

EFL Students' Self-regulation in the Writing Process using ChatGPT

Krismalita Sekar Diasti¹

Soegijapranata Catholic University, Indonesia

krismalita@unika.ac.id

Cecilia Titiek Murniati²

Soegijapranata Catholic University, Indonesia

c_murniati@unika.ac.id

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Abstract

The rise of Artificial Intelligence (AI), especially ChatGPT, in language learning education raises debate among scholars. One of the issues discussed is students' overdependency on ChatGPT. This study aims at investigating how higher education students regulate their learning process, specifically in their process of completing writing tasks using ChatGPT. Self-regulation is defined as proactive efforts initiated by learners in managing their learning process. This study employed mixed method involving 28 students who took paragraph expository writing class. The data were gathered by distributing questionnaires and conducting FGD. The results of this study showed that students regulate their writing process through several strategies, such as goal setting, self-monitoring, and self-evaluation. The findings of this study provide suggestions to equip EFL students with self-regulated learning skills to help them navigate their learning process in the digital era. Moreover, ChatGPT could be an alternative digital tool which could support the shift of the education process to become more student-centered.

Keywords: Self-regulated learning; ChatGPT; EFL students; Writing

1. Introduction

Artificial Intelligence (AI) is widely known and utilized in all sectors of human life, including education. AI has been viewed as a paramount tool in the modern learning process (Aljohani, 2021; Mohammadkarimi, 2024; Pratiwi et al., 2024; Meisuri, 2024), which could help students to achieve the learning outcomes more effectively. Student-centered learning can be further supported by using AI in the classroom. AI is not a novel tool in education. Examples of AI in language learning such as Grammarly, which focuses on providing grammar suggestions; QuillBot, which focuses on paraphrasing text; Elicit, which focuses on reviewing research paper; ELSA Speak, which focuses on improving speaking skills; Duolingo, which focuses on language acquisition; and most recently, ChatGPT, which focuses on providing information. Since its launch, ChatGPT has gained spotlight from many scholars. Indeed, the use of ChatGPT raises pros and cons on the language education field.

ChatGPT is designed to imitate human in "the way a human would behave as a conversation partner" (Valova et al., 2024). ChatGPT works with big data and prompts given by its users. The more complete the prompt provided by users, the more precise the responses given by ChatGPT. ChatGPT is believed to enhance the quality of the learning process since it offers a personalized learning experience resulting in the improvement of students' self-regulated learning skills (Pisica et al., 2023; Xiao & Zhi, 2023; Slamet, 2024). ChatGPT uses natural language processing (NLP). As a result, it could provide responses based on students' needs and proficiency level with the aim that it could support more personalized learning activities. Research done by (Khurma et al., 2024) shows that ChatGPT is a promising tool which could maximize students' learning engagement. They state that ChatGPT's capacity to provide fast response and



immense knowledge supports students to be accountable for their own learning. Moreover, it could engage students to learn without the guidance of their teachers.

In English language learning, ChatGPT could promote students' critical thinking skills (Suharmawan, 2023). Teachers could provide learning activities to hone students' critical thinking skills by engaging them to think, analyze, and evaluate information provided by ChatGPT. Ideally, information gained from ChatGPT should not be solely used. Additionally, ChatGPT could promote self-regulated learning in which students are accountable for their learning process independently. Learning processes which integrate ChatGPT is considered more suitable for adult learners who could decide their learning goals and monitor their learning autonomously. In fact, the integration of ChatGPT to the learning process could support students' internal motivation driving them to learn (A'yun et al., 2025). In addition to increasing students' learning motivation, ChatGPT-assisted learning could improve self-regulated learning skills as well as knowledge construction (Wu et al., 2024). The use of ChatGPT in L2 learning could also help students to be in control of navigating their own learning processes (Wei, 2023).

