

EFL Low-proficient Learners' Use of Google Translate and ChatGPT in Writing Tasks

Abstract—This study investigated the impact of utilizing Google Translate (GT) and ChatGPT for L2 writing among 16 low-proficiency EFL freshmen. Two writing tasks served as pre-tests, and then the students used GT and ChatGPT to assist them in rewriting writing task 1 and writing task 2, respectively. After revising the outputs from GT and ChatGPT based on self-reflection, peer feedback, and teacher feedback, the students were given the same writing tasks in the midterm and final exams as a post-test. Results reveal that both GT and ChatGPT effectively enhanced the students' writing quality. Additionally, participants perceived that both tools heightened their writing motivation L2, with vocabulary acquisition identified as a noteworthy benefit. While acknowledging the efficiency of feedback received from GT and ChatGPT, the students preferred teacher feedback to AI-generated feedback. This preference stemmed from the belief that the teacher could better comprehend their queries and offer more helpful suggestions.

Keywords—EFL low-proficient learners, Google Translate, ChatGPT, Writing tasks

I. INTRODUCTION

In the rapidly advancing world of technology, the progress and accessibility of advanced software have undoubtedly brought revolutionary changes to foreign language writing instruction and learner writing strategies. From the application of corpora to the use of online writing translation tools like Google Translate, or online writing assessment systems such as Grammarly or Quillbot, there has been a significant enhancement in the quality of foreign language writing. In recent times, a groundbreaking technology has emerged globally. In November 2022, OpenAI introduced ChatGPT, the latest chatbot powered by generative artificial intelligence utilizing large-scale language models, capable of directly generating human-like text [1]. Despite the availability of these powerful assisting tools for EFL writing, the impact and effectiveness of utilizing them to facilitate learners, especially low-proficient ones, are worth exploring. Additionally, Google Translate and ChatGPT appear to have become an innovative and revolutionary tool in assisting EFL writing, and concerns related to students' inappropriate use, such as plagiarism, fairness, and academic integrity, inevitably follow [2]. Hence, further investigation is urgently needed to address this gap in research, aiming to bridge the knowledge divide and acquire a better understanding of how to optimize the utilization of Google Translate and ChatGPT for EFL writing [3].

Previous studies confirmed that machine translation (MT) software like Google Translate could effectively facilitate L2 writing. Lee (2020) suggested that MT helped the students correct lexico-grammatical errors in their writing and positively impacted their writing strategies through their practice of editing the output of the MT [4]. Tsai (2020) found that students utilizing Google Translate as a revision tool manifested better

L2 performance in terms of writing quality than that of their self-writing, which is especially evident for lower-proficient learners [5]. Since the release of an AI-powered chatbot, ChatGPT, there has been a boom of studies aiming to investigate its potential for language learning. Xiao and Zhi (2023) stated that ChatGPT can offer ideas for researchers and learners by summarizing articles or generating human-like texts for presentations [3]. Nonetheless, it can offer incorrect responses since the database ChatGPT relies on is restricted to pre-2021 data, so it requires users to critically evaluate the responses [3]. Despite a flood of studies geared toward ChatGPT, there remains limited empirical evidence on this newly released AI technology for EFL writing.

Writing instruction in EFL settings in tertiary education remains, however, challenging as many EFL learners have fewer opportunities to practice writing and receive feedback from their teachers due to large classes [5]. The context in the current study is even more challenging as the participants were freshmen at a technical university. Most of them had no English writing experience in their vocational senior high school years. It wasn't hard to imagine that they were less motivated and confident in English writing in the writing course at university. Based on the discussed gap, two research questions were formulated as follows.

1. Are there any significant differences in the scores between the pre-test and post-test for two writing tasks, one aided by Google Translate and the other by ChatGPT?
2. What are the students' perceptions towards using Google Translate and ChatGPT as supplementary tools to facilitate their writing?

II. METHODS

A. Participants

This study included 16 freshmen enrolled in the elective course "English Writing I" at a technical university in southern Taiwan. The participants, who were non-English majors, belonged to diverse departments such as Multimedia and Entertainment Science, Creative Product Design, Finance, Hospitality Management, and Computer Science. The course aimed to equip students with the skills needed to pursue English Medium of Instruction (EMI) courses in their senior years. Before joining the course, the participants underwent an English proficiency test—the Oxford Online Placement Test. Their native language was Mandarin Chinese, with three students scoring at Level B1 and the remaining 13 at Level A2 in the Common European Framework of Reference (CEFR).

