



CHATGPT FOR DEVELOPING CRITICAL THINKING IN WRITING: PERSPECTIVES OF SENIOR HIGH SCHOOL ENGLISH TEACHERS IN INDONESIA

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Abstract: The use of ChatGPT as a generative artificial intelligence (AI) has been increasingly integrated into daily communication as a complimentary chatbot that assists individuals in resolving inquiries. ChatGPT's ease is also being discussed in the educational context, including in language teaching. Although previous studies have examined the use of artificial intelligence in English language teaching, limited studies investigate the possibilities and constraints of ChatGPT in enhancing students' critical thinking abilities in writing from the educators' viewpoint, especially senior high school level educators. Therefore, this study examines English teachers' perspectives on utilizing ChatGPT to improve students' critical thinking skills in English writing sessions. Employing a mixed-method design, insights were obtained from qualitative data of interviews with six teachers and triangulated with quantitative survey responses from 20 teachers. Findings reveal the teachers' recognition of ChatGPT's ability to facilitate individualized learning and improve instructional effectiveness. However, there are remaining concerns that educators are apprehensive about, particularly regarding the students' overdependence on AI, which may hinder the advancement of critical thinking abilities. This study offers a framework for the efficient use of AI tools in L2 instruction to enhance students' critical thinking skills, providing valuable recommendations for instructors aiming to align technological improvements with pedagogical principles. Further research utilizing larger sample sizes in an experimental context should be conducted to yield more robust conclusions.

Keywords: *artificial intelligence; ChatGPT; critical thinking; EFL; mobile-assisted language learning; writing*

INTRODUCTION

Artificial intelligence has recently emerged as a significant application among technology users. Chatbots are among the most frequently utilized artificial intelligence products on a regular basis. They are frequently utilized because of their facilitation of effortless information retrieval and straightforward problem analysis (Abdaljaleel et al., 2024; Oguz et al., 2024). ChatGPT constitutes one of the widely recognized chatbots due to its features of technological advancement, including a Generative Pre-trained Transformer (GPT) that produces human-like responses (Lahby et al.,

2024). The dialogue style enables ChatGPT to respond to follow-up inquiries, acknowledge errors, contest erroneous assumptions, and decline unsuitable requests (Farhi et al., 2023; Oguz et al., 2024). The functionality enhances user comfort and enjoyment while interacting with the chatbot.

The ease of ChatGPT access is also being discussed in the educational context, including in English as a second language (L2) teaching. Since its release in late 2022, ChatGPT has gained substantial attention from educators worldwide, and discussions have emerged about its potential applications in teaching and learning. Several

previous studies have investigated ChatGPT utilization in English language classrooms, such as the study by AlTwijri and Alghizzi (2024) on the efficacy of incorporating AI technologies to improve EFL learners' motivation, engagement, and attitudes while relieving their learning anxiety. It resulted in the adoption of AI technology in EFL settings being nascent, necessitating additional studies to determine the influence of AI-integrated lessons on the affective aspects of EFL learners. Moreover, Kostka and Toncelli (2023) explored latent challenges, opportunities, and recommendations for applying ChatGPT to English language teaching from classroom practices. The findings show that the rise of ChatGPT and AI tools will continue to impact change in education in ways we cannot yet imagine. A nuanced evaluation of the advantages and challenges of teaching and learning in an AI-driven world is essential, as AI will undoubtedly persist in its development and evolution.

Behind its sophistication, the advancement of AI raises concerns regarding individuals' critical thinking abilities, given the convenience with which AI provides necessary information to its users. In English language classrooms, critical thinking development remains a vital educational objective, particularly in writing instruction, where students need to analyze, evaluate, and synthesize information effectively (Sarica & Usluel, 2016). Critical thinking is defined as reasonable, reflective thinking aimed at determining what to believe or how to act (Southworth, 2022). Recent studies have shown that integrating AI-powered tools in writing instruction can potentially enhance students' analytical capabilities and deeper learning processes (Liu et al., 2024). However, the specific role of ChatGPT in fostering critical thinking skills through writing tasks requires further investigation, especially from the perspectives of classroom practitioners who directly implement the technology.

