An Investigation of Using ChatGPT to Personalize Student's Learning Process in EFL Writing Classes

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Abstract

The application of ChatGPT has been considered a powerful tool to help students simplify writing tasks. Students have indeed utilized the benefits of ChatGPT to personalize their writing learning process more effectively, leading to the ultimate goal of developing writing capacity. The case study, employing both quantitative and qualitative research, aimed to explore how effectively ChatGPT promotes students' personalization in learning writing. To achieve the purpose of the inquiry, the study utilized pretest and posttest analysis, documents and semi-structured interviews after conducting a two-month experimental teaching period. The findings revealed that students expressed their dynamic engagement and preferences with ChatGPT during their writing learning process. Additionally, students demonstrated their purposeful selection of ideas that suited their writing requirements and level. What was more, using ChatGPT assisted them in identifying various writing mistakes in terms of expression and word usage; thereby, students boosted up their critical thinking skills in adjusting and revising their writing better. However, the students still pointed out some limitations in receiving immediate feedback from their teachers outside the classroom. Therefore, some pedagogical implications were highly recommended to help students make full use of the benefits of ChatGPT in learning writing.

Introduction

Writing is a productive skill in which students have to integrate their knowledge of grammar and vocabulary along with reasoning ability to create a complete piece of writing. Therefore, this skill requires a wide range of different factors in terms of knowledge and thinking from learners (Bisriyah, 2022; Ahmed, 2019). Many students find this skill challenging for them because it involves "cognitive and metacognitive activities, for instance, brainstorming, planning, outlining, organizing, drafting and revising" (Alisha et al., 2019, p. 20). In other words, students need to follow a precise writing procedure to optimize challenging steps and make them easier to manipulate. They learn how to conduct steps in order, namely, (1) planning and gathering ideas, (2) writing the first draft, (3) revising the initial draft, (4)

choosing a topic and examining contents or structures, and (5) rewriting complete writing (Bisriyah's, 2022). Besides, students encounter other obstacles such as a lack of resources, insufficient English writing proficiency, and restricted rehearsal opportunities in writing (Aldabbus & Almansouri, 2022; Selvaraj & Aziz, 2019). Ferris and Hedgcock (2013) indicated other similar writing phases, including developing reading skills, brainstorming and generating ideas, using planning strategies, practicing drafting, and incorporating feedback to create a writing task. According to Ho (2024), one of the major problems students face is a lack of academic writing knowledge, leading to challenges in organization and language use. It requires a lot of time to cover all of the stages of in-class writing lessons while the time alloted for each lesson is limited and teachers have to deal with overloaded learning contents. Thus, it is necessary for students to learn as much outside the classroom as they can.

With the encouragement of the Ministry of Education and Training (2022) in the employment of technology in the teaching and learning contexts, technology-based teaching has become more common in educational settings these days and has significantly contributed to the development of a learner-centered approach because of an unlimited learning environment. Various AI-based activities are created and applied in real teaching contexts (Dobrin, 2023) to facilitate modern teaching. ChatGPT, one of the most powerful AI tools, can create human-like responses in a short time (Wu et al., 2023) and bring a new slant to language learning and teaching. Students can personalize their learning path through experiencing an AI-based environment that meets their needs and abilities (Fitria, 2023; Noroozi & Sahin, 2023). Moreover, students can make use of ChatGPT's superior features to support them in generalizing ideas, providing them with useful vocabulary items or structures, and checking their mistakes for the first writing draft. From the hindrances of writing skills and the benefits of ChatGPT mentioned above, the authors conducted the current study to find out to what extent ChatGPT helps strengthen students' personalized learning in writing skills.

Literature review

AI-based learning platform

Artificial Intelligence (AI) is defined as a computer science that focuses on developing systems that can successfully perform tasks that require human intelligence (Baker & Smith, 2019). AI technologies have consistently demonstrated their ability to study data, adjust to new inputs, and carry out tasks similar to those done by humans with increasing precision and efficiency (Joshi, 2019). As a result, AI has become an effective tool in various fields, especially in education where it has transformed traditional learning approaches by providing personalized and adaptive learning experiences (Woolf, 2010). Specifically, AI-based learning platforms have been widely utilized in EFL classes to deliver customized language instruction, provide real-time feedback, and support various language practices through interactive tools like chatbots (Pereira et al., 2019). These platforms are particularly useful in meeting the diverse needs of language learners by adapting the content and practice activities to individual proficiency levels and learning styles, thus enhancing engagement and improving learning outcomes (Dewi et al., 2021).

One of the most popular AI tools emerging is Chat Generative Pre-trained Transformer (henceforth chatGPT), developed by OpenAI in 2022. Chat GPT has been extensively used in EFL classes for its numerous practical benefits. One notable feature of ChatGPT is its capacity to generate productive and meaningful responses. This is because it utilizes a pre-trained language learning model from a vast data corpus to generate immediate and

productive outcomes based on a given prompt (Crawford et al., 2023). According to Abdullah et al. (2022), ChatGPT is able to generate human-like responses tailored to the context and content of the user's query, which helps learners address complex tasks and gain deep understanding of challenging concepts.

