

## **Students' Perspectives on DeepSeek as a Learning Aid for Enhancing English Writing Skills**

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### **ABSTRACT**

In today's digital era, students are constantly seeking new ways to improve their academic writing, especially in learning English as a Foreign Language (EFL). One tool gaining attention nowadays is DeepSeek, an AI-powered writing assistant that helps students organize ideas, correct grammar, and improve writing quality. While tools like Grammarly and ChatGPT have been widely researched, studies on students' views of DeepSeek are still limited. This research explores students' perspectives on using DeepSeek to improve their English writing skills. A mixed-methods approach was used, involving 55 second-semester English Education students from Universitas Muhammadiyah Kalimantan Timur who completed a questionnaire. Five students were then selected for in-depth interviews. The results show that students generally view DeepSeek as a helpful and easy-to-use tool that increases their confidence and motivation in writing. Many students reported improvements in grammar and spelling checks. However, some students raised concerns about becoming too dependent on AI and noted that DeepSeek sometimes lacks context in its corrections. The study implies that AI tools like DeepSeek can be valuable for supporting writing development in EFL learners. Still, students should be guided to use these tools wisely as assistance, not as a replacement for their thinking. A key limitation of this study is its small and localized sample, which may not reflect broader educational settings. Future research with larger and more diverse participants is recommended to better understand the wider impact of AI writing tools.

**Keywords:** DeepSeek; Artificial Intelligence; Writing Skills; Learning Aid; Student Perspectives

### **INTRODUCTION**

Over the past few years, technology has developed highly in education, especially in language acquisition. The use of Artificial Intelligence (AI) as a learning aid has greatly facilitated teachers and students in learning English as a foreign language (EFL), especially in academic writing. According to Song & Song, (2023) AI

enhances students' and lecturers' abilities by improving writing training effectiveness, customization, and availability because AI offers personalized feedback, instant corrections, and enhanced learning experiences. English writing skills are necessary for both professional and personal communication as well as academic accomplishment. However, many students face challenges such as poor syntax, limited vocabulary, and trouble putting their ideas into cohesive sentences. These difficulties show how important it is to have efficient resources and methods to help students improve their writing abilities (Riphasa, 2024). Moreover, from Jimenez. et al., (2024) It is challenging for university students to establish a clear flow of ideas and create a coherent structure in writing their papers. Furthermore, Sa'adan et al.,(2024) Studies show that higher education students had trouble with several things: using correct grammar and language, organizing their ideas, finding enough reliable information, choosing the right words, and managing their time well to finish their writing tasks. According to Bora (2023) To become proficient in writing, the student must practice constantly. It is well known that one of the most difficult things for English language learners to learn is writing (Riadil et al., 2023).

DeepSeek is an AI-powered tool similar to the previous one, such as ChatGPT, Chatbox, Jenni AI, Perplexity, and Gemini. These AI-powered systems are created to assist humans with intelligent tutoring systems. According to Gao et al (2025), DeepSeek generally surpasses Gemini, GPT, and Llama in classification accuracy, but falls short of Claude. The researchers also discovered that DeepSeek is slower than the others but less expensive, whereas Claude is significantly more expensive than the others. As was mentioned, AI-powered chatbots and adaptive learning algorithms deliver individualized feedback, cater to a wide range of learning demands, and boost classroom motivation. DeepSeek has a more structured approach and problem-solving focus to teach students critical thinking and analysis to master difficult concepts, compared to similar AI like Chat GPT (Kotsis, 2025). Moreover, Esmaeil Nejad et al. (2022) emphasize that critical thinking plays a crucial role in enhancing writing skills, and its absence significantly diminishes the quality of written work. Furthermore, Syarifah & Fakhruddin (2024) find that Students' writing processes in writing lessons are greatly enhanced by AI. Writing is made easier and faster by AI.