The conceptualization of critical thinking in this study is grounded in several theoretical frameworks. Firstly, Paul and Elder's (2020) framework provides a structured approach for understanding how ChatGPT might support intellectual development, emphasizing three components that consist of elements of thought, intellectual standards, and intellectual traits. ChatGPT's feature that provides immediate feedback on writing might enhance students' awareness of these elements, particularly by highlighting logical inconsistencies or suggesting ways to improve clarity and precision in their

writing. Secondly, Bloom's Revised Taxonomy serves as another valuable lens for examining how ChatGPT facilitates cognitive processes in writing. The hierarchical structure consists of remembering, understanding, applying, analyzing, evaluating, and creating maps into various interactions between students and AI writing assistants.

Moreover, prior research has predominantly examined the application of ChatGPT inside higher education (Gozali et al., 2024; Song & Song, 2023). Little endeavours to elucidate the application of chatbots in senior high school education. Senior high school level represents a significant time in students' academic development, a stage where advanced writing skills and critical thinking abilities become increasingly crucial for tertiary-level preparation and future career success (Espinoza-Celi & Pintado, 2020). As ChatGPT endures to evolve and impact educational practices, understanding teachers' perceptions and experiences with this technology is essential for developing effective pedagogical practices. Kohnke et al. (2023) assert that teachers' attitudes and beliefs about AI tools significantly influence their implementation and effectiveness in their classrooms.

While existing research has explored various aspects of AI in education, little is known about how teachers perceive ChatGPT's role in fostering higher-order thinking skills, particularly in resource-constrained settings. Moreover, only a limited number of mixed-methods investigations into how English teachers perceive and utilize ChatGPT for developing critical thinking skills through English writing instruction at the senior high school level (Oguz et al., 2024; Saif et al., 2024). Understanding their perceptions is vital as teachers serve as the primary mediators between technological innovations and student learning outcomes. Their experiences offer valuable information about the practical implications, challenges, and opportunities of incorporating ChatGPT in writing instruction aimed at enhancing critical thinking skills. The investigation related to students' critical thinking is in accordance with the objectives of the recent curriculum in Indonesia, the emancipated curriculum, which promotes student-centered learning, critical thinking, creativity, problem-solving skills, and comprehensive development (Wahyudin et al., 2024).

This mixed-method study aims to explore English teachers' perceptions of using ChatGPT as a tool for developing critical thinking skills in

English writing instruction at the senior high school level. By examining English teachers' experiences, concerns, and strategies in implementing ChatGPT, this research seeks to contribute to the growing body of knowledge about AI integration in language education and provide practical insights for educators, administrators, and policymakers. The findings are expected to help inform best practices for incorporating AI tools into English writing instruction, while maintaining a focus on critical thinking development. Here, the researchers formulated two research questions: (1) How does ChatGPT impact students' critical thinking development in senior high school English writing classrooms? (2) What challenges do teachers encounter when utilizing ChatGPT in senior high school English writing classrooms?

METHOD

This study aimed to investigate English teachers' views on how ChatGPT impacts students' critical thinking improvement and its challenges during the implementation in English writing classrooms. To answer the research questions, the researchers employed a mixed-methods, exploratory sequential design. The approach allows the examination of educators' experiences with the deployment of ChatGPT in fostering students' critical thinking skills in writing instruction while also acquiring generalized insights across broader contexts (Creswell & Creswell, 2021). It enables the researchers to collect rich and accurate data about how English teachers perceive the integration of ChatGPT into their writing instruction, particularly in its role in fostering students' critical thinking.

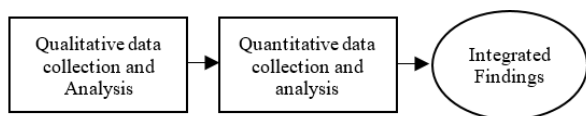


Figure 1. *Steps of exploratory sequential design*

This study's participants are English teachers from senior high schools in Indonesia. Using a purposive sampling method, twenty English teachers at the senior high school level from different areas of Indonesia were selected based on specific inclusion criteria to ensure the relevance and richness of the data. To be eligible for inclusion, participants were required to meet the following criteria: (1) Currently engaged in teaching English as a foreign language in senior high schools in Indonesia. (2) Experienced in using ChatGPT in their English writing instruction. (3) Have at least 3 years of experience in teaching English. (4) Demonstrate willingness to participate

in the study and provide informed consent. They were assured of confidentiality and their right to withdraw at any time.