ChatGPT is also a useful tool for task performance evaluation and feedback provision. ChatGPT can produce model responses or solutions for complex problem-solving tasks and evaluate students' performance as it relates to task output, assignments, or essays by utilizing this knowledge and model responses, particularly for text-based tasks (Cotton et al., 2023). Additionally, ChatGPT may generate checklists and assessment rubrics and provide insightful feedback, thereby helping students effectively monitor their learning process and take a self-directed approach to their learning progress.

Moreover, ChatGPT provides a tailored learning environment for learners based on their learning pace, progress, preferences, and styles (Buolamwini & Gebru, 2018). Similarly, Gao et al. (2021) claim that the tool offers learners personalized, flexible learning opportunities by giving them personalized feedback and recommendations, which then significantly assists them in determining their own learning objectives, tracking their development, and reflecting on their learning outcomes. This adaptive feature of ChatGPT not only fosters student-centered learning but also increases their motivation and interest in learning, enabling students to take greater control over their learning process (Gao et al., 2021).

Personalized learning

The term "personalized learning" has been discussed by many different authors for over a decade. Personalized learning was construed as an adaptation of learning conditions to suit learner's preferences, strengths, and requirements (Patrick et al., 2013; Bray & McClaskey, 2015; Bishop, Downes, & Farber, 2019). According to Walkington and Bernacki (2020), personalized learning was defined as an instructional approach to drive learners' experiences suitable for their needs, abilities, and interests. Pane et al. (2020) also gave a similar definition of personalized learning as the two previous authors, with an emphasis on an individual's needs, capacity, and interests and the aim of helping learners achieve better learning outcomes. This approach stimulates students' flexibility in their learning process and their control over how, what, when, and where their learning takes place (Patrick, Kennedy, & Powell, 2013, p. 3) to optimize the results. Personalized learning was described by Lokey-Vega and Stephens (2018) as "an educational paradigm shift that values learner differences and harnesses technology to allow educators and learners to co-plan an individualized educational experience" (p. 7). The integration of technology has contributed to learners' success and supported them to gain desired outcomes. Students in a personalized learning environment have become more automated and proactive (Lokey-Vega & Stephens, 2019) and have been willing to engage in "meaningful, authentic, and rigorous challenges to demonstrate desired outcomes" (Zmuda, Curtis, & Ullman, 2015, p. 7). Generally, personalized learning was specified as an educational approach to customize learners to adapt to their strengths, needs, skills, and interests effectively and comprehensively.

Personalized learning, undoubtedly, provides students with an immersive and intelligent learning environment to assist them in improving their learning capacity and proficiency based on their needs and learning situations (Dishon, 2017). Besides, it is reflected through students' behavior, achievement, and preferences to engage them in the learning environment (Kakish, 2018) or give them opportunities for autonomous learning and track their learning progress (Tsai et al., 2020). When students can fulfill their learning needs and choices, they feel more motivated and involved in the learning environment. This results in better learning

results, effective self-regulation, and strong motivation in class (Walkington & Bernacki, 2020). Furthermore, personalization plays an indispensable role in enhancing students' motivation and attitudes (Jones et al., 2013), supporting metacognition and self-reflection development (Arroyo et al., 2014; Kim et al., 2014), and reducing students dropping out of school (Furini, et al., 2022). Hachfeld and Lazarides (2020) pointed out the importance of personalized learning in encouraging students' reflexivity, autonomy, personal and social responsibility, and critical ability. Students themselves can recognize their strengths as well as weaknesses with personalization in their learning (Tapalova, 2014). Future Ready Schools (2017) affirmed that personalized learning is an effective approach to boost "students' logical reasoning, problem-solving, collaboration, effective communication, and academic attitudes" (p. 40). On the whole, the more appropriate the personalized learning is, the more benefits students can gain.

Personalized learning includes various components depicted by different authors. The elements are illustrated in the following table:

Table 1.

The description of personalized learning's elements

Key elements of personalized learning (Hanover Research, 2012, p. 8)	• flexible anytime/everywhere learning • redefined teacher role/expand teacher • project-based authentic learning • student-driven learning path • mastery/competency-based progression/pace
Key components of personalized learning (Jones & McLean, 2018)	• learner as an active agent • instructor or technology tool for facilitation and feedback • environment with multiple or adaptive pathways
Characteristics of personalized learning (Van Schoors et al., 2023)	• attention to learner characteristics and goals • adaptive learning environment and tasks • driven by the learner, teacher, or technology tool • visualized feedback through continuous formative assessment
Components of personalization (Chaipidech et al., 2019)	• a self-directed approach • a problem-based approach • a context-specific approach

The key components of personalized learning show that students can gain many significant benefits from this kind of learning approach. In the case of integrating technology into the learning, students reveal their learning personalization precisely and clearly.

Teacher roles and learner roles in personalized learning

In order to make personalized learning most effective, teachers and students play vital roles both inside and outside the classroom. First and foremost, students express their responsibility to accomplish assigned tasks. They need to know what, when, how and where to do activities and evaluate their learning process as Patrick, Kennedy and Powell (2013) mentioned earlier. On the other hand, teachers guide learning activities as a supervisor, instructor or facilitator to help students overcome their hindrances or difficulties and provide them with useful techniques for learning tasks (Shaikh, 2012). Mäenpää (2016) added that teachers have varied different teaching techniques corresponding to specific materials. Teachers focus on learning outcomes and evaluate students' improvement in a personalized learning environment. Pane et al. (2015) indicated that a good teacher must express a deep concern about students' ideas

and opinions to help them gain positive learning outcomes.