However, most of the existing studies have focused on general AI writing tools such as Grammarly, ChatGPT, or Quillbot, while research that investigates student perspectives specifically on DeepSeek remains limited. Studies such as Losi et al. (2024) focus on AI-assisted writing tools like ChatGPT, Quillbot, and Grammarly, which have shown promise in assisting students in learning, especially with writing. This highlights a gap in current research regarding how this newer AI tool, which emphasizes structured learning and critical thinking, is perceived and utilized by students in academic writing. Unlike existing studies that generalize AI tools, this research narrows its scope to student-centered experiences with DeepSeek, specifically in English academic writing. The urgency of this study lies in the rapid integration of AI tools in EFL classrooms, which demands a deeper understanding

of how students interact with these technologies, whether they support learning or risk over-reliance. With students increasingly using AI for writing tasks, educators need insights into how tools like DeepSeek impact learning motivation, writing independence, and academic integrity.

This research aims to identify students' perspectives toward DeepSeek, particularly whether they see it as a useful and effective tool for improving their English writing skills. Additionally, this research seeks to determine whether DeepSeek is easy to use and provides the necessary features for writing academic assignments. This objective is driven by the limited number of studies focusing on DeepSeek specifically, despite the increasing use of AI writing tools in educational settings. Therefore, the main problem addressed in this study is the lack of empirical research on how students perceive and use DeepSeek, and how effective it is in supporting the development of English writing skills in EFL contexts. This research is divided by two main research questions. First, it seeks to understand what students' perspectives are on the use of DeepSeek as a learning aid for enhancing their English writing skills. This involves exploring how students perceive the benefits, limitations, and overall effectiveness of DeepSeek in supporting their academic writing. Second, the study aims to examine whether DeepSeek is easy to use and provides all the necessary functionality that students need when completing their English writing assignments

## **LITERATURE REVIEW**

### **Previous Related Study**

Recent studies have shown that AI-powered tools like DeepSeek can help students identify and correct errors, expand their vocabulary, and improve the overall structure of their writing. For example, a study by Fikri et al, (2024) It was found that the writing skills of participants had increased while using ChatGPT, an AI similar to DeepSeek. By providing a score from 1 to 10, on average, they said 7 or 8. This means that there has been progress in improving English writing skills. Losi et al (2024) found that AI-powered writing tools are effective in enhancing writing quality. A study conducted by Syarifah & Fakhruddin (2024) found that students who used AI such as Grammarly, ChatGPT, Quillbot, Grammarly, Jenny AI, etc. for their writing assignments showed significant improvements in grammatical accuracy and vocabulary use in their academic writing. These tools not only help students identify and correct errors but also provide explanations for the corrections, enabling learners to understand their mistakes and avoid repeating them in the future. This feature is particularly valuable for EFL learners, as it promotes active learning and long-term retention of grammatical rules.

Despite the growing use of AI tools in education, there is a lack of research focusing on students' perspectives. Most studies have examined teachers' experiences or the technical aspects of AI tools, leaving a gap in understanding how students engage with these tools (Marzuki et al., 2023). Moreover, Losi et al (2024) Research that

AI tools such as ChatGPT, QuillBot, and Grammarly are widely used by students to enhance their writing, but this research didn't include DeepSeek in their research on other AI tools, even though DeepSeek already existed in 2024. This indicates a gap in research regarding DeepSeek, highlighting the necessity of this study. However, the explanations and findings from previous research show that AI is developed dynamically with different variants, kinds, and types. For that matter, it is known that the research regarding AI-powered, particularly DeepSeek, as a writing assistant tool, is still limited and weak. Therefore, more research is needed to discuss about DeepSeek.

### **Students' Perspectives**

This variable relates to how students perceive, respond to, and experience the use of DeepSeek in their writing tasks. Students' perspectives reflect their motivation, confidence, and perceived improvement in writing skills while using the tool. This concept is grounded in the theory that learners' attitudes toward educational technology significantly influence their engagement and learning outcomes (Vera et al., 2025). A positive perception of AI tools is often associated with increased motivation and more effective learning. Moreover, students' perspectives also reflect their sense of agency in the learning process. If they feel that the tool empowers rather than replaces their thinking, it can foster critical awareness and self-directed learning (Chukwunemerem, 2023). On the other hand, negative or overly dependent attitudes may hinder long-term development, especially in areas such as critical thinking, creativity, and original composition (Umarova et al., 2025). Therefore, understanding students' perspectives not only helps assess the immediate effectiveness of DeepSeek but also offers insights into how such tools can be responsibly integrated into pedagogical practices to support sustainable skill growth.