A sizeable number of studies have emphasized the benefits and drawbacks of ChatGPT in the EFL classroom as well as learners' perception towards ChatGPT. However, there is still limited research aiming to find how students regulate themselves when completing task with the help of ChatGPT. Therefore, further studies are needed. This study fills the gap in the literature by exploring how EFL students regulate their use of ChatGPT to facilitate their writing process. This study aims to discover strategies used by the students in regulating their learning process, especially in writing task completion. Regulating one's learning is considered an essential factor which determines students' achievement. Moreover, the result of this study contributes to broadening the understanding of ChatGPT usage which could become an alternative of digital learning processes.

ChatGPT in EFL Classroom

The use of ChatGPT in the EFL classroom offers learning experiences which differ from traditional classrooms. Its ability to replicate human conversation provides interactive learning activities where students could interact personally. ChatGPT distinguishes itself as a promising tool which offers personalized learning experiences (Abas et al., 2023; Horn, 2024; Songsiengchai, 2025; Ullah et al., 2025). The ability to customize responses to meet students' needs could support autonomous learning guaranteeing students' language development. ChatGPT has been proven to provide an adaptive learning environment where the responses could be adjusted based on students' proficiency level (Abas et al., 2023). ChatGPT could also solve the issue where teachers find difficulty in providing feedback to each student. ChatGPT's ability to replicate real-life conversation benefits both teachers and students to get feedback on students' progress quickly which traditional classroom lacks. The versatility of ChatGPT also drives students to learn in a more relaxed environment (Rosmayanti, 2024). Students who have low achievement often possess low confidence and participate less actively in the learning processes. Therefore, ChatGPT could be utilized to support and help students by providing a less intimidating learning environment.

Further, teachers could utilize ChatGPT to transform learning activities into more interactive and engaging since ChatGPT offers ideas for material development and lesson planning (Koraishi, 2023; Octavio et al., 2024). By using ChatGPT, teachers could provide learning activities which are more engaging and contextual. ChatGPT's feature offers automated grading and real time feedback which could help teachers in assessing students' writing production (Octavio et al., 2024). As a result, teachers' administrative works are alleviated.

Recent studies on the use of ChatGPT in the EFL classroom highlight its drawbacks which mainly concern the information biases. According to Hang (2023), information given by ChatGPT might be biased and misleading due to its database and algorithms. As a result, it is paramount to always evaluate and criticize information provided by ChatGPT. The current learning process should be beyond topic comprehension providing students to elevate their critical thinking skills. As one of the 21st century skills, students' critical thinking skills should be developed since they need to analyze and evaluate information derived from the internet (Dad, 2023) leading to drawing logical conclusion. Moreover, the use of ChatGPT in the EFL classroom raises concern about students' academic integrity (Hang, 2023). One of the debatable questions is when students use ChatGPT in their writing assignment completion. It raises concern whether the writing production truly reflects students' writing performances. To overcome this issue, teachers should adjust the assessment which fits to the current context (Hang, 2023). Teachers could assess students both written and oral to ensure the result truly reflect students' comprehension. Further, the assessment needs to measure students' higher order thinking skills. The use of ChatGPT in the EFL classroom remains debatable. However, teachers need to embrace the current technology while adjusting the pedagogical framework to suit the current learning process.

Self-regulated Learning

Self-regulated learning could be defined as an active initiative to manage the learning process, including setting goal, monitoring progress, and evaluating the learning results. Self-regulated learning is tightly connected to andragogy learning in which adult learners take control in navigating their own learning. Zimmerman mentions self-regulated learners as “masters of their own learning” meaning that learners have active participation in managing and being responsible to their learning process (Zimmerman, 1990). Self-regulated learning involves the abilities to adapt and find suitable learning strategies to achieve one’s learning goals. Self-regulation involves three cyclical phases: forethought, performance, and self-reflection (Zimmerman, 2000). The forethought phase involves individuals’ beliefs and the targeted goals. The performance phase includes effort individuals devote to achieve the targeted goals. In this phase, learners regularly adjust their learning strategies to achieve their goal effectively. The last phase is self-reflection where learners engage in reflecting and evaluating their learning process. Self-regulated learners will not easily feel satisfied with their learning achievement and continuously seek for improvement. Self-regulated learning skills are significant to be acquired, especially in this digital learning environment where students need to be accountable for their own learning.