In general, the relationship between teachers and students is reciprocal and aims to achieve a common goal. Students strengthen their collaboration with their teachers and their peers in class and beyond the classroom. Conversely, teachers orientate students' learning journey (Bray & McClaskey, 2016).

Stages in the writing process

In order to create complete writing tasks, students must conduct precise writing steps appropriately and reasonably.

There are three main stages in writing skills which are planning, writing, and revising (Yang et al., 2022; Zupan & Babbage, 2017). The first stage includes several components of the selection of ideas, organizational planning, and setting writing goals. This is an important stage in creating a firm ground for the topic given. Therefore, in this stage ideas are not good, which results in a bad-quality writing. It is ultimately necessary to outline ideas as carefully and considerably as possible to fulfill the topic.

The writing stage involves several skills, such as converting ideas into language (drafting) and written words. Students base on available ideas combined with suitable vocabulary and grammatical patterns to make complete writing. Ideas are arranged in a logical way to ensure the coherence and cohesion of the writing task and answer all of the topic queries.

The revision stage includes the stage of correcting spelling errors, and sentences, or it can also modify other aspects. The writing is proofread to find errors or inadequate ideas and to adjust and sharpen the writing tasks. In this stage, feedback from teachers or peers plays a vital role in helping students recognize their strengths and weaknesses in writing and facilitating them to enhance their writing better.

The integration of ChatGPT for personalized learning in writing classes

The application of ChatGPT applied to real teaching context has brought many significant benefits to students' learning process, particularly in learning writing. Many authors mentioned the considerable advantages of using ChatGPT in learning writing as follows.

First and foremost, students can foster their writing efficiency and creativity thanks to ChatGPT. More specifically, according to Su & Tran (2024), ChatGPT contributes to improving students' English writing skills by providing personalized feedback, suggesting vocabulary and grammar enhancements, enabling real-time corrections, and fostering engagement through interactive writing exercises. In addition,ChatGPT helps them develop contents quickly for writing activities (Liu et al., 2024) as well as create various ideas for the topic or produce written texts in different styles (Bonner et al., 2023; Marzuki et al., 2023). Furthermore, ChatGPT helps students enhance their writing proficiency by assisting them in generating well-organized and well-structured essays or outlines (Baskara, 2023; Liu et al., 2023; Alsaedi, 2024). This chatbot also helps them master the use of vocabulary or sentence patterns for writing tasks (Bonner et al., 2023; Marzuki et al., 2023). Moreover, using ChatGPT was depicted to improve students' problem-solving skills (Qadir, 2022; Tlili et al., 2023) because they develop their synthesis and analyze the results after the output of ChatGPT. Last but not least, when students know how to use ChatGPT to support their writing learning as mentioned above, they can know how to personalize their learning more effectively. According to Wei (2023), ChatGPT is considered a "personal tutor" and "learning partner" in students' writing learning process. Zou and Huang (2023a) asserted that using ChatGPT developed students' self-regulation, autonomy and confidence in their learning.

They also indicated that students had more chances to be exposed to writing practice. These benefits were presented in some other studies (Wei, 2023; Zou & Huang, 2023a; Ali et al., 2023; Alsaedi, 2024). Abas et al. (2023) and Nguyen (2023) showed that ChatGPT can enhance personalized learning by providing real-time feedback, meeting students' needs, and promoting interactive and involving learning experiences.

Nevertheless, there have been some certain challenges during the implementation of ChatGPT in EFL classes. In detail, when students abuse ChatGPT, they tend to rely on it to accomplish writing tasks or assignments which results in the decrease of motivation, critical analysis and creativity (Barrot, 2023; Yan, 2023; Zou & Huang, 2023a; Harunasari, 2023; Irzawati et al., 2024; Alsaedi, 2024). Similarly, Pham & Le (2024) found that over-reliance on ChatGPT may hinder students' critical thinking and creativity. Additionally, it is unfair for students who use ChatGPT to gain higher scores in writing compared to those who learn in the conventional method (Alsaedi, 2024). Another challenge that makes students confused while interacting with ChatGPT is that they cannot comprehend long feedback because of their language barriers (Carlson et al., 2023). Hereby, they gradually reduce motivation and involvement in learning (Alsaedi, 2024). Imran and Almusharraf (2023) and Firat (2023) pinpointed that students may decrease their critical thinking, attention to ethics, and creativity in case of not using ChatGPT appropriately. Generally speaking, ChatGPT offers a wide range of benefits and can help students boost their personalized learning if they use it reasonably and suitably.

Research Questions

To serve the research purposes, the case study was seeking to answer the following research questions:

1. To what extent does ChatGPT improve the students' writing ability?
2. What are the students' perceptions of applying ChatGPT to their personalized learning?

Methods

Pedagogical Setting & Participants

The study was conducted at the People's Security University located in Thuc Duc City, Ho Chi Minh City. The study involved one class of 38 second-year students, including 31 males and 7 counterparts with ages ranging from 19 to 22. All of the participants acquired the same level of English proficiency as indicated by their placement test results at the beginning of the English course. At the time of the current study, the students were enrolled in an English course that integrated four skills, i.e., reading, listening, speaking, and writing. With an aim of fostering the students' writing capacity, ChatGPT was employed in the classroom to enhance their personalized experience in their writing progress.