### **Writing Skills**

Writing skills, as the second variable, involve grammar, coherence, vocabulary, sentence structure, and the ability to express ideas clearly. Shyamala K.C (2021) emphasized that effective writing requires the development of both linguistic competence and cognitive skills. Traditional methods of teaching writing, such as teacher-led instruction and peer review, have proven effective to some extent. However, these methods often lack the immediacy and personalization needed to address the diverse needs of learners (Suryani et al., 2024). For example, in large classrooms, teachers may not have the time to provide individualized feedback to each student, leading to gaps in learning. Peer review, while beneficial, can be inconsistent in quality, as students may lack the expertise to provide accurate and constructive feedback (Wu & Schunn, 2021). This is where AI-powered tools like Grammarly and ChatGPT come into play, offering scalable and consistent feedback that can complement traditional teaching methods. AI-powered tools such as DeepSeek assist students by offering real-time feedback, promoting better sentence construction, and encouraging revision and reflection. As stated by Khan (2024),

AI can support writing development, especially among EFL learners, by making writing tasks more accessible and less intimidating.

### **DeepSeek as a Learning Aid for Enhancing English Writing Skills**

This variable refers to how DeepSeek, an AI-powered writing tool, supports students in developing their English writing skills. DeepSeek offers features such as real-time grammar correction, sentence restructuring, idea generation, and clarity improvement. According to Polakova & Ivenz (2024), AI tools are effective in providing personalized and immediate feedback, which is particularly beneficial for English as a Foreign Language (EFL) learners. DeepSeek helps students build better writing habits by supporting them in organizing ideas, improving grammar accuracy, and crafting coherent and structured texts. Furthermore, DeepSeek aligns with the concept of personalized learning, which emphasizes adapting educational content to meet individual needs. As noted by Wang (2025) DeepSeek can analyze student writing patterns and offer tailored support, enabling teachers to deliver differentiated instruction that addresses diverse student challenges. This aspect of DeepSeek not only enhances linguistic improvement but also empowers learner autonomy. In addition to its learning benefits, DeepSeek contributes to educational efficiency by simplifying routine tasks such as grading and attendance tracking. This allows educators to focus more on student interaction and instruction. Kotsis (2025), supports by stating that DeepSeek promotes active learning through interactive modules, which foster deeper engagement compared to standard AI writing tools.

Therefore, the relationship between DeepSeek and writing skills involves both functional supports, like grammar correction and idea generation, and pedagogical contributions through personalized and engaging learning. This study investigates how students perceive and interact with DeepSeek in terms of its usability, impact, and potential to improve their writing abilities. The relationship between these variables is analyzed through students' responses regarding the usability, usefulness, and impact of DeepSeek on their writing. This study aims to explore to what extent DeepSeek contributes to writing improvement and how students perceive its role in their learning process, whether as a tool for support or as a potential cause of over-reliance in academic writing.

## **METHOD**

### **Design and Samples**

This research uses a mixed-method approach, combining quantitative and qualitative methods to provide a comprehensive understanding of students' perspectives on DeepSeek. The quantitative data from questionnaires helps identify general trends and patterns regarding usability, motivation, and writing development, while the qualitative data from interviews offers deeper insights into individual experiences and reflections that cannot be captured through numbers

alone. This combination allows the researcher to validate and enrich the findings through triangulation, increasing the study's reliability and depth. The participants were second-semester English Education students at Universitas Muhammadiyah Kalimantan Timur who were enrolled in a professional writing course. A total of 55 students participated in the questionnaire, and five students were selected purposively for the interview to ensure that every potential participant's opinion is considered, leading to more reliable findings. The participant for an interview would be selected based on their answer to the questionnaire. Therefore, the interviewee will be selected based on their purpose of using DeepSeek, whether they use it for grammar and spelling checks, generating ideas for essays, improving sentence structure and coherence, or assessing and enhancing the quality of their writing.

