

Building writing self-efficacy in English language learners through interactive writing

MOHADDESE SADAT ZAMANI^a  

MOSTAFA MORADY MOGHADDAM^b (Corresponding author)  

^{a,b}Shahrood University of Technology, Shahrood, Iran

Abstract

This study investigates the effect of interactive writing strategies on the writing self-efficacy of EFL learners. Employing a quasi-experimental design, sixty participants were assigned to an experimental group engaging in interactive, collaborative writing activities and a control group receiving traditional instruction. The intervention lasted eight weeks, during which the experimental group participated in activities involving peer feedback, group drafting, and teacher guidance designed to foster engagement and support. The Writing Self-Efficacy Questionnaire was administered prior to and following the intervention to assess changes in learners' confidence in their writing abilities. Results demonstrated a significant increase in self-efficacy levels among students who experienced interactive writing strategies compared to those in the control group. However, this study did not include direct measures of writing proficiency, limiting conclusions about skill development. These findings emphasize the importance of integrating structured, collaborative writing activities into EFL instruction to boost learners' confidence and motivation. This research offers practical implications for language teachers, suggesting that interactive approaches can create a supportive classroom environment that enhances learners' belief in their writing capabilities and encourages active engagement in the writing process.

Keywords: interactive writing, self-efficacy, social cognitive theory, student engagement, writing confidence

Introduction

Writing is a fundamental skill that significantly impacts professional success and personal growth (Hyland, 2007). Proficiency in writing not only reflects literacy in a language but is also essential for academic and career advancement (Shooli et al., 2021). The writing process encompasses various aspects, including planning, organization, spelling, and word choice,

making it a complex skill (Almasi & Tabrizi, 2016). However, traditional writing instruction often lacks personalized feedback and practice opportunities, leaving students ill-equipped for effective written communication (Graham & Sandmel, 2011). Contributing factors to writing difficulties include insufficient procedural knowledge, ineffective teaching methods, and inadequate planning (Santangelo et al., 2007). Even native writers can struggle with these challenges (Zumbrunn et al., 2016).

A shift toward a process-oriented approach in writing pedagogy presents a promising solution to these issues (Harmer, 2001). The distinction between product-oriented and process-oriented approaches has long been recognized in educational theory. The product-oriented approach emphasizes the final written product, focusing on grammatical accuracy and structure, often at the expense of revision and creative exploration (Nunan, 1991; Zargaran, 2025). In contrast, the process-oriented approach views writing as a dynamic, recursive process involving planning, drafting, revising, and editing (Flower & Hayes, 1981). This model fosters creativity and critical thinking, encouraging students to see writing as an evolving activity that benefits from feedback and continuous improvement (Graham & Sandmel, 2011). Research indicates that this approach not only enhances writing skills but also boosts students' motivation and confidence (Shafiee Rad & Jafarpour, 2023). By prioritizing writing stages and incorporating feedback loops, the process-oriented approach creates a more engaging and student-centered learning experience (Hyland, 2003). However, critics argue that the methods used in process writing classrooms may not adequately support struggling students in developing essential writing skills (Graham & Harris, 1997) and that there is often insufficient focus on fundamental skills like handwriting and spelling (Cutler & Graham, 2008).

Interactive writing, a socially situated instructional method, exemplifies a process-oriented approach where instructors and learners collaboratively engage in writing tasks, often referred to as "sharing the pen" (McCarrier et al., 2000). This method emphasizes the connection between reading and writing, creating an inclusive environment that addresses diverse learner needs (Isnaeni, 2016). In interactive writing, students collectively compose meaningful texts, focusing on sounds, letters, and words, with the teacher facilitating rather than dominating the process (Dobao, 2012). This approach encourages active participation in text construction, enhancing skills in word choice, sentence structure, and revision. Unlike shared writing, where the teacher primarily manages revisions, interactive writing allows students to engage in reading, rereading, and revising texts, providing direct experience in the editing process (McCarrier et al., 2000).

Interactive writing integrates cognitive and social elements, fostering meaningful interactions between teachers and students during text creation (Mackenzie, 2015). It facilitates explicit instruction in both authorial skills (text structure, grammar, vocabulary) and secretarial skills (spelling, punctuation, handwriting), as well as reading comprehension. Unlike conventional methods that rely heavily on lectures and standardized exercises (Liao & Wong, 2010), interactive writing promotes active involvement through dynamic activities such as group discussions and real-time feedback. This collaborative atmosphere helps students refine their writing skills and gain confidence in this challenging area (Isnaeni, 2016).

