were used to obtain the data. Students first finished writing projects both before and after utilizing a grammar checker. To find shifts in writing style, these texts were examined. Second, while utilizing the grammar-checking tool, students used reflective journals to write about their experiences, difficulties, and viewpoints. Students'

metacognitive processes were captured in these journals. Third, in order to better understand the perspectives and experiences of the students, semi-structured interviews were carried out. Lastly, document analysis was done by looking at students' written work to find areas where grammar, vocabulary, sentence structure, and coherence had improved.

Thematic analysis, as suggested by Braun and Clarke (2006), was used to examine the data. Data familiarization, coding, classification, topic development, and interpretation were some of the steps in this process. Key elements of writing style, including grammatical accuracy, vocabulary diversity, sentence complexity, coherence and cohesion, metacognitive awareness, writing autonomy, and reliance on technology, were the focus of the analysis.

### **C. Result and Discussion**

The study's findings address the goal of investigating how students' writing styles alter following the use of a grammar-checking tool. The results show that using such technology enhances a number of characteristics of writing growth, such as metacognitive awareness, sentence complexity, coherence, grammatical accuracy, and lexical diversity. In order to highlight the similarities, differences, and distinctive contributions of this research, these findings are reviewed in reference to earlier investigations.

#### **1. Error Reduction and Grammatical Accuracy**

This result demonstrates that using grammar-checking software greatly increases pupils' grammatical accuracy, which answers the (Wang et al., 2019) research question. The findings

show a discernible decrease in frequent grammatical errors, especially in punctuation, subject-verb agreement, verb tense usage, and article usage.

This result is in line with earlier research that highlights the value of automated feedback in enhancing grammatical performance (Ebadi & Rahimi, 2017; Li, 2023). When feedback is given immediately, students can spot and fix mistakes in real time, which makes the revision process more effective than when teacher comment is given later.

However, this study shows that improved grammatical accuracy does not always imply a better comprehension of grammatical rules, in contrast to earlier research. Some pupils did not critically assess the software's corrections and instead relied largely on them. This bolsters Warschauer's (2010) claim that automated tools might encourage surface-level correction instead of deep learning.

Thus, by pointing out a disconnect between conceptual knowledge and error correction, our work adds to the body of literature. Grammar-checking technologies are useful in lowering errors, but without supervised

teaching, their ability to promote long-term grammatical competence is still limited.

## 2. Vocabulary Development and Lexical Diversit

By proving that grammar-checking tools aid in the growth of pupils' lexical diversity, this conclusion addresses the research issue. The findings demonstrate that pupils employed a more complex and diversified vocabulary, including academic and formal terms.

This result is consistent with Zhang and Zou's (2020) claim that automated writing tools promote vocabulary growth by suggesting synonyms. Students are consequently exposed to a greater variety of lexical options, which improves the caliber and formality of their writing.

However, this study discovered that some students misused foreign words because they lacked contextual awareness, which is different from other findings. This suggests that expanding one's vocabulary involves more than just learning new words; it also entails knowing how to use them appropriately in context, collocation, and register (Hyland, 2016).

This study thus makes a contribution by highlighting the fact that, although grammar-checking tools facilitate lexical expansion, contextualized vocabulary learning is still necessary. To utilize new terminology correctly and

efficiently, students still need assistance.

## 3. Syntactic Development and Sentence Complexity

By demonstrating that students' sentence complexity increased after utilizing grammar-checking software, this conclusion answers the research question. The findings show that children started to build increasingly complicated sentences, including compound and complex structures with subordinate clauses.

This result is consistent with Hyland's (2016) theory that exposure to a variety of sentence patterns improves writing complexity. Grammar-checking software facilitates this process by offering structural recommendations that inspire students to try out more complex sentence structures.

However, this study discovered that, in contrast to earlier studies, greater complexity occasionally led to grammatical errors. Some pupils made mistakes by creating extremely complicated phrases since they did not fully comprehend the syntactic rules.

This discovery adds to the body of literature by emphasizing the necessity of striking a balance between accuracy and complexity. Even while grammar-checking software encourages syntactic development, students still need assistance to maintain the complexity and accuracy of their sentences.