### **Instrument and Procedure**

The data collection instruments consisted of a questionnaire and a semi-structured interview. The questionnaire, adapted from Zebua & Katemba (2024), included 12 items divided into three sections to assess motivation, usability, and writing skill development. A Likert scale (1 = Strongly Disagree to 4 = Strongly Agree) was used to quantify responses. The interviews aimed to explore deeper reflections and experiences in using DeepSeek and were conducted for approximately 20 minutes per participant. The questions were open-ended, addressing writing experience, tool effectiveness, and observed improvements.

### **Data Analysis**

Quantitative data from the questionnaire were analyzed descriptively to determine trends in students' responses. Mean scores and standard deviations were calculated to identify the overall perception. The qualitative data from the interviews were analyzed using narrative analysis, which helped explore personal experiences and insights regarding the use of DeepSeek. The integration of both data sources allowed triangulation and enhanced the validity of the findings.

## RESULTS AND DISCUSSION

### Ease of Use and Functional Features of DeepSeek

To gain a deeper understanding of how students perceive and experience the use of DeepSeek in their English writing activities, this chapter outlines the results of the questionnaire and interview data. It focuses on students' usage patterns, perceived benefits, and challenges in using DeepSeek to improve their English writing skills, and it is analyzed qualitatively with supporting numerical data. The data collected from the questionnaire shows that students generally perceive DeepSeek positively across three main areas: motivation and confidence, ease of use and functionality, and its role in developing writing skills. The table below is a list of the questionnaire and its results for the Likert scale and mean.

*Table 1. Descriptive result for the variable*

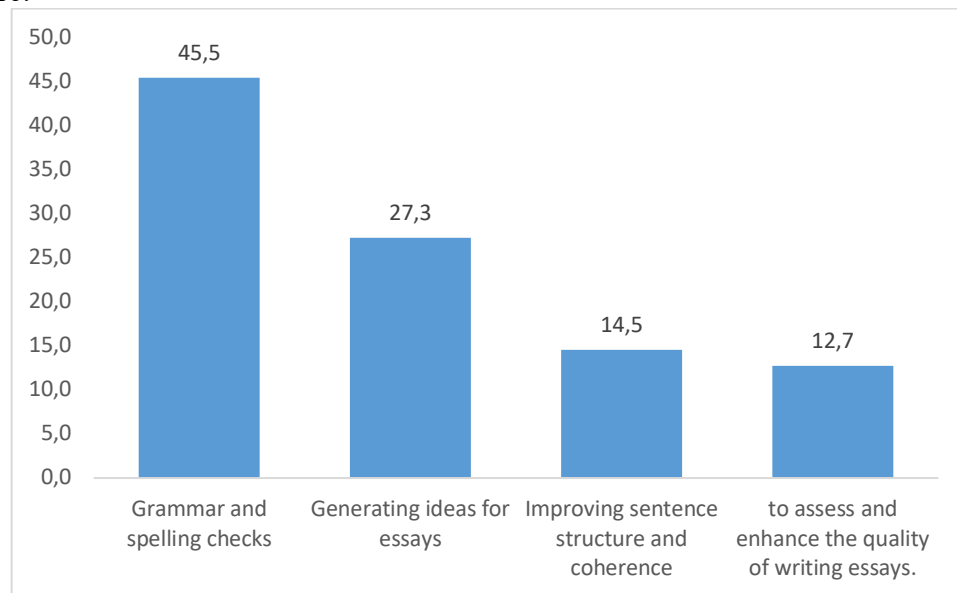
No.	Questions	Likert Scale (%)				SD
		Strongly Disagree	Disagree	Agree	Strongly Agree	
Student’s Perspective on DeepSeek: Increase Student Learning Motivation						
1	DeepSeek increases student motivation to learn.	5,5%	12,7%	70,9%	10,9%	0,67%
2	You do not have any difficulty in using DeepSeek in the process of writing.	0%	14,5%	69,1%	16,4%	0,56%
3	With DeepSeek, I have more confidence in writing my academic texts, especially in writing my English essay.	0%	7,3%	78,2%	14,5%	0,46%
4	I feel that DeepSeek helps me better understand concepts in essays.	1,8%	7,3%	76,4%	14,5%	0,54%
DeepSeek as a learning aid						
1	DeepSeek provides complete features and easy-to-use procedures.	0%	7,3%	78,2%	14,5%	0,46%
2	DeepSeek is very flexible in its use.	1,8%	3,6%	80%	14,5%	0,50%