Researchers have expressed concern about the perceived difficulty of writing, particularly in EFL contexts, where expressing thoughts on paper can be daunting (Widdowson, 1983). Non-native learners often struggle with productive skills due to limited opportunities for language production, making writing their most challenging skill (Alidmat & Ayassrah, 2017; Morady Moghaddam & Tirnaz, 2024). These learners face additional cognitive burdens as they navigate unfamiliar syntactical structures, manage limited vocabulary, and adhere to academic conventions (Hyland, 2007). A significant obstacle is the difficulty in generating and

presenting main ideas, which can be overwhelming (Vijayavalsalan, 2016). Furthermore, a lack of confidence in writing abilities exacerbates these challenges, hindering learners from initiating or completing writing tasks (Latif, 2007). Interactive writing strategies can address these issues by guiding students through the writing process and providing necessary support until task completion.

This study investigates the effect of interactive writing on the writing self-efficacy of intermediate EFL learners in Iran. Utilizing a quasi-experimental design, the research aims to determine whether structured interactive writing strategies—such as prewriting, drafting, sharing, and revising—can significantly enhance learners' confidence in their writing abilities. Improving writing self-efficacy is crucial, as it encourages learners to take risks, experiment with new ideas, and overcome writing-related anxiety (Bruning et al., 2013).

Literature Review

Self-Efficacy

Self-efficacy, a central concept in social cognitive theory, refers to an individual's belief in their ability to accomplish specific tasks and achieve goals (Bandura, 1997; Schunk & DiBenedetto, 2020). This belief is shaped by various sources, including past experiences, vicarious experiences (observing others), social persuasion (feedback from others), and physiological and emotional states. These sources interact dynamically to influence perceptions of capabilities across different domains (Bandura & Schunk, 1981). Research consistently shows that higher self-efficacy correlates with greater motivation, persistence, and overall academic success (Pajares, 2003).

Bandura (1997) emphasized the importance of challenging experiences in fostering self-efficacy, suggesting that confident learners attribute their accomplishments to their capabilities and efforts. In contrast, those with low self-efficacy often underestimate their abilities and opt for less challenging tasks. In writing, self-efficacy is defined as the belief in one's capacity to complete writing tasks effectively (Bruning et al., 2013). Students with high self-efficacy are more motivated, set ambitious goals, and invest greater effort in their writing (Sabti et al., 2019). However, anxiety can hinder engagement in writing tasks (Woodrow, 2011).

Self-efficacy is task-specific, prompting exploration into why some learners achieve higher success and motivation than others with similar capabilities (Bandura, 2006). It plays a crucial role in persistence and resilience, particularly in challenging tasks like writing (Pajares, 2003). Zimmerman (2000) noted the role of self-efficacy in self-regulated learning, emphasizing planning, goal setting, and self-monitoring, which are integral to the interactive writing process. These elements encourage a more organized approach to writing and enhance learners' responsibility for their progress, ultimately improving writing performance (Zimmerman & Schunk, 2011). Previous studies have shown a positive correlation between students' beliefs about their writing abilities and their actual performance, often involving interventions that include group discussions, peer feedback, and collaborative writing activities (Pajares & Valiante, 2001; Zimmerman & Kitsantas, 1997).

Empirical Findings on Interactive Writing

Interactive writing, rooted in social constructivist theory (Vygotsky, 1978) and emergent literacy (Clay, 1975), emphasizes collaboration between learners and teachers in text creation. Vygotsky's concept of the Zone of Proximal Development highlights cognitive development through social interactions, necessitating scaffolding to advance learning (Wood et al., 1976). This approach positions the teacher as a facilitator, co-constructing knowledge rather than merely transmitting it (Mercer, 2000). Interactive writing enhances students' writing and cognitive skills through collaboration with peers and instructors (Bruner, 1985).