#### 4. Coherence and Cohesion

By showing that grammar-checking technologies enhance the consistency and cohesiveness of students' work, this conclusion addresses the research issue. The findings demonstrate that students' texts developed a more coherent structure and stronger linkages between concepts.

This is in line with Sun's (2020) findings that digital writing tools can improve readability through better sentence structure and flow. Grammar-checking software's recommendations assist students in rewriting sentences that are confused or disjointed.

This study, however, goes beyond earlier research by showing that enhanced awareness of audience and purpose is also associated with gains in coherence. Pupils developed a greater awareness of the presentation and interpretation of their thoughts.

Thus, this study makes a contribution by demonstrating that grammar-checking software not only enhances writing's technical features but also fosters the growth of communicative awareness, which is crucial for successful writing.

#### 5. Metacognitive Awareness

This result shows that using grammar-checking software improves students' metacognitive awareness, which answers the research question. The findings demonstrate that students'

awareness of their writing processes—including planning, drafting, and revising—increased.

Zimmerman (2002), who highlights the significance of metacognition in self-regulated learning, supports this conclusion. Students were able to assess their own strengths and shortcomings through the study's reflecting exercises.

This study emphasizes the internal cognitive processes involved in writing growth, in contrast to earlier research that mostly focused on writing outcomes. Students stated that the feedback enabled them to identify reoccurring errors and enhance their tactics.

Thus, this study makes a contribution by showing that grammar-checking software can support deeper reflective learning and self-awareness in addition to improving writing.

#### 6. Writing Autonomy

By demonstrating that grammar-checking software encourages writing autonomy, this result addresses the research issue. The findings show that students become less dependent on teacher input and more autonomous in their work revision.

This is consistent with Zimmerman's (2002) theory of self-regulated learning, in which students assume ownership of their own development. Grammar-checking software offers a framework that facilitates self-revision.

But this study also shows that students differ from one another. Some people actively responded to criticism, while others took corrections without thinking about them.

This adds to the body of literature by highlighting the fact that using technology does not inherently foster autonomy. It takes critical thought and active participation to use grammar-checking software effectively.

#### 7. Overreliance on Technology

By emphasizing a detrimental effect of grammar-checking tools—namely, students' overreliance on technology—this outcome answers the research question. The findings indicate that some pupils developed a reliance on the program and lost confidence when writing without it.

This result validates the claims made by Yim and Warschauer (2017) that an over-reliance on technology can impair independent language processing and critical thinking.

This study also shows that students who rely too much may write superficially, putting accuracy before meaning. Furthermore, automated feedback isn't always reliable, and accepting suggestions without question can lead to mistakes.

Thus, by highlighting the significance of using technology critically, this study makes a contribution. Grammar-checking

software should not be used as a substitute for education, but rather as an aid.

#### D. Conclusion and Suggestion

This study examined how utilizing a grammar-checking program affected students' writing styles. The results show that pupils' writing growth is positively impacted by grammar-checking software. Pupils showed gains in sentence complexity, coherence, lexical diversity, grammatical accuracy, and overall writing quality. By enabling students to freely review and edit their work, the program also promoted increased metacognitive awareness and writing autonomy.

But the investigation also identified a number of difficulties. Some students accepted modifications without fully comprehending the grammatical ideas underlying them and became unduly reliant on automatic feedback. This reliance could hinder critical thinking and limit chances for more in-depth language acquisition. Therefore, grammar-checking software should be utilized as learning aids rather than as a substitute for language education, even though it can be a useful tool for promoting writing development. The results imply that how these technologies are included into the writing-learning process has a significant impact on their instructional value.

Several recommendations can be made in light of the study's findings. Instead of accepting all corrections automatically, teachers should first assist students in critically analyzing the feedback that grammar-checking software provides. Second, in order for students to comprehend the linguistic rationale behind suggested adjustments, grammar-checking software must be incorporated into classroom education. Third, students should continue honing their own writing and editing abilities by

using these tools as additional learning resources. Finally, in order to obtain a more comprehensive knowledge of the long-term effects of grammar-checking software on writing development, future researchers are urged to carry out comparable studies with larger samples and various educational environments.

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