3	I think DeepSeek is easy to use for writing my essay.	1,8%	3,6%	76,4%	18,2%	0,53%
4	I like to use DeepSeek because it has many good features compared to any other grammar checker tool.	1,8%	12,7%	70,9%	14,5%	0,59%
DeepSeek in Developing Writing Skills						
1	DeepSeek makes helpful suggestions for improving my English essay writing.	0%	5,5%	81,8%	12,7%	0,42%
2	DeepSeek is very useful in developing my writing skills, especially for my English essay writing.	0%	7,3%	76,4%	16,4%	0,48%
3	I am more effective in tackling essay writing tasks using DeepSeek.	0%	14,5%	72,7%	12,7%	0,53%
4	I tend to rely on DeepSeek when writing English essays.	3,6%	21,8%	67,3%	7,3%	0,63%

A majority of students reported feeling more confident in their academic writing after using DeepSeek. They also indicated that the tool helps them better understand essay concepts, suggesting that it supports not only mechanical aspects of writing but also cognitive understanding. While most respondents agreed that DeepSeek increases their motivation to learn, a small portion did not feel the same, indicating that the motivational effect may vary depending on how students perceive the tool as a support tool rather than a source of motivation. Responses indicate strong agreement that DeepSeek is user-friendly and equipped with comprehensive features. Students found it flexible and easy to use for writing tasks, which contributed to its perceived usefulness in academic settings. Although a few students expressed mild disagreement regarding its features, the majority viewed it as a practical and accessible tool for supporting essay writing.

Students widely acknowledged that DeepSeek offers constructive suggestions that help improve their writing. Most found it useful in developing their overall writing skills and becoming more effective in completing writing tasks. Additionally, many students reported relying on DeepSeek when writing essays, highlighting its role in enhancing clarity, structure, and grammar. To have a better understanding of how students perceive and utilize DeepSeek as a learning aid in developing their English writing skills, the researcher also examined what is their purpose of using

DeepSeek. To address the issues, there are four parameters, which include 1) Grammar and Spelling Checks. 2) Generating Ideas for Essays 3) Improving Sentence Structure and Coherence. 4) To Assess and Enhance the Quality of Writing Essays. From these choices, the results obtained from the questionnaire were:



*Figure 1. The Purpose of Using DeepSeek*

The bar chart indicates that most students primarily use DeepSeek to address technical aspects of writing, such as grammar and spelling. This reflects a common priority among second-language learners, who often focus on accuracy to meet academic standards. A smaller but significant group uses DeepSeek to generate ideas, indicating that DeepSeek is also valued for its ability to support the early stages of the writing process. Fewer students reported using it for improving coherence or overall quality, which may indicate either limited awareness of its full capabilities or a tendency to rely on personal judgment or human feedback for higher-order writing concerns. Overall, the data indicates that students see DeepSeek primarily as a tool for superficial accuracy, although they are now beginning to understand its wider range of applications in the writing process.

### **Students' Perceptions of DeepSeek as a Learning Aid**

According to the results, it can be concluded that the remaining research question has been answered: 'What are students' perspectives on the use of DeepSeek as a learning aid for enhancing English writing skills?'. The interviewees were selected based from the answer of their answers to their purpose of using DeepSeek. Each participant gave reflections that were related to certain functional goals, such as correcting grammar, creating ideas, improving sentence structure and coherence, or increasing overall writing quality. Based on the interviews revealed several

recurrent themes regarding how students perceive and experience DeepSeek as a writing aid were revealed. Each participant's answers offered personal insights that illustrate the tool's perceived impact on different aspects of the academic writing process. The table below states the initials of the participants.