Research on interactive writing has explored its effects on writing ability, engagement, motivation, and learning outcomes. For instance, Isnaeni (2016) found significant improvements in learners' writing abilities after implementing interactive writing techniques. Mitchell et al. (2019) examined nursing students' self-regulatory writing behaviors, noting that those with low self-efficacy and high anxiety sought more help but felt negatively about their abilities and were less likely to apply feedback. Majed and Muhammad (2020) concluded that eleventh-grade students taught with interactive writing strategies demonstrated superior writing skills. Coon et al. (2019) highlighted challenges in transferring face-to-face writing instruction to online courses, emphasizing the need for strategies that support self-efficacy in online writing instruction. Talaat (2021) reported significant enhancements in both descriptive writing abilities and self-efficacy among sixth-grade EFL students using an interactive writing approach. Seyyedrezaei et al. (2021) found that Etherpad-based¹ collaborative instruction was more effective than traditional methods in improving writing quality and self-efficacy. Moqadasizadeh et al. (2023) discovered that interactive writing strategies led to superior written accuracy and complexity among non-Iranian EFL learners. Lastly, Nurdin et al. (2023) revealed positive influences of blended learning incorporating interactive writing on students' interests and writing skills.

The primary gap identified in this study is the limited research on the effects of interactive writing on writing self-efficacy among EFL learners. While substantial literature exists on self-efficacy in various educational contexts, most studies have focused on general or domain-specific self-efficacy in areas like mathematics or reading (Cahyanti, 2021), with little attention to writing self-efficacy in collaborative contexts (Bruning et al., 2013). Furthermore, previous research has predominantly concentrated on collaborative writing rather than interactive writing (Rahimi & Fathi, 2022), which offers a more dynamic and guided approach to the writing process. This distinction is crucial, as interactive writing provides unique benefits not fully captured by studies focusing solely on collaborative writing (Rahimi & Fathi, 2022). While collaborative learning emphasizes shared tasks, interactive writing assigns individual writing tasks within an interactive context, enhancing learning and social skills such as communication and decision-making (Patterson et al., 2008). This lack of targeted investigation into how interactive writing influences writing self-efficacy highlights a significant area for further exploration, particularly in EFL settings where learners often struggle with writing due to language barriers and cognitive load (Alidmat & Ayassrah, 2017).

This study aims to fill this gap by providing empirical evidence on the effectiveness of interactive writing strategies in enhancing writing self-efficacy among EFL learners. The research question guiding this study is:

RQ1: What is the effect of interactive writing on the writing self-efficacy of Iranian EFL learners?

Based on this question, the following hypotheses are proposed:

- H0: Using interactive writing has no effect on learners' writing self-efficacy.
- H1: Using interactive writing has a positive effect on writing self-efficacy.
- H2: Using interactive writing has a negative effect on writing self-efficacy.

¹ It is an online collaborative writing platform that allows multiple users to co-author and edit documents in real-time. Etherpad provides a shared workspace where learners and instructors can work simultaneously on the same text, see each other's changes instantly, and communicate through embedded chat features.

Method

Research Design

A quantitative research approach was adopted in this study, utilizing a quasi-experimental design to investigate the effect of interactive writing on the writing self-efficacy of EFL learners. The research design employed in this study was the nonrandomized control group, pretest-posttest design, as outlined by Ary et al. (2018) to investigate the effect of interactive writing instruction on EFL learners’ writing self-efficacy. The nonrandomized control group, pretest-posttest design is one of the most widely used quasi-experimental designs in educational research. In this study, subjects were assigned to the experimental and control groups and a pretest on the dependent variable Y (i.e. writing self-efficacy) was administered. The treatments were introduced only to the experimental subjects, after which the groups were measured on the dependent variable (see Table 1). It is worth noting that it does not permit random assignment of subjects to the experimental and control groups (Ary et al., 2018).

Table 1. Nonrandomized control group, pretest-posttest design (Ary et al., 2018, p. 261)

Group	Pretest	Independent variable	Posttest
E	Y1	X	Y2
C	Y1	–	Y2

Participants and Sampling Procedure

This study was conducted at a foreign language institute in Sari, Iran, involving participants from two parallel classes enrolled in a general English course at the intermediate level. The course spanned 24 weeks, with 12 sessions dedicated to teaching writing skills. All learners were instructed by the same female teacher, who had six years of experience teaching adult language learners. Classes met twice a week for 90-minute sessions, comprising a total of 60 intermediate-level EFL learners (29 males and 31 females), with each class consisting of 30 students. Informed consent forms were signed by all participants prior to the study. The homogeneity of the classes regarding proficiency was confirmed through the administration of the Quick Oxford Placement Test (QOPT), a standardized assessment that reliably measures language proficiency levels (Geranpayeh, 2003).