2. Method

This study attempted to explore how students proactively manage their writing process when using ChatGPT. This study employed mixed method, specifically an explanatory sequential design. Explanatory sequential design involves two stages of data collection in which quantitative data is collected and analyzed in the first phase. The result of quantitative data is used to collect qualitative data (Creswell & Creswell, 2017). This study involved twenty-eight higher education students who took paragraph expository writing class. Paragraph expository writing is one of the writing courses offered to sophomores aiming to provide students with writing activities to help them organize their ideas coherently and cohesively.

To obtain the data, this study used two research instruments, namely questionnaire and focus group discussion (FGD). The questionnaire consisted of closed-ended questions with Likert Scales ranging from 1 to 5. The statements of the questionnaire were developed based on the theory of Self-regulated learning by Zimmerman (2000), who stated that learners undergo three self-regulated phases, namely forethought, performance, and self-reflection. The results of the questionnaire were analyzed and used as a guide to construct the interview questions. The interview was done in FGD involving four participants to delve more information from the participants. Participants were selected through purposive sampling based on their answers to the previous questionnaire. The selection of the participants was mainly due to their writing process experience using ChatGPT. The results of the interviews were analyzed using thematic coding and used to support the data obtained from the questionnaire. To ensure participants' confidentiality, pseudonyms were used in reporting the results.

3. Findings and Discussion

In this study, the findings describe EFL students’ experiences in using ChatGPT to help them complete their writing assignments. Through close-ended questions and FGD, the participants shared their experiences. The results of this study showed that students regulated their writing processes when using ChatGPT as a tool to facilitate their writing process. The students employed self-regulated learning strategies, namely goal setting, self-monitoring, and self-evaluation.

Goal Setting

Goal setting becomes the first phase of self-regulation. Zimmerman (2000) defines goal setting as an attempt to decide specific learning outcomes which learners need to achieve by the end of the learning process. During the writing process, students should already decide their writing goals in order to be more directed in the writing process. The results of the questionnaire show that students already set their writing goals as seen in Table 1.

Table 1. Goal Setting Strategy

Statements	Mean	SD
I set specific goals in completing writing task.	3.75	0.84
By using ChatGPT, I become more motivated to complete the given writing task.	3.71	0.97

Table 1 demonstrates that students have set their writing goals in their initial writing process. Students who set writing goals do not only show higher enthusiasm to finish the writing task but also possess higher motivation to adjust writing strategies when facing problems in the writing process (Wijaya, 2021). The forethought stage involves the ability to motivate oneself towards the planned goal (Zimmerman, 2000). Motivation consists of intrinsic and extrinsic motivation. Participants in this study admitted that they are driven by extrinsic motivation, particularly by using

ChatGPT in the process of writing completion. The participants explained further their experience in using ChatGPT as a tool to assist their writing process. The participants said:

I usually think first about what I would like to write. Then, I ask ChatGPT's opinions. [P1]

My writing process usually begins by deciding the topic and outlining the ideas I would like to write about. ChatGPT helps me in making an outline with the chosen topic. [P3]

I personally feel motivated by ChatGPT. Apart from learning, I could ask for opinion from ChatGPT. [P4]

From the interview results, it could be seen that P1 has extrinsic motivation to complete the writing task. ChatGPT's versatility could foster students' learning motivation since ChatGPT's responses could be adjusted to the learners' pace and needs (Abas et al., 2023). Therefore, ChatGPT is considered a suitable tool to support student-centered learning and could revolutionize traditional learning style which are often characterized as one-size-fits-all. Moreover, the participants employed goal setting strategy in their writing process. Both P1 and P3 claimed that they have decided their writing topic and asked ChatGPT to help them make an outline. The results of this study are supported by Umamah et al., (2022) who stated that goal setting is an important phase for self-regulated learners to direct them achieve their personal learning goals. Goal setting is seen as a strategic effort to promote students' learning outcomes (Teng & Huang, 2019). Overall, both survey and interview data suggested that learners need to have learning goals in order to remain focused on their academic journey.