*Table 2. Initials of The Participants*

No.	Initial	Purpose Using DeepSeek
1	RNA	Grammar and spelling checks
2	AMP	Improving sentence structure and coherence
3	AAW	Generating ideas for essays
4	SRH	to assess and enhance the quality of writing essays.
5	NSN	to assess and enhance the quality of writing essays.

#### *DeepSeek as a Support for Idea Generation and Structure*

Across multiple interviews, students showed that DeepSeek played an important role in helping them overcome idea blocks and providing direction in writing. For instance, RNA described how DeepSeek gave her a starting point when she had no idea how to begin her assignments, acting like a brainstorming companion. Similarly, AMP emphasized that the tool helped her organize her writing into a clear structure, especially during tight deadlines, where DeepSeek provided not only ideas but also well-organized phrasing and structure. AAW praised the tool for its ability to generate relevant ideas from keywords or topics, making it her preferred method for initiating essay tasks. Likewise, NSN shared that DeepSeek helped her craft effective introductions and conclusions when she felt stuck, often giving examples that sparked her creativity. These answers suggest that students view DeepSeek not merely as a grammar checker but as a generative writing companion that aids the thinking process and provides content direction.

#### *Improvement in Grammar, Word Choice, and Clarity*

Students frequently reported that DeepSeek enhanced the technical quality of their writing. For example, SRH highlighted how DeepSeek corrected her grammar while also explaining the reasons behind the corrections, helping her learn from mistakes rather than simply fixing them. NSN echoed this sentiment, stating that DeepSeek made her more aware of typos, improved her vocabulary use, and helped her write clearer, more concise sentences. Additionally, AMP noted that the tool significantly improved the quality of her sentence structure, especially when she was writing long paragraphs. AAW mentioned that she began exploring synonyms more confidently, guided by DeepSeek's suggestions. Overall, students viewed the tool as contributing to both accuracy and stylistic refinement in their academic writing.

*Confidence and Writing Fluency*

A recurring theme was the boost in writing confidence that students experienced when using DeepSeek. RNA described feeling more secure about her grammar and structure, and AAW mentioned that using DeepSeek felt like having a supportive writing partner who could review her work and validate her choices. This increased confidence led to greater fluency and less hesitation during the writing process. For some students, such as NSN, DeepSeek also helped reduce the frustration and inefficiency associated with starting or structuring essays from scratch. This aligns with the broader idea that when applied carefully, DeepSeek can encourage learner autonomy and lessen writing anxiety.

*Perceived Writing Improvement and Reflections on Effectiveness*

When asked to rate the improvement in their writing skills due to DeepSeek, students gave positive but varied responses. RNA rated it between 8 out of 10, AMP gave a 9.5, AAW rated it 9, and SRH gave an 8. NSN, while acknowledging the tool's usefulness, rated it slightly lower at 7.5, explaining that it was “helpful but not helping much, it was a so-so.” This variation reflects different levels of reliance, prior writing skills, and expectations toward DeepSeek. Students generally acknowledged improvement in their essays, especially in grammar, structure, and expression, although they recognized that DeepSeek works best as a complement to their own thinking, not as a replacement.

The findings of this research carry several important implications for both educational practice and theoretical development, while also highlighting areas that warrant further investigation. From a practical standpoint, the students' positive perceptions of DeepSeek, particularly its user-friendliness, comprehensive features, and capacity to build writing confidence, underscore its value as a pedagogical tool in EFL (English as a Foreign Language) contexts. The majority of students reported that DeepSeek not only helped them correct grammatical errors but also enhanced their understanding of essay structure and writing coherence. This supports the view of Maqbool & Bilal (2025), who found that AI-assisted tools can enhance writing effectiveness and increase student engagement by offering personalized feedback and fostering motivation.