For the sampling procedure, a non-probability convenience sampling method was employed to include participants who were available and willing to participate (Best & Kahn, 2006). Convenience sampling, as defined by Mackey and Gass (2015), involves selecting participants based on their accessibility and proximity to the researchers.

Participants were assigned to control and experimental groups based on pre-existing class structures, which is typical in quasi-experimental designs. However, within this framework, the assignment of students to the control and experimental groups was conducted randomly. This approach ensured a balanced distribution of participants while maintaining the integrity of the study.

All selected participants had a minimum of two years of English language learning experience and were aged between 20 and 30 years. This criterion was crucial for ensuring consistency in learners’ exposure to English instruction, thereby minimizing variability in language proficiency that could potentially confound the study results (Mackey & Gass, 2015). The QOPT was employed to ensure the participants’ consistency in language proficiency levels. More specifically, the second edition of the QOPT, which was sourced from Oxford University Press,

was utilized. This assessment comprises two sections with 60 items that cover vocabulary, grammar, and cloze tests. The first section contains questions 1-40, while the second part includes questions 41-60, all presented in a multiple-choice format. Participants who scored between 30 and 40 were categorized as intermediate learners, corresponding to level B2.

Instruments

Informed by social cognitive theory, the Writing Self-Efficacy Beliefs Questionnaire (WSEBQ) was adopted from Teng and Wang (2023) to assess five dimensions of writing self-efficacy: Linguistic Knowledge Efficacy (LKE), Information Organization Efficacy (IOE), Rehearsal and Memory Efficacy (RME), Self-Regulatory Efficacy (SRE), and Writing Performance Efficacy (WPE). Data collection utilized a 7-point Likert scale for each item, ranging from 'strongly disagree' to 'strongly agree', ensuring optimal accuracy. Any ambiguities were discussed and resolved prior to administration.

The questionnaire was piloted with 18 individuals who shared similar characteristics with the main population to ensure clarity, comprehensibility, and cultural appropriateness (Nakazawa, 2011). This piloting process allowed for the identification and resolution of potential issues related to language, wording, or interpretation, thereby enhancing the validity and reliability of the instrument. The reliability analysis, measured by Cronbach's α , indicated acceptable reliability for the questionnaire (0.84). Examples of items from the WSEBQ include:

- Item 1: I can organize sentences and paragraphs for academic writing.
- Item 2: I can judge how to avoid verbose and awkward expressions in academic writing.

Data Collection Procedures

The study involved two intact classes of 30 intermediate-level EFL learners from a foreign language institute in Sari, Iran. This selection ensured established relationships among participants and their instructor, which helped maintain classroom dynamics (Mackey & Gass, 2015). To confirm the comparability of the classes, the QOPT was administered, providing an objective measure of participants' linguistic abilities and establishing a baseline for proficiency.

Following the QOPT, the Writing Self-Efficacy Beliefs Questionnaire was administered as a pretest to both groups. The experimental group then underwent an intervention focused on interactive writing strategies, while the control group received standard instruction.

The intervention consisted of several stages mirroring the process writing approach, which emphasizes writing as a recursive process (Graham & Sandmel, 2011). The timeline for the intervention included:

- Prewriting: Participants engaged in activities to stimulate creativity and generate ideas, such as brainstorming based on relevant images.
- Drafting: Students were introduced to writing models that illustrated effective writing structures, helping them understand organization and coherence.
- Sharing: Participants exchanged drafts in small groups, providing and receiving constructive feedback, which fostered peer interaction and community support.
- Evaluating, Revising, and Editing: Students critically reviewed their drafts against predetermined criteria, identifying areas for improvement and making necessary revisions. This stage developed their self-monitoring skills, essential for enhancing writing quality and self-efficacy (Zimmerman & Bandura, 1994).

Publishing: Participants showcased their completed writings, receiving recognition and feedback from peers and instructors, which boosted their confidence and appreciation for effective communication.

In contrast, the control group engaged in structured learning focused on direct instruction. Sessions began with a warm-up, followed by a brief overview of the writing topic, such as descriptive writing. After the instructional segment, participants had a wrap-up period to clarify concepts and receive homework assignments aligned with the session's content.