Design of the Study

The case study with mixed-methods research was employed to investigate the current issues (Yin, 2018) of learning writing and explore the effectiveness of using ChatGPT to personalize the students' learning. Both quantitative and qualitative data were collected and analyzed to increase the study's persuasiveness and reliability. According to Stake (2005), this design facilitates researchers to obtain "better understanding, perhaps better theorizing, about a still larger collection of cases" (p. 446). The researcher will have a more comprehensive look at the practical teaching and evaluate the effectiveness of the learning tool.

Description of ChatGPT

ChatGPT was used in the current study, and it was ChatGPT-4o. This version is the latest one created by Open AI and released in May 2024. This version is totally free and friendly for users. It accepts all inputs, including texts, images, or sounds, and creates the expected outputs quickly and accurately. Using the free ChatGPT-4o is convenient for students in the research context, as they can access and interact with each other. Although there are some limitations to the free version, the students could make use of the important functions to complete their tasks such as generating ideas, providing suitable vocabulary and sentence patterns, and giving constructive feedback for the students' writing.

ChatGPT-4o was used during the student's learning process to support them in accomplishing the writing tasks. They used this learning tool to brainstorm ideas for the topics and provide the necessary vocabulary and grammar structures. The students take advantage of interacting with this tool to choose the input that suits their level.

Data collection & analysis

To serve the research purposes, three research tools including tests (i.e. pretest and posttest), documents, and semi-structured interviews were exploited as follows:

The pretest was conducted before the start of the course without using ChatGPT-4o to ensure the consistency in the two tests. The students were involved in the writing tests, and their writing papers were marked based on the VSTEP writing rubric. After the two-month period of implementing ChatGPT to strengthen personalized learning in writing, the students underwent the posttest which was also evaluated by VSTEP writing rubric to measure their writing proficiency. All of the pretest and posttest were marked by teachers who were trained in the "training course for speaking and writing examiners according to the English proficiency test format from Level 3 to Level 5". The results from the tests were analyzed using SPSS 26 to calculate the p-value compared to 0.05 and to determine whether using ChatGPT was effective or not in the EFL class.

Students' notes or records (known as documents) were collected and served for the study to consider how the students interacted with ChatGPT for each topic. The documents displayed ideas that the students required ChatGPT to help them, and they wrote their own ideas. In the last stage, the students used ChatGPT to check the writing criteria for their own writing to find out the mistakes. After that, they would revise their writing to be better. The students' notes were considered an effective document for taking notes of important contents while and after interacting with ChatGPT. The students use Word files to do writing tasks conveniently and quickly.

The semi-structured interviews aimed to gain in-depth information about the benefits and difficulties when the students used ChatGPT to personalize their writing skills. There were 10 students divided into two focus groups to take part in the interview. The interviews were conducted within two months after the implementation of ChatGPT. Each focus group interview lasted about 30 minutes. Participant responses were grouped and analyzed in themes to determine what the students perceived on implementing ChatGPT. All participant responses were kept confidential and only used for research purposes.

Findings

Results from the pretest and posttest

After grading the pretest and posttest, the test scores were coded and analyzed to identify to what extent the students' improved in writing skills after implementing ChatGPT. The Wilcoxon test was chosen to reveal the difference between the pretest scores and the posttest ones. The numeral statistics from the tests are illustrated in the following table.

Table 2.

The differences in the pretest and posttest

	N	**Mean**	**S.D**	**Min**	**Max**
Pretest	38	3.63	.714	2	4
Posttest	38	3.92	.632	2	5

It can be seen from the table that the mean of the posttests (M=3.92) is higher than that of pretest (M=3.63), which shows that there is a positive change in the posttest results. In other words, the implementation of ChatGPT exerted an effective impact on the students' writing learning. In the pretests, the scores range from 2.0 to 4.0, and the number of scores which are below 4.0 are relatively high (23 out of 38 students). By contrast, the posttest results are more positive, with 9 students having scores below 4.0.

The following table depicts the ranks of the pretest and posttest.

Table 3.

The ranks of the pretest and posttest

		N	Mean Rank	Sum of Ranks
Posttest - Pretest	Negative Ranks	2[a]	7.00	14.00
	Positive Ranks	12[b]	7.58	91.00
	Ties	24[c]		
	Total	38		

a. posttest < pretest

b. posttest > presttest

c. posttest = presttest

the positive ranks are 12, which means that the students who gained higher scores occupy 12 out of 38 students while the negative ranks only are 2. Ties in ranks include 24 students, which presents the same scores between the two tests. Moreover, the mean and the sum of positive ranks are higher than those of the negative ones. It confirmed that using ChatGPT had a certain effect on learning writing.

In order to affirm profoundly the effectiveness of ChatGPT in personalizing the students' writing learning, the p-value was calculated and displayed in Table 4 as follows:

Table 4.