Data were collected through semi-structured interviews and questionnaires. The researchers prepared a semi-structured interview guide exploring three key dimensions: senior high school English teachers' experiences in integrating ChatGPT into English writing instruction, perceived challenges in integrating ChatGPT to foster students' critical thinking, and observed benefits of using ChatGPT to foster students' critical thinking in senior high school writing tasks. The interview protocol consists of open-ended questions that are practically being followed up to elicit detailed responses. The interview lasted approximately 45 minutes up to one hour with six senior English teachers. Then, the qualitative data were analyzed thematically following the systematic procedures introduced by Braun and Clarke (2006), which consist of familiarizing with the data, generating initial codes, searching for themes, reviewing, defining, and writing the report. Subsequently, the 4-Likert Scale questionnaires were distributed to the 20 English teachers experienced in using ChatGPT to generalize the findings of the interview results. The questionnaires have been tested for validity through Pearson correlation, yielding a *P*-value of <0.050, indicating that the questionnaire was valid. The researchers also checked the reliability by calculating the coefficient using Cronbach Alpha formulae (Table 1).

Table 1. *Reliability analysis*

Scale Reliability Statistics	
Cronbach's Alpha	
Scale	0.918

The table indicates that the reliability coefficient exceeds 0.700, signifying that the questionnaire is trustworthy, valid, and consistent in measuring the same attributes. The questionnaire findings were analyzed using descriptive statistics in SPSS version 24 by computing the mean and standard deviation to summarize the responses.

This study executed data integration during the interpretation and instrument development phases. The topics derived from the interview guided the questionnaire design, ensuring it reflected the authentic experiences of the teachers. Discrepancies between qualitative and quantitative results are addressed through team discussions to strengthen the validity and consistency of the conclusions.

RESULTS AND DISCUSSIONS

The thematic analysis of the qualitative data from the interview transcripts produced multiple themes, categorized into core categories and sub-categories, to address the two study questions. This section outlines and defines each subject, derived from the verbatim excerpts of the interview statements. The quantitative data results reflect the perspectives of larger samples in relation to the themes identified in the interview data results.

ChatGPT fosters students' critical thinking development

Some information about how ChatGPT was implemented in English writing classrooms is unveiled, as well as the factors impacting the students' critical thinking development. The participants have all taught English in senior high schools for over ten years. However, their experience in ChatGPT implementation ranges from one to two years.

"I have been teaching English for more than ten years, and I have been using ChatGPT about one recent year." (Teacher 1)

"I have ten years of teaching experience and one year of teaching using ChatGPT." (Teacher 2)

"During my ten years teaching, I have been applying ChatGPT since 2022." (Teacher 3)

"More than ten years but one year for ChatGPT." (Teacher 4)

"My teaching experience is ten years, and my ChatGPT experience in class is about one year." (Teacher 5)

"I taught English more than ten years ago, and I started using ChatGPT about the last two years." (Teacher 6)

Motivations for utilizing ChatGPT

When the participants were asked about their motivation for utilizing ChatGPT in their English writing classrooms, some said it is intended to make the time more efficient and the learning process more comprehensive.

"To help students gain understanding from various learning sources." (Teacher 1)

"I want to introduce AI to them." (Teacher 2)

"It becomes easier to construct an idea to write." (Teacher 3)

"ChatGPT can be used as a discussion assistant when we want to develop our writing framework." (Teacher 4)

"It helps me manage time." (Teacher 5)

"The task becomes easier to complete with ChatGPT companion." (Teacher 6)

The aforementioned statements indicate that the primary motivations of the teachers include addressing the obstacles encountered by their students and familiarizing their students with contemporary technology, artificial intelligence, and its exact applications. Another element is the time constraint the teachers encounter, which is sometimes limited and necessitates innovative approaches for enhanced efficiency.

The integration of ChatGPT in English writing classes

The English teachers also revealed specific examples of ChatGPT integration in English writing instructions. The main function of the chatbot is to find inspiration for brainstorming the students' writing ideas and to help them find appropriate vocabulary.

"I instructed them to find an inspiring story which has complication and resolution." (Teacher 1)

"The students may ask ChatGPT to find ideas or topics to write." (Teacher 2)

"The students were asked to write a paragraph of a story plot. If they find difficulty in defining plot, they may ask ChatGPT." (Teacher 3)

"Since the students were asked to write their framework, they were allowed to open ChatGPT to find information on the topic of the framework." (Teacher 4)

"I ask them to use ChatGPT to look for titles of narrative story examples." (Teacher 5)

"To find an example of procedure text based on daily routine." (Teacher 6)

The transcripts above confirmed many methods employed by the English teachers to integrate ChatGPT into the writing instruction, such as identifying the subject or titles of students' works, for plotting the narrative, since prior to composing paragraphs, pupils must rigorously delineate the step-by-step plot. Figure 2 illustrates ChatGPT

prompts utilised by students, as observed by teachers in the context of writing instruction.