B. Tasks Description

Data for the current study was collected over a semester. At the beginning of the semester, the students were given the first writing task, which served as the pre-test, on a topic consisting

of two prompts, from which they had to compose a two-paragraph essay of at least 120 words. During the pre-test, they had to write on their own without consulting any online dictionary. In the following four weeks, with the same writing task, the students rewrote the essay with the aid of Google Translate, which involved the following three steps: (1) writing the essay in Chinese and translating it into English with the help of Google Translate, (2) Editing their initial translation based on peers' feedback and their own reflection, (3) Editing their second version based on teacher's feedback.

During the midpoint of the semester, students were assigned the same topic as the initial writing task, essentially serving as the post-test. Like the pre-test conditions, the students were not allowed to use any dictionaries. After the midterm, the students were given the second writing task, which also served as the pre-test. Following the pre-test, in the subsequent four weeks, with the same writing task, the students rewrote the essay with the help of ChatGPT and followed the same three steps as writing task 1. At the end of the semester, the students were asked to write an essay on the same topic as the pre-test, which served as the post-test of writing task 2. The students can not consult with any dictionary in both pre-tests and post-tests. The level of the two writing tasks is the same and the tasks are adopted from writing tests of the intermediate level of the general English proficiency test (GEPT) in Taiwan.

C. Data Collection and Analysis

The pre-tests and post-tests of the two writing tasks were collected and analyzed by two experienced writing instructors using the same writing rubric of the intermediate-level GEPT writing test. The rating involved six levels ranging from 0 to 5, where 0 refers to no writing ability while 5 refers to excellent writing ability. Interviews of all participants were individually conducted at the end of the semester and recorded. Interviews helped to elucidate the students' perceptions of utilizing Google Translate and ChatGPT as supplementary tools as well as the effectiveness of feedback these tools provided compared to the real teacher's feedback. The interviews were transcribed and coded with multiple steps from open to classifying coding to identify emerging themes, which were used to triangulate the quantitative results.

III. RESULTS

A. Effect on writing performance

Descriptive statistics results for the participants' writing performances of the two writing tasks are detailed in Table 1. The interrater reliability of the two raters was calculated by the intraclass correlation coefficient (ICC). The analysis yielded a high inter-rater reliability score of .87 for all test scores, including two pre-tests and two post-tests. The paired-samples t-test results indicated that there were significant differences between the pre-test and post-test for the two writing tasks ($t = 7.51, p = .000$; $t = 6.68, p = .000$). This suggests that either using Google Translate or ChatGPT as a facilitative tool in their L2 writing could significantly improve the participants' writing performances and promoted their writing skills.

TABLE I. THE *t*-TEST RESULTS OF THE PRE-TEST AND POST-TEST FOR TWO WRITING TASKS

B. Learners' perceptions of using Google Translate and ChatGPT

The students' perceptions about how Google Translate and ChatGPT facilitate them during the writing process, collected through 16 students' individual interviews, were analyzed for themes. The overall findings indicated that the participants showed satisfactory experiences about utilizing Google Translate and ChatGPT to aid their writing. The recurring themes of the responses were identified and categorized across four dimensions: (1) heightened L2 writing motivation, (2) effectiveness of improving L2 writing skills, (3) helpfulness of feedback provided by Google Translate and ChatGPT, (4) helpfulness of feedback from real teacher.

Heightened L2 writing motivation

Except for one student, 15 participants agreed that using Google Translate and ChatGPT, serving as a scaffolding approach, increased their English writing motivation for the

Tasks	Tests	Mean	SD	<i>t</i>	<i>p</i>
Writing Task 1 (N=16)	Pre-test	38.13	12.37	7.51	.000**
	Post-test	63.63	8.02		
Writing Task 2 (N=16)	Pre-test	38.13	13.15	6.68	.000**
	Post-test	59.06	12.68		

following reasons. First, they wouldn't feel writing in English was that difficult and frustrating with the help of the CALL tools as illustrated by a student:

Usually, I cannot finish an English composition smoothly, but with the AI, there is more chance that I can complete the assignment (student #13).