The p-value of the tests

Test Statistics[a,c]			
			Posttest-Pretest
Z			-2.668[b]
Asymp. Sig. (2-tailed)			**.008**
Monte Carlo Sig. (2-tailed)	Sig.		**.012**
	99% Confidence Interval	Lower Bound	.009
		Upper Bound	.014
Monte Carlo Sig. (1-tailed)	Sig.		**.006**
	99% Confidence Interval	Lower Bound	.004
		Upper Bound	.008

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

c. Based on 10000 sampled tables with starting seed 2000000.

As can be seen from the statistics, the Z value is -2.228 which shows the difference between the two tests. Moreover, the two-tailed p-value from the pretest and posttest is .008 which is much less than .05 revealing that ChatGPT has a significantly positive effect on the students' personalized learning in the writing skill. Both the one-tailed and two-tailed p-values, .012 and .006, are smaller than .05, indicating the difference between the pretest and posttest and demonstrating the positive influence on the students' personalized learning.

Results from the students' document analysis

In the students' learning records, they followed the writing steps that their teacher instructed in class. After reading the topic, the students copied the topic and pasted it into "Message ChatGPT" and requested "Give me some ideas for the topic of the letter or essay in Level B1 of VSTEP". The result was immediately displayed on the ChatGPT screen to show detailed ideas relating to the topic. For example, the ideas for the first topic of Task 1 are displayed as follows:

Picture 1.

The topic for writing task 1

You should spend about 20 minutes on this task.
You received an email from your English friend, Jane. She asked you for some information about one of your friends. Read part of her email below.

...I've just got an email from your friend, An. She said she's going to take a course in London this summer. She asked if she could stay with my family until she could find an apartment. Can you tell me a bit about her (things like her personality, hobbies and interests, and her current work or study if possible)? I want to see if she fit in with my family...

Write an email responding to Jane.
You should write at least 120 words.

Picture 2.

Brainstorming ideas for the first topic from ChatGPT

To write an email at the B1 level of VSTEP, you'll want to focus on clear and simple language while ensuring you address all the points requested by Jane. Here's a breakdown of ideas to include in your response:

Introduction:
- **Greet Jane**: Start with a friendly greeting like "Dear Jane."
- **Thank her for the email**: Acknowledge that you received her email and express that you're happy to help her with information about An.

Describe An's Personality:
- **Friendly and Polite**: Mention that An is a friendly and polite person who is easy to get along with.
- **Responsible**: Highlight that she is a responsible individual, which means she is reliable and can be trusted.

Talk About Her Hobbies and Interests:
- **Music and Reading**: Say that An enjoys listening to music and reading books. This shows she has hobbies that can be enjoyed quietly, which might be good for a family setting.
- **Movies and Cultures**: Add that she likes watching movies and is interested in learning about different cultures. This could be a point of connection with Jane's family.

Mention Her Current Work or Study:
- **Student or Worker**: Clarify that An is currently a student (or a worker, depending on the context) and that she is taking a course in London to improve her skills.
- **Dedicated**: Mention that she is serious and dedicated to her studies, which shows she is focused and hardworking.

Conclusion:
- **Recommend Her as a Guest**: Suggest that you think An would be a good guest and that she will fit in well with Jane's family.
- **Offer Further Help**: End by offering to provide more information if needed.

Sample Phrases:
- "An is a very friendly and polite person."
- "She enjoys listening to music, reading books, and watching movies."
- "She is currently a student and is taking a course in London to improve her skills."
- "I believe she will be a good guest and will fit in well with your family."
- "Please let me know if you need any more information."

Additional Tips:
- **Keep sentences simple**: Avoid complex sentences to ensure clarity.
- **Use appropriate linking words**: Words like "besides," "also," and "because" can help make your writing more cohesive.
- **Stay on topic**: Make sure each paragraph addresses the points Jane asked about.

These ideas will help you craft a solid, level-appropriate response for the B1 VSTEP exam.

The students relied on such ideas and suggestions in terms of sentence samples to produce their own writing. They could use suggested sentences from ChatGPT to put in their writing. Besides, they need to adjust or add more words that are suitable for the practical context. The student's answer was illustrated in the following picture.

Picture 3.

The student's writing

> Dear Jane,
>
> I read your letter. Now I am writing this letter to tell you about my friend An.
>
> An is a friendly and polite person who is easy to get along with. she is a responsible individual, which means she is reliable and can be trusted.
>
> An enjoys listening to music and reading books. She also likes watching movies and is interested in learning about different cultures.
>
> An is currently a student and that she is taking a course in London to improve her skills. she is serious and dedicated to her studies, which shows she is focused and hardworking.
>
> I believe she will be a good guest and will fit in well with your family. Please let me know if you need any more information.
>
> Best wishes,

After completing their writing task, the students continued copying their product on the ChatGPT to check the task fulfillment, organization, vocabulary, and grammar of the writing. ChatGPT provided the students with precise feedback for each writing criterion and evaluated whether the writing met B1-level requirements or not. On the whole, the feedback gave positive comments on the students' answers and suggested some suitable corrections for the mistakes.

Picture 4.