After the intervention, all participants completed a posttest. The pretest-posttest design allowed for effective measurement of learning gains, enabling the assessment of the intervention's impact on writing self-efficacy (Campbell et al., 1963). The pre- and posttest scores on the WSEBQ were analyzed to evaluate changes in participants' writing self-efficacy beliefs, comparing outcomes between the experimental and control groups. Throughout the study, 90 minutes of class time were dedicated to writing instruction over 12 sessions, in addition to the pretest and posttest sessions.

Data Analysis

The data analysis used SPSS (Version 27), employing parametric tests to address the research question. More specifically, before conducting two independent samples t-tests, the assumptions necessary for these tests, such as normality and homogeneity of variance, were assessed. The non-significant p-values obtained from the Shapiro-Wilk test of normality and Levene's test of homogeneity of variance indicated that parametric tests are appropriate. Initially, the pretests of both groups were compared to ensure the participants' similarity in terms of writing self-efficacy before treatment. Subsequently, another independent samples t-test was performed to determine whether a significant difference existed between the two groups after the intervention. In addition, a paired-samples t-test was also used within the experimental group to evaluate improvements in writing self-efficacy from pretest to posttest.

Results

In this study, the Writing Self-Efficacy Questionnaire was employed to assess participants' confidence in their writing abilities across various dimensions. Administered both before and after the intervention, this questionnaire provided quantitative data to measure changes in learners' self-efficacy levels resulting from the interactive writing activities. The pretest data established baseline confidence, while the posttest data evaluated any improvements, thereby enabling a comprehensive analysis of the intervention's impact on learners' writing self-efficacy.

Parametric Tests

Testing the assumptions for parametric tests is necessary to ensure the validity of the statistical analyses. By assessing assumptions such as normality and homogeneity of variance, we can confirm that the data meet the requirements for parametric tests. Normality refers to the distribution of the data, where the scores follow a normal or bell-shaped curve (Das & Imon, 2016). The violations of this assumption can lead to inaccurate results. Homogeneity of variance, on the other hand, means that the variance or spread of scores is roughly equal across different groups being compared (Games et al., 1979). If this assumption is violated, the reliability of the statistical tests may be compromised. Therefore, it is important to test these assumptions before applying the parametric tests. The results of the Shapiro-Wilk test are presented in Table 2.

Table 2. Shapiro-Wilk test of normality

Test Type	Groups	Statistic	df	Sig.
Pretest	Control	.955	30	.234
	Experimental	.936	30	.070
	Control	.933	30	.061
Posttest	Experimental	.952	30	.186

Table 2 provides the results of the Shapiro-Wilk test to assess the normality assumption for the pretest and posttest scores of both the experimental and control groups. The p-values obtained from the test for all groups ranged from .061 to .234, which were greater than .05. This result indicates that there is no significant departure from normality in the data distribution. Consequently, the assumption of normality is met. Moreover, the results of Levene’s test for homogeneity of variance are reported in the next section (Tables 4 and 6).

The Pretest Phase

The main aim of this study was to investigate the effect of interactive writing on the writing self-efficacy of Iranian EFL learners. Table 3 provides the pretest scores of both the experimental and control groups on the writing self-efficacy questionnaire.

Table 3. Descriptive statistics of pretest scores

Group	N	Minimum	Maximum	Mean	Std. error	Std. deviation statistic
Control	30	61.00	119.00	86.8333	2.66957	14.62186
Experimental	30	65.00	115.00	89.3333	2.43175	13.31925

The mean pretest score of the experimental group was 86.83, while that of the control group was 89.33. On average, participants in the experimental group reported slightly higher levels of writing self-efficacy than those in the control group before the intervention. However, to determine whether this difference was statistically significant or due to chance, an independent samples t-test was conducted (see Table 4).

Table 4. Independent samples t-test for the pretests of the control and experimental groups

Levene’s test for equality of variances				t-test for equality of means				
F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
							Lower	Upper
.387	.536	.692	58	.492	2.50000	3.61110	−4.72840	9.72840

The independent samples t-test was conducted to compare the mean pretest scores of the experimental and control groups on the writing self-efficacy questionnaire. The assumption of equal variances was tested using Levene’