Second, they mentioned when they lacked inspiration in writing, they could use ChatGPT to generate some ideas to help them with the beginning. Third, they said when they cannot generate anything in English, they could write in their L1 and then translate the texts into English.

1) Effectiveness of improving L2 writing skills

All the students noted that Google Translate and ChatGPT proved to be valuable tools for expanding their vocabulary. While Google Translate primarily contributed to their word acquisition, ChatGPT went a step further by offering model essays and correcting grammatical errors. However, when it came to improving grammar, only two students felt that these technological aids were beneficial, while others expressed that they didn't gain much grammar insight from the feedback provided by Google Translate and ChatGPT. This could be attributed to their lower proficiency levels, lacking a solid foundation in grammatical knowledge, which rendered the feedback less effective in helping them grasp grammatical concepts. Among the students, five mentioned that the writing processes primarily enhanced their skills in paraphrasing and editing essays. As one student noted, "Paraphrasing made me more impressive, because I corrected the parts where I made mistakes." Another student stated she learned how to ask questions by interacting with ChatGPT, as she noted:

When my initial prompt did not yield the desired results. However, through practice, I finally got the desired outcome (student #12).

2) *Helpfulness of feedback from Google Translate and ChatGPT*

All 16 participants unanimously agreed that feedback provided by Google Translate and ChatGPT is beneficial to their English composition because they are fast and efficient in offering feedback in real-time. In contrast, waiting for the teacher's feedback takes time. Nonetheless, one student mentioned that the feedback from Google Translate and ChatGPT is more machinelike and inflexible. Another student stated that the feedback from the technology tools can only be helpful to vocabulary.

3) *Helpfulness of feedback from a real teacher*

All 16 participants harmoniously stated that compared with feedback from AI, the teacher's feedback is more helpful to them in the following aspects. Firstly, the teacher can assist the students how to revise ungrammatical sentences and tell them how to edit their sentences, as illustrated by one student:

The teacher can respond in a more serious manner, and I learn more grammatical knowledge, such as prepositions, from the teacher (student #4).

Secondly, the teacher can provide suggestions on the organization of the essay but ChatGPT can't, as a student noted:

The teacher could point out where there were issues in my essay's organization and then help me make corrections. Also, the teacher could tell me how to add connectors and make my sentences flow better (student #10).

Thirdly, seven students mentioned that the teacher's feedback is more humane and warmer as a student stated:

The teacher understood better what I was asking and what I wanted to write. Also, AI won't point out my mistakes, but a teacher can (student #3).

IV. CONCLUSION

The present study aimed to explore the impacts of employing either Google Translate or ChatGPT as a scaffolding approach for L2 writing among 16 low-proficiency EFL freshmen at a Taiwanese University. Both their written essays and perceptions of the experience were examined. Regarding the first research question, findings suggest that regardless of whether students utilized Google Translate or ChatGPT, both tools effectively supported their writing endeavors and significantly elevated the quality of their compositions. However, based on the students' interview responses, ChatGPT was perceived as more beneficial than Google Translate in terms of translation accuracy, idea generation, and interactivity.

In addressing the second research question concerning students' perceptions, results indicate unanimous agreement among the students that both tools heightened their L2 writing motivation and substantially assisted them in completing tasks. Notably, the students identified vocabulary acquisition as the most significant benefit, but they did not observe substantial gains in grammatical knowledge through these technological aids. Despite ChatGPT being perceived as more advanced and powerful than Google Translate, the effectiveness of learning grammatical knowledge through it, especially for low-proficiency learners, remains uncertain. Additionally, students appreciated the efficiency of feedback from both Google Translate and ChatGPT, finding it valuable for their writing improvement. However, they expressed a preference for teacher feedback over AI feedback, stating the teacher's better understanding of their questions and ability to provide more comprehensive suggestions.

Given that this study was conducted as exploratory research shortly after the introduction of ChatGPT, it holds potential pedagogical implications for integrating AI tools into L2 writing instruction. Nevertheless, the study is constrained by methodological limitations, including a small participant pool and the absence of a control group. Future research should address these limitations by incorporating larger and more diverse samples. Furthermore, investigating how AI can be effectively employed to enhance EFL learners' grammatical knowledge, particularly for low-proficiency students engaged in English composition, warrants further exploration.

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