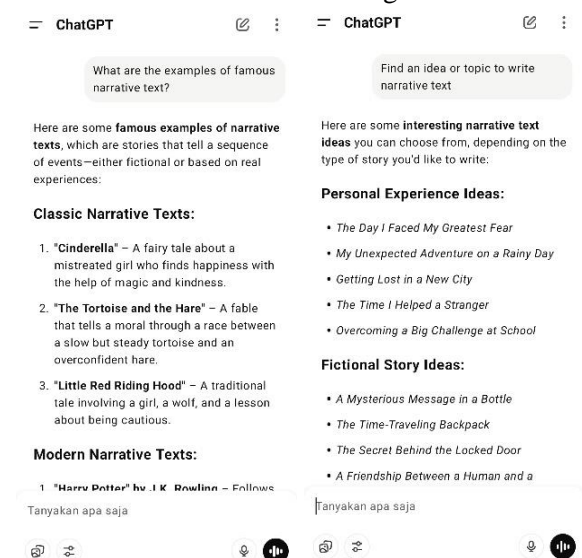


Figure 2. ChatGPT's use in finding ideas and examples of narrative text

ChatGPT's rapid response not only delivers straightforward responses but also offers text samples from diverse online sources, facilitating quicker information filtering for students compared to a standard Google search.

Change in students' critical thinking abilities

As a result of the ChatGPT implementation, most teachers mentioned a change in their students' critical thinking abilities. It relates to idea formulation and the upgraded speed in thinking and understanding new insight. The activity that causes the development of the students' critical thinking is when they are forced to write whatever is in their mind, and ChatGPT helps them expand the input of prior knowledge they have.

"The students improved in idea formulation, spelling, and Grammar through Recount text writing activity with the assistance of ChatGPT." (Teacher 2)

"They have a better imagination through the freedom of writing of what is in their minds without difficulties in plotting and vocabularies." (Teacher 3)

"ChatGPT is only an assistant of discussion. The students' critical thinking improves through developing main idea activity." (Teacher 4)

"After using ChatGPT, they are easier to understand the narrative text and identify the information easily." (Teacher 5)

Most English teachers in this survey recognized

the development of their students' critical thinking through several qualities. One instance is students' improvisation in generating ideas after utilizing ChatGPT to assist them in identifying interesting topics for their writing. Furthermore, the pupils received instruction in spelling and grammar improvement. Besides, students exhibit increased imagination in defining their narrative plots after employing ChatGPT to assist them in overcoming challenges related to plot development. However, a divergent perspective also emerges, asserting that the enhancement of students' critical thinking is attributable not to the aid of ChatGPT but rather to the process of formulating their writing's central idea.

ChatGPT as language and content consultants

Following the development of the students' critical thinking, the participants also stated that their students learned to evaluate and analyze their writing products, assisted by ChatGPT. This is done by utilizing the various features offered in ChatGPT, such as direct interactive chat, get advice, and translation.

"The students ask ChatGPT to find themes, checking spelling and grammar. It uses direct chat feature. Then they compare with their manual analysis." (Teacher 2)

"Asking for feedback to revise the students' writing." (Teacher 3)

"Correcting the spelling and grammar using get advice feature." (Teacher 4)

"They can find what I did not explain in ChatGPT using the feature of question-and-answer development." (Teacher 5)

"They learned to analyze faster with the translation assistance from ChatGPT." (Teacher 6)

The aforementioned qualitative data can be summarized that: (1) The introduction of ChatGPT in writing lessons has significantly aided the students in various aspects. (2) The direct chat tool, equipped with numerous functionalities, can assist the students in enhancing the quality of their work. (3) Moreover, the process of instructing writing with the aid of ChatGPT enhances the student's critical thinking, as it increasingly stimulates their curiosity regarding the responses provided by the chatbot. (4) The offered features, including advice or feedback, translation, and interactive dialogue, compel the students to critically assess and

appraise their work within a limited class duration. quantitative data analysis of the questionnaire
 This trend was supported by the result of presented in the Table 2 below:

Table 2. The impact of ChatGPT on students' critical thinking development

No.	Statement	M	SD
1.	I use ChatGPT to motivate students to engage more actively in the writing process.	3.25	0.444
2.	I use ChatGPT to introduce AI to students.	3.20	0.410
3.	I use ChatGPT to make teaching time more efficient.	3.25	0.444
4.	I believe that integrating ChatGPT into writing classes enhances students' writing exploration and creativity.	3.20	0.410
5.	I employ ChatGPT to help students overcome initial barriers to writing, such as writer's block.	3.45	0.510
6.	I use ChatGPT to help students brainstorm writing ideas.	3.20	0.410
7.	Students use ChatGPT to improve their essay structure and organization.	3.10	0.308
8.	ChatGPT assists students in understanding different writing genres and styles.	3.15	0.366
9.	Using ChatGPT encourages students to critically evaluate AI-generated content.	3.10	0.308
10.	Students demonstrate improved analytical skills when interacting with ChatGPT.	3.10	0.308
11.	ChatGPT prompts students to think more deeply about language and writing structure.	3.15	0.366
12.	Students become more metacognitive about their writing process when using ChatGPT.	3.10	0.308
13.	ChatGPT effectively serves as a language consultant for students.	3.30	0.470
14.	The AI provides helpful suggestions for improving writing clarity and style.	3.15	0.366
15.	Students learn new vocabulary and writing techniques through ChatGPT interactions.	3.15	0.366

The table shows that teachers are mainly motivated to use ChatGPT in order to assist their students in overcoming writing barriers (M=3.45, SD=0.510), supported by other motivations of time efficiency and engaging students in the writing class (both M=3.25, SD=0.444). Regarding ChatGPT integration in writing classes, they moderately agree that the chatbot enhances students' exploration and creativity (M=3.20, SD=0.410) and is used as a brainstorming tool (M=3.20, SD=0.410). Moderate and consistent agreement also appears on the perception of ChatGPT encouragement on critical evaluation of AI-generated content and analytical skill improvement (M=3.10, SD=0.308). It is also acknowledged that ChatGPT was like a language consultant (M=3.30, SD=0.470) by providing helpful suggestions on writing clarity and style and facilitating the students to learn new vocabulary and techniques.

The integration of ChatGPT in English writing classrooms represents a significant shift in pedagogical approaches, particularly in fostering critical thinking development among students. This is confirmed by the findings that English teachers with extensive teaching experiences (over 10 years) have embraced ChatGPT primarily to enhance efficiency and comprehensiveness in the learning process. This fact aligns with previous research by Liu et al. (2024), who found that AI-powered writing tools can significantly reduce the cognitive load on students, allowing them to focus more on higher-order thinking skills rather than getting stuck on basic language mechanics. Moreover, the teachers stated that the motivation

for digital literacy has also become the reason for them to implement the chatbot. It is in accordance with what is stated by Ng et al. (2023) about the necessity of AI literacy education, as AI literacy has emerged as a crucial digital competency required by all individuals, not solely computer scientists.

The findings reveal that ChatGPT serves multiple pedagogical functions, primarily as a source of inspiration and vocabulary building. The English teachers reported using ChatGPT for various writing activities, from generating story ideas to developing frameworks and understanding text structures. This multifaceted application supports Warschauer and Xu (2024) assertion that AI writing assistants can function as cognitive scaffolds, providing students with the necessary support to bridge the gap between their current abilities and desired learning outcomes. The teachers' testimonies particularly emphasize ChatGPT's role in helping students overcome initial writing barriers, which has been identified as a critical factor in developing writing confidence (Darling-Hammond et al., 2020). Furthermore, the educators' perception of ChatGPT as a language consultant is corroborated by Swain's comprehensible output hypothesis, which posits that learners must generate language comprehensible to their interlocutors, thereby likely recognizing the constraints of their second language proficiency and the necessity to discover more effective means of conveying their intended message (Lightbown & Spada, 2013).

A notable aspect of the findings is the reported improvement in students' critical thinking abilities,

specifically in idea formulation and processing speed. This development appears to be facilitated by the interactive nature of ChatGPT, which allows students to explore and expand their ideas freely. Similar results were reported by Lee et al. (2024) in their longitudinal study of AI-assisted writing classrooms, where students demonstrated enhanced analytical capabilities and deeper engagement with content when using AI tools as discussion partners. The findings suggest that ChatGPT's role as a "discussion assistant" creates a unique learning environment where students can test and refine their ideas through immediate feedback.