The data from the questionnaire and interviews reveal that students generally find DeepSeek helpful, accessible, and effective in improving various aspects of academic writing, such as grammar, coherence, vocabulary, and idea generation. The first section of the findings shows that DeepSeek contributes significantly to students' learning motivation and writing confidence. Over 90% of students agreed that DeepSeek made them more confident in writing academic texts. This aligns with Song & Song (2023), who stated that AI enhances writing effectiveness and increases student engagement. Similarly, Selim (2024), found that first-year EFL students at Al-Baha University experienced notable improvements in writing

quality and self-confidence through the use of AI tools, highlighting their effectiveness in providing immediate, adaptive feedback.

Students in this study also reported a deeper understanding of essay structure and clarity, highlighting that DeepSeek helps develop not just technical writing accuracy but also conceptual comprehension. In the second section, the ease of use and practicality of DeepSeek were strongly affirmed. Most students found DeepSeek's features complete and user-friendly. These results resonate with Wang (2025), who emphasized that DeepSeek is designed to be more structured and educationally focused than other AI tools like ChatGPT. The flexibility and accessibility noted by participants further support DeepSeek's potential to be adopted widely in EFL classrooms.

The third section presents compelling evidence that DeepSeek supports the development of students' writing skills. Nearly all participants agreed that DeepSeek offers useful suggestions and enhances their writing clarity and coherence. This finding is consistent with Fikri et al. (2024), who noted improvements in students' grammar and writing quality when using AI tools such as ChatGPT. The participants in this study confirmed that DeepSeek not only corrects errors but also explains them, enabling deeper learning, an aspect critical in building long-term writing competence.

Interview results reinforce these quantitative insights. Students reported that DeepSeek helps them generate ideas, organize their thoughts, and reduce writing anxiety. These qualitative insights reveal that students don't view DeepSeek as merely a tool for grammar checking, but as a writing partner that supports their thinking process. This aligns with Kotsis (2025), who emphasized DeepSeek's potential in encouraging students' critical thinking and structured learning. Despite the positive findings, the study has limitations, including a small, specific sample of EFL students and reliance on self-reported data, which may not fully reflect actual writing improvements. The absence of pre- and post-tests and the limited number of interview participants also restrict the depth and generalizability of the results. As noted by Huang et al. (2024), while AI tools can support grammar and content organization, their true effectiveness is best assessed through longitudinal studies that evaluate sustained improvements in learner output.

These findings also contribute to the theoretical discourse on second language writing, especially within the framework of socio-cognitive and scaffolded learning theories. DeepSeek appears to serve as a form of automated scaffolding, providing immediate, adaptive feedback while encouraging learner autonomy. This aligns with Lahby (2025), who emphasized that DeepSeek was intentionally designed to support educational goals, distinguishing it from broader AI models like ChatGPT that lack instructional structure. Furthermore, the way students used DeepSeek to reflect on their errors and revise their work suggests a shift from surface-level correction toward deeper metacognitive engagement, a crucial element in long-term language development.

This aligns with the findings of Mouchel et al. (2023), who observed that adaptive writing support systems can foster more strategic and cognitively engaged revision behaviour, indicating that AI-assisted tools have the potential to promote reflective writing practices rather than mere mechanical editing. However, the data also highlight the risk of over-reliance. Some students expressed a tendency to depend on DeepSeek for structure and content clarity. This is in line with concerns raised by Zhang et al. (2024) regarding students' dependence on AI tools, which could limit independent thinking and writing autonomy. Therefore, while DeepSeek supports writing improvement, educators should guide students in using it as a supplementary aid rather than a replacement for their critical efforts.

## CONCLUSION

In summary, this research highlights the benefits of AI-based tools like DeepSeek in supporting students' English writing development, not only by enhancing their engagement but also by shaping more confident and independent writers. While students generally respond well to its features, the study also highlights the importance of mindful use to prevent over-reliance. Therefore, further research is needed to explore its effectiveness in varied educational settings, compare it with other AI tools such as ChatGPT, Grok, or Meta AI, and assess its long-term influence on students' critical thinking and autonomy. Insights from educators will also be essential in guiding the responsible and impactful integration of AI in writing instruction.

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