Feedback from ChatGPT

> Your letter is clear and well-organized, but it could benefit from a few minor improvements in grammar and task fulfillment to make it more polished. Here's a breakdown:
>
> **Task Fulfillment:**
> - **Content**: You have addressed all the points Jane asked about—An's personality, hobbies, interests, and current study. This fulfills the task requirements.
> - **Word Count**: The letter is concise and should meet the B1 level word count requirement.
>
> **Organization:**
> - **Structure**: The letter has a clear introduction, body, and conclusion. Each paragraph logically follows the other.
> - **Flow**: The ideas connect well, making the letter easy to read.
>
> **Grammar and Vocabulary:**
> - **Capitalization**: The word "she" at the beginning of sentences should be capitalized.
> - **Repetition**: The phrase "which shows she is focused and hardworking" is a bit repetitive since you already mentioned that she is "serious and dedicated." You could simplify it by just stating, "She is focused and hardworking."
> - **Clarity**: The sentence "An is currently a student and that she is taking a course in London to improve her skills" should be revised for clarity. It can be shortened to: "An is currently a student and is taking a course in London to improve her skills."
>
> **Revised Version:**
> ___
>
> **Dear Jane,**
>
> I read your letter, and I am writing to tell you about my friend An.
>
> An is a friendly and polite person who is easy to get along with. She is a responsible individual, which means she is reliable and can be trusted.
>
> An enjoys listening to music and reading books. She also likes watching movies and is interested in learning about different cultures.
>
> An is currently a student and is taking a course in London to improve her skills. She is focused and hardworking in her studies.
>
> I believe she will be a good guest and will fit in well with your family. Please let me know if you need any more information.
>
> Best wishes,
>
> [Your Name]
>
> This version maintains the clarity and structure of your original letter while improving the grammar and removing minor repetition.

For Task 1, ChatGPT showed the complete revision of the writing to help the students have a comprehensive look at their own writing. Task 2, on the other hand, was displayed with some corrections of vocabulary and grammar structures. The students had to reconsider and decide to adjust vocabulary or grammar to suit their writing.

Generally speaking, the students can use ChatGPT to make requests that suit their ability as well as needs to achieve the best learning outcomes and personalize their writing learning process.

Results from the interviews

Semi-structured interviews were conducted with two distinct focus groups to elicit in-depth information relating to the application of ChatGPT to personalize the students in learning writing. The interview responses were analyzed using three main themes: how ChatGPT was exploited in writing sessions, the advantages of ChatGPT in the students' personalized learning, and the disadvantages of this platform for students' personalized learning.

First and foremost, ChatGPT was instructed right after the pretest was completed. The teacher introduced the overall information about ChatGPT to the students and guided them on how to interact with this platform. The students know how to make requests about writing tasks. The teacher also showed the students the way to choose sentences relating to the writing topics and put them into their own writing. More importantly, the teacher gave feedback on each writing criterion from ChatGPT. After answering about the generation of ideas, many students agreed that ChatGPT could provide useful and good ideas for the writing tasks. Specifically, the students from both groups shared that,

> *After I put the requirement of "give me some ideas for this topic", this platform immediately showed me clear ideas for the writing tasks. I normally find ideas difficult for me. However, ChatGPT helped me do it well. It is so amazing.* (S2-FG1)

> *ChatGPT is a wonderful tool that helps me generate ideas, produce sentence patterns* (S1-FG2, S3-FG2), *and provide me with coherent vocabulary.* (S5-FG1)

Moreover, some other students indicated that ChatGPT gives a clear outline with precise ideas that are highly coherent and cohesive. The students find brainstorming ideas for writing easier and more convenient. They know how to type their requirements for each topic to find suitable ideas. The second group students shared, "*I think ideas from ChatGPT are suitable and support the topic. I can develop my writing from such ideas* (S1-FG2, S5-FG2)." Another student added that,

> *From the ideas of ChatGPT, I know how to choose suitable sentences and can make my own writing quickly and effectively.* (S4-FG2)

> *I merely need to add some conjunction words with given ideas and sentences from ChatGPT to create a complete writing.* (S3-FG1)

Additionally, one student from the first group shared that although he understood the requirements of the writing topics, he could not think of what vocabulary and sentence structures he should use to write (S1-FG1). Thanks to ChatGPT, he could deal with his problems and spent more time self-studying writing outside the classroom.

Secondly, when asked about the benefits of using ChatGPT, all the students asserted that this AI-based learning platform is an effective tool to boost their personalized learning. They could use this tool to create their ideas that suit their level (S1-FG1, S2-FG1, S5-FG1; S2-FG2, S3-FG2, S4-FG2), provide necessary and suitable vocabulary as well as sentence

patterns (S3-FG1, S4-FG1; S1-FG2) and check mistakes (S5-FG2). The students acknowledged that ChatGPT can not only generate ideas at a very fast speed but also ensure accuracy and connection to the topic.

The time limit to learn writing in class is not certainly enough for the students to practice and receive dedicated feedback from their teacher; however, they can use ChatGPT as a device to give them constructive and real-time feedback beyond the class. They can interact with ChatGPT anytime and anywhere they like without worrying about allotted time. Therefore, this platform is really convenient for them to enhance their writing, which results in their proactiveness in personalizing their learning to the fullest extent. One student noted that, "*I spend more time studying writing with ChatGPT because it is user-friendly and effective for my learning process (S2-FG2)*". Some students revealed that they could "*know how to synthesize ideas (S1-FG1), control their learning (S4-FG2), and allocate time to practice writing (S4-FG1)*".