The findings also highlight the emergence of new evaluation and analysis practices among students. Through features such as direct interactive chat, feedback solicitation, and translation assistance, students are developing more sophisticated approaches to reviewing and improving their work. This observation aligns with recent research by Smith et al. (2024), who found that students using AI writing assistants demonstrated improved self-regulation and metacognitive awareness in their writing process. The ability to receive immediate feedback and multiple perspectives on their writing appears to encourage students to adopt a more critical and analytical approach to their work. Cope et al. (2021) highlight that in AI-enhanced education, learners enjoy limitless access to identifiable knowledge. However, according to Kostka and Toncelli (2023), academic integrity is threatened by the knowledge acquired through ChatGPT since it may even result in "high-tech plagiarism."

The transformation of the writing classroom through ChatGPT integration suggests a shift towards a more dynamic and interactive learning environment. As indicated in the findings, the time constraints of traditional classroom settings are being addressed through ChatGPT's efficient feedback and support mechanisms. This efficiency, however, does not appear to compromise the development of critical thinking skills. Rather, as supported by recent research from Thiga (2024), it seems to enhance it by providing students with more opportunities for revision, reflection, and improvement within limited class time. The findings suggest that when properly implemented, ChatGPT can serve as both a practical tool for writing improvement and a catalyst for developing higher-order thinking skills.

Challenges of utilizing ChatGPT in English writing classrooms

Despite the potential for innovation and modern advantages in integrating the ChatGPT chatbot technology into an English classroom, unforeseen problems persist during its practical application. According to the findings from the interviews with six participants, all English teachers faced difficulties when implementing ChatGPT in their English writing classrooms. The challenges included stable internet connection, digital literacy, lack of vocabulary memorization, and device constraints.

Connection and device issues

One of the emerging themes of the challenges the English teachers faced during the ChatGPT implementation was device and connection issues, which derived from various school conditions.

"The main challenge is an internet connection."
(Teacher 2)

"Not all students can operate the chatbot; I need to struggle to guide them." (Teacher 3)

"The laptop usage is scheduled, so I cannot use it to teach them at any time." (Teacher 4)

The excerpts above indicate that the teachers who incorporated ChatGPT into their writing sessions faced challenges due to inadequate resources, such as the challenge of obtaining a reliable internet connection, as ChatGPT necessitates a rapid connection to generate immediate responses. Certain schools lack an adequate number of computers or laptops required for using the technology in L2 instruction, and not all students possess the technological proficiency needed to run the chatbot, particularly those in remote areas.

Negative effects of ChatGPT use on independent thinking

In addition to the challenges with device and connection, several salient negative impacts on students' ability to think independently are emerging as side effects of ChatGPT use, including the inability to memorize the tenses in grammar, the risk of assistance addiction, the weakening of memory, the risk of trusting misleading information, and the students' inability to look up dictionaries in the future.

"Several students find it difficult to remember the formula of tenses of the text language feature." (Teacher 1)

“They have a risk of ChatGPT addiction, always rely on the chatbot answer.” (Teacher 2)

“When they use ChatGPT continuously, they have a risk of brain malfunction.” (Teacher 3)

“The students totally believe in the information from ChatGPT without any validation. It is harmful, sometimes.” (Teacher 4)

“It will lead to the self-distrust with their ability.” (Teacher 5)

“I had ever had experience asking one of the students, and he did not answer directly but firstly opening ChatGPT.” (Teacher 6)

The statements suggest a disparity among various students regarding their memorization abilities, particularly concerning the sixteen grammar tense formulas. Subsequently, instances of self-distrust and addiction emerge as challenges for certain students who prefer to consult ChatGPT rather than exerting their own effort. The manifestation of the habit is indicated by the readiness to use ChatGPT at any moment for inquiries or tasks. A further issue is ChatGPT’s potential dissemination of false information. Unquestioningly trusting ChatGPT may lead students to persistent misinformation.

Teachers’ actions to minimize the emergent risks

In response to students’ excessive dependence on ChatGPT, the English teachers have implemented several measures, including mobile phone limits, establishing a classroom agreement, elucidating the true purpose of ChatGPT, and utilizing tools for plagiarism and AI detection.

“In particular conditions, I forbid my students not to use a mobile phone at all, just conventional activities such as discussions, writing on notebooks, and presenting the result of discussion.” (Teacher 1)

“Giving them a guideline and learning agreement at the beginning of the class.” (Teacher 2)

“I use plagiarism and AI checker such as Turnitin to check whether they use ChatGPT or not.” (Teacher 3)

The teachers added,

“I usually tell the students that if they answer according to their own thinking, they will obtain different scores, or better scores.” (Teacher 3)

“To maintain their creativity, before writing in the form of text, they should first present their framework in the front side of the classroom.” (Teacher 4)

When queried about measures to prevent student misuse of ChatGPT, they suggested activities including the establishment of explicit guidelines for ChatGPT use during the lessons, special oversight, and supplementary tasks to foster individual creativity.