Self-monitoring

Participants in this study acknowledged that they monitor their writing process although they utilize ChatGPT. The self-monitoring process belongs to the second phase of self-regulated learning where learners track their performances and the environment around them (Zimmerman, 2000). The monitoring process is significant for learners as they could ensure whether they are still on the right track. Table 2 showed that the participants monitored their writing process.

Table 2. Self-monitoring Strategy

Statements	Mean	SD
I monitor my writing progress although I use ChatGPT	3.78	1.10
I check the information from ChatGPT carefully before I use it in my writing	4.03	1.03

The results of the questionnaire showed that students monitor their writing process regularly. Monitoring is considered as a crucial step which could determine the quality of students' writing products. Information provided by ChatGPT has the potential to be misleading (Murphy et al., 2023). The references provided by ChatGPT are also sometimes bogus. Therefore, students need to monitor their writing progress despite the fact that they use ChatGPT. When asked whether the participants double checked the information provided by ChatGPT before using it, they stated as follows.

I do. I still check on other websites, for example, Google. [P2]

Yes, I always check it. I always ask ChatGPT to provide me with the link to the references. If it is bogus, then I ask ChatGPT to provide me with new references. [P4]

Based on the interview results, the participants admitted that they monitor their writing progress although they ask help from ChatGPT. In addition, both P2 and P4 check the references provided by ChatGPT before using it since they are aware of bogus references given by ChatGPT. Self-regulated learners are characterized by taking intended action to monitor their performances, especially whether they are still on the right track in achieving their goals. According to Zimmerman (1990), adult learners have the ability to monitor their performances. The issue of over-dependence might be minimize by providing learning activities which invite students to monitor and evaluate information provided by ChatGPT. By having this activity, students could also hone their critical thinking skills as it involves evaluating, analyzing, and interpreting information as well.

Self-evaluation

Writing involves multifaceted stages, including planning, drafting, revising, and editing (Amani & Bisriyah, 2025). Each step of writing requires students to apply self-regulation strategies. In the self-reflection phase, learners are encouraged to evaluate their performances. Self-reflection can be done by having self-evaluation where learners reflect on whether they have accomplished their goals (Zimmerman, 2000).

Table 3. Self-evaluation Strategy

Statements	Mean	SD
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I evaluate my writing product before submitting it.	4.21	1.06
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Table 3 demonstrated that participants were involved in self-reflection by evaluating their writing products. The interviewees explained further as follows.

I will read again to make sure the sentences are coherent. [P1]

I read my draft again. [P2]

Both P1 and P2 mentioned the strategy they use to evaluate their writing results which is by reading or going over the draft. The process of self-evaluation could assure the participants that their ideas and explanation are aligned. In a nutshell, the findings of this study suggest that learners should be encouraged to evaluate their writing products since by doing so they could improve the quality of their writing which ultimately improves their learning achievement.

4. Conclusion

With the advancement of technology, the learning process is encouraged to be more student-centered. AI, particularly ChatGPT, is believed to transform traditional learning. ChatGPT's rapid response and personalized feedback could cater students' needs. The findings of this study demonstrated that EFL learners regulated their learning and writing process, especially when they used ChatGPT through goal setting, self-monitoring, and self-evaluation strategies. The participants in this study used ChatGPT as a tool to assist their writing process by asking ChatGPT to provide them with writing outlines, suggestions, and references. To ensure the accuracy of the information, the participants cross-checked with another website. It showed that the participants in this study did not solely use the suggestions given by ChatGPT. Further, this study suggests the need to equip students with self-regulated learning skills, especially in using ChatGPT. Moreover, learners also need to be guided on how they critically evaluate information or content provided by AI. The ability to reflect on one's performance is also crucial for learners to master. By regulating one's learning, students could remain aware of their role as lifelong learners who continuously seek opportunities to thrive and pursue knowledge amid massive technology advancements.

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