One important benefit of ChatGPT is that it can show very detailed feedback for users' requirements. The students said that they could receive long, prompt, and constructive feedback after typing the request to check the writing criteria. In detail, one student said that,

> *The feedback for my own writing with each writing criterion is precise. After reading the feedback, I know some mistakes are appearing in my writing. I also know that the vocabulary I use for my writing is suitable for my level. From the feedback, I consider the good points and adjust the not-good points to better my writing.* (S4-FG2)

> *From the list of feedback, I spend time reading them and correcting the mistakes in my own writing. Besides, I read the revised writing of task 1 and compared it to my own so as to find out the differences. Hereby, I could avoid repeating these mistakes.* (S5-FG1)

> *After reading feedback from ChatGPT, I think about them a lot and understand which ones are good and which are not good enough to adjust my writing properly. It helps me develop my critical thinking (S4-FG1) and problem-solving skills.* (S2-FG2)

On the whole, ChatGPT is a good tool to personalize the students' learning by helping them take charge of their own learning outside of the classroom, decide and evaluate their progress as well as preferences, and recognize strengths or weaknesses from feedback.

The last theme focuses on the challenges when the students use ChatGPT. Many of the students expressed that abusing ChatGPT for writing tasks gradually results in overdependence on this tool. This learning tool makes the students lazy to think of ideas by themselves and tend to rely on waiting for ideas from ChatGPT. One student said, "*I only feel confident when using ChatGPT for my writing tasks. Sometimes I cannot create good ideas for my writing without ChatGPT's support (S2-FG2)*". Another student added that,

> *I find it hard for my friends to think about suitable vocabulary and sentence patterns for their writing. They often tell me that they do not know how to use vocabulary to come up with their own paragraphs without using ChatGPT.* (S5-FG2)

In addition to the over-reliance on ChatGPT, the students find it slightly difficult to choose suitable ideas from the many ideas suggested by ChatGPT. Additionally, some ideas contain difficult vocabulary, which hinders the students' understanding. One student shared that, "*Some words in ideas of task 2 about the tourism topic are difficult for me. I have to spend more time looking up a dictionary to comprehend all of these words and even use Google translation to interpret the whole sentence (S3-FG2)*". In terms of the worry of misunderstanding, the students also shared some long feedback about certain obstacles for

them to comprehend. It is time-consuming for them to read all the comments to recognize the weak points of their learning. Some students revealed their opinions on reading feedback as follows:

> *I can merely understand some easy feedback. There are some difficult words that I do not know their meaning.* (S5-FG2)

> *The feedback for writing part 1 is easy to follow, but feedback for the writing task of part 2 is tough to understand for my ability.* (S3-FG1)

> *To understand all of the feedback content, I usually use Google Translate.* (S1-FG1)

The students also shared one more challenge that they cannot develop when learning with ChatGPT, that is, collaboration skills. They only interact with this virtual learning tool without discussing problems with their friends or teachers. Feedback from peers and teachers plays vital roles in assisting them in reinforcing their writing skills, such as generating ideas or sharing effective learning techniques. However, when the students use ChatGPT, they depend on this learning most of the time and spend little time exchanging with their friends or teacher. One student said that,

> *I can catch ideas from ChatGPT for my own writing. This learning platform has taught me how to correct my mistakes in writing. I do not receive feedback from my friend or my teacher outside the classroom.* (S4-FG1)

> *ChatGPT provides all of what I need, so I can do everything to do my writing by myself. However, I cannot develop group work skills or collaborative skills.* (S5-FG2)

Another student said that he could not receive immediate feedback from his teacher outside the classroom (S1-FG2). He also added that, "*I hope my teacher to help me evaluate the suitability of feedback from ChatGPT so that I self-evaluate the quality of my writing. However, it is impossible to do that out of the classroom* (S1-FG2)". The teacher spent time mainly in class and gave feedback to the students directly in-class sessions. Instead, the students adjusted their writing by themselves based on ChatGPT's feedback beyond the classroom.

The last challenge that deprived the students of their opinions is the way they make requests. Some students revealed that it is sometimes difficult for them to type requests for the writing topic because some topics are unfamiliar (i.e. crime rate, capital punishment) (S3-FG1; S2-FG2, S3-FG2). The students need to type the requests accurately to find out the best ideas for the topics. When the students are confused in giving requests, the ideas would go astray and affect the students' comprehension.

Discussion

The study's findings support the theories from the literature review regarding writing stages, the roles of teachers and students, and key aspects of personalized learning in writing.

First, the findings about the students' use of ChatGPT are closely similar to the previous theories about the writing process, including the planning, writing, and revising stages (Yang et al., 2022; Zupan & Babbage, 2017). During the planning phase, the students used ChatGPT to generate ideas related to the writing topic by pasting the topic into the "message ChatGPT" and requesting ideas suitable for their proficiency level (B1 of VSTEP). This finding is consistent with the theory that effective planning involves the thoughtful selection of ideas and organizational planning. In the writing stage, the students utilized the ideas and sentence

structures provided by ChatGPT to draft their texts, making adjustments as needed for the context. Finally, in the revision stage, the students use ChatGPT to evaluate their own writing for task fulfillment, organization, vocabulary, and grammar. The tool provided the students with precise feedback, highlighting areas for correction and suggesting improvements, leading to the overall quality of their writing. The students gained better results for their posttest thanks to these precise steps. The students made full use of learning outside the classroom with this platform to contribute to their writing stage. As a result, the test scores after the two-month experimental teaching proved the effectiveness of ChatGPT in enhancing their writing and expressed the efficiency in their personalized learning.