“The guideline of ChatGPT use should be clear, precise, and understandable.” (Teacher 2)

“I had to ask them to write with different topic to force their creativity output.” (Teacher 4)

“I must control them strictly and specifically, guide them directly during the chatbot use.” (Teacher 5)

English teachers with experience using ChatGPT provide advice on using it to foster students’ critical thinking, including formulating specific prompts for practice, assessing students’ comprehension, and establishing clear operational guidelines for ChatGPT. It is also advisable to compare different chatbots, such as Jenni AI, Quillbot, and Gemini, to see which best meets students’ requirements.

“As I have stated above, ChatGPT is for searching examples of text only.” (Teacher 1)

“Teachers should generate precise and effective prompts to be examples for students.” (Teacher 2)

“The rules of using it wisely is a must.” (Teacher 4)

“Teachers should explain the benefits and drawbacks of ChatGPT before implementing it.” (Teacher 5)

The interviews summarize that: (1) Employing ChatGPT in writing classes presents specific problems for educators in preserving students’ integrity and inventiveness in their assignments. (2) Such challenges could be mitigated by establishing precise regulations and classroom agreements. (3) Artificial intelligence, in addition to ChatGPT, can also be utilized in English classrooms to assess the appropriateness of students’ needs.

Meanwhile, the results of the questionnaires

show a slight difference, as shown in Table 3.

Table 3. *The impact of ChatGPT on students' critical thinking development*

No.	Statement	M	SD
1.	Students become overly dependent on ChatGPT for writing tasks.	3.10	0.447
2.	ChatGPT use may compromise students' independent thinking skills.	2.95	0.394
3.	Technical issues (internet connectivity, device access) hinder effective ChatGPT integration.	2.85	0.366
4.	ChatGPT can be effectively integrated into the existing English writing curriculum.	3.15	0.366
5.	The use of ChatGPT requires continuous teacher guidance to maintain educational value.	3.65	0.489

Table 3 reveals that teachers are more concerned about students' dependence on ChatGPT (M=3.10, SD=0.447) and less about compromising independent thinking skills (M=2.95, SD=0.394). The challenges in technical issues such as internet connectivity and device access are perceived as relatively minor challenges (M=2.85, SD=0.366). The teachers have a strong belief in the importance of continuous guidance in ChatGPT implementation (M=3.65, SD=0.489). Despite the existence of the challenges, the teachers maintain cautious optimism that ChatGPT can be effectively integrated into the existing curricula, suggesting that there must be educational benefits preserved while minimizing potential risks to students' critical thinking development.

The implementation of ChatGPT in English writing classrooms, while promising, faces significant infrastructural and pedagogical challenges that seek careful consideration. The findings highlight fundamental barriers such as internet connectivity issues, limited device accessibility, and varying levels of digital literacy among students. These challenges align with recent research by Karan (2024), who identified technological infrastructure as a critical factor in successful AI integration in education. Additionally, Singh (2024) found that disparities in digital literacy can significantly impact the effectiveness of AI-enhanced learning environments, suggesting the need for comprehensive digital literacy training programs before implementing AI tools in classrooms.

Of particular concern is the potential negative impact of ChatGPT use on students' cognitive development and learning autonomy. The English teachers reported issues ranging from students' diminished ability to memorize grammar rules due to an overreliance on the AI tool for basic tasks. These observations correspond with Zhang et al. (2024) research on the "AI dependency syndrome" in educational settings, where students showed

decreased confidence in their abilities and reduced motivation to develop fundamental language skills. This finding reveals an apparent contradiction: while teachers observed enhanced critical thinking skills among students using ChatGPT, they also expressed concerns about potential dependency. This fact can be comprehended through the lens of scaffolding theory (Vonna et al., 2015). When ChatGPT plays a role as a temporary scaffold, providing support that is gradually removed as students' competence develops, it enhances critical thinking by allowing students to engage with high-order concerns. The findings also raise important concerns about students' critical evaluation skills, as noted by Teacher 4, who observed students accepting ChatGPT's information without validation, echoing similar concerns raised in the study on AI-induced information literacy challenges and the policymaking of AI integration in education (Schiff, 2022; Tiernan et al., 2023).

The teachers' responsive strategies to these challenges demonstrate a proactive approach to maintaining educational integrity while leveraging AI benefits. The implementation of usage guidelines, plagiarism checks, and specific classroom agreements reflects what McKnight and Gannon (2024) termed as "AI-aware pedagogy," which emphasizes the balanced integration of technology while preserving traditional learning objectives. Nonetheless, Kohnke et al. (2023) contend that, despite the development of digital tools purporting to identify AI-generated text, this response may result in a perpetual game of "cat and mouse" and fails to address the essential utility of ChatGPT or the ethical implications of technology. Subsequently, the findings show that the teachers are developing innovative approaches to prevent over-dependence, such as requiring preliminary framework presentations and implementing mobile phone restrictions, strategies that align with Annamalai et al.'s (2023) recommended practices for maintaining student autonomy in AI-enhanced

classrooms.

The findings underscore the crucial role of structured guidance in ChatGPT implementation, particularly through clear guidelines and specific prompts. It is also crucial to prevent students from trusting misleading information from the chatbot (Baidoo-Anu & Owusu Ansah, 2023). This also aligns with recent research by Nguyen (2024) who found that well-designed prompts and explicit usage guidelines significantly improve learning outcomes in AI-assisted writing classrooms. The teachers' suggestion to explore various AI tools (such as Jenni AI, Quillbot, and Gemini) reflects an emerging understanding of the need for diverse technological alternatives, as supported by Baidoo-Anu and Owusu Ansah (2023) on the benefits of using multiple AI tools to meet varied learning needs and preferences.

The challenges identified when implementing ChatGPT in English writing classrooms point to a broader need for systematic approaches to AI integration in education. The findings suggest that successful implementation requires a delicate balance between leveraging AI capabilities and maintaining traditional educational values. This aligns with the "balanced integration framework" proposed by Wang et al. (2024), which emphasizes the importance of maintaining student creativity and critical thinking while utilizing AI tools. The teachers' experiences highlight the need for continued research and development of best practices in AI-enhanced writing instruction, particularly in addressing issues of student autonomy and authentic learning experiences.

CONCLUSION

This study reveals the dual nature of ChatGPT implementation in senior high school English writing classrooms. On the one hand, the findings demonstrate ChatGPT's significant potential in enhancing students' critical thinking development through improved idea formulation, faster processing of information, and more sophisticated evaluation practices, whereas, on the other hand, they also disclose substantial challenges that need to be addressed. The research shows that when properly implemented with clear guidelines and structured oversight, ChatGPT can serve as an effective tool for developing students' critical thinking in writing, particularly through its functions as a discussion assistant, feedback provider, and source of writing inspiration. The English teachers' experiences suggest that the tool's interactive features and immediate feedback capabilities have the potential to create a more

dynamic learning environment that encourages students to engage more deeply with their writing process.

However, the successful implementation of ChatGPT in writing instruction faces several notable challenges that warrant careful consideration. These encompass infrastructural issues such as internet connectivity issues and device availability, as well as pedagogical concerns regarding student overdependence and potential negative impacts on fundamental language learning skills. Therefore, teachers should properly design writing tasks that explicitly require students to justify and evaluate ChatGPT-generated suggestions rather than accepting them uncritically. For instance, the teacher might instruct students to criticize the output text from ChatGPT and understand its weaknesses before integrating it into their writing. Additionally, teachers are required to establish clear protocols of when students are allowed to incorporate AI assistance and how students should modify the suggestions.

The present study is limited by its sample that consist exclusively of Indonesian senior high school English teachers, potentially limiting the generalizability of findings to other cultural educational contexts where attitudes toward AI and pedagogical approaches may differ significantly. Moreover, the reliance on self-reported data from teachers may introduce potential bias, as participants may have overreported and underreported data due to social desirability or other factors. Therefore, future research should focus on developing comprehensive and evidence-based frameworks for AI integration in writing instruction, particularly exploring ways to balance technological assistance with traditional learning objectives, such as an experimental study with more randomized and larger samples, which also highlights the monitoring system of in-class and out-of-class writing activities. Additionally, longitudinal studies examining the long-term effects of ChatGPT usage on students' writing development and critical thinking skills would provide valuable insights for educational practitioners, indicating that schools and instructors should develop clear and specific guidelines when accepting generative AI in writing practices to ensure transparency in the system that aligns with the school curriculum. The findings of this study suggest that while ChatGPT holds promising potential for enhancing writing instruction and critical thinking development, its

successful implementation requires careful planning and continuous monitoring to ensure that it serves as a complement to, rather than a replacement for, traditional learning approaches.

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