Regarding the roles of teachers and learners in personalized learning, the research findings match the theories supported by previous researchers. First, with the use of ChatGPT, the students learned how to make requests for their writing tasks, select relevant sentences, and adjust them to finalize their own writing. This finding is congruent with the claims about the active role of students in managing and evaluating their own learning, as outlined by Patrick, Kennedy, and Powell (2013). Second, the teacher in the current study played a crucial role by introducing ChatGPT, guiding the students on its use, and providing them with feedback. This finding is consistent with those of Shaikh (2012) and Mäenpää (2016), who emphasize that teachers act as supervisors, instructors, or facilitators, helping students overcome learning challenges and offering tailored support during the learning process. Furthermore, this supports Bray and McClaskey's (2016) view that teachers orient and guide students in their personalized learning journey, ensuring that they are making progress towards their goals.

The findings about the use of ChatGPT in writing classes closely align with key elements of personalized learning as posited by various authors. According to Patrick et al. (2013), Bray and McClaskey (2015), and Bishop et al. (2019), personalized learning customized educational experiences to individual needs, abilities, and interests. ChatGPT was proven to support this approach by helping the students generate ideas, select suitable vocabulary, and construct sentence patterns that suit their levels. ChatGPT also offered the students flexibility and control over the learning process, which corresponds to the perspectives of Patrick, Kennedy, & Powell (2013), Hanover Research (2012), and Lokey-Vega and Stephens (2018). These authors emphasize that students gain autonomy over what, how, and when they learn, resulting in improved outcomes and personalized experiences through the use of technology.

Additionally, due to its interactive features, the platform was reported to enhance the students' motivation during the writing process. This is consistent with the opinions of Kakish (2018), Walkington and Bernacki (2020), and Jones et al. (2013), who highlight that personalized learning environments significantly boost students' motivation and engagement during their learning journey. It was also found that ChatGPT promoted the students' independence, self-reflection, and critical thinking. This insight is relatively similar to the views of Hachfeld and Lazarides (2020), and Tapalova (2014) on the development of learner autonomy and helps students recognize their strengths and weaknesses. Moreover, ChatGPT provided the students with a diverse, flexible, and adaptive learning environment, which is in line with the suggestion recommended by Hanover Research (2012), Jones and McLean (2018), and Van Schoors et al. (2023) discussing the adaptive learning pathways in the personalization of learning.

However, challenges were also identified during the writing process for the ChatGPT application. The students reported becoming overly dependent on ChatGPT, which diminished their ability to independently generate ideas and think critically. This aligns with Barrot's (2023) and Yan (2023) concerns about certain difficulties in selecting suitable ideas

from numerous suggestions, especially when complicated language is used. The feedback from ChatGPT was sometimes overwhelming and time-consuming to process, confirming Carlson et al. 's (2023) concerns about managing feedback effectively. Notably, the study revealed two new findings: reliance on ChatGPT reduced opportunities for peer and teacher collaboration, and the students struggled with making effective requests for complex topics. These findings highlight the necessity of embracing opportunities for peer and teacher collaboration and better support and guidance on how to use the tool more effectively.

Conclusion

In conclusion, using ChatGPT in learning writing helps the students brainstorm ideas for the topics effectively, especially for difficult topics within a short period of time. From these ideas, the students could use suggested vocabulary or sentence patterns to put in their writing. Moreover, the students could rehearse their critical thinking by choosing the most suitable ideas from the ChatGPT list. With the difficult sentences, the students could ask ChatGPT to make them easier to approach and understand. These interactions with ChatGPT help the students develop their personalized learning. They could practice knowledge that is suitable for their ability and level. They know what to do and how to do it, and they take charge of their own learning process. What was more, detailed feedback from ChatGPT corresponding to each writing rubric supports the students in recognizing their mistakes as well as their strengths in each topic. The students spend time reading the feedback to comprehend what they need to adjust to make a complete writing as best as they can.

However, the students encountered some challenges during the application of ChatGPT, such as overreliance and difficulties in writing requests. They sometimes had problems with technical mistakes; however, they could use their personal wifi connection to overcome this situation. When interacting with ChatGPT, the students tend to work alone, which results in a lack of collaboration with their peers and teachers. They could ask other applications for help when they had hindrances with understanding the meaning of vocabulary.

The current study contributed positively to the practical teaching of writing skills combined with the support of the technology-based teaching method. However, the study has some limitations, such as the limited time of ChatGPT applications and the samplings that were used in the study. Firstly, the ChatGPT application was exploited during the two-month teaching period. Hence, the improvement in writing quality including personalized writing does not show at a high level. The students had a certain improvement in tests, but the number of the students with the same scores between the two tests is relatively high. Additionally, the participants of 38 students in this study are not large enough to generalize the research results for the whole context. Further research should be conducted to lengthen the period of implementation of ChatGPT in teaching writing and to evaluate it more comprehensively. Furthermore, this learning platform should be expanded in other EFL classes to boost their students' personalized learning in writing lessons, especially outside the classrooms and ensure the reliability and validity of the research results.

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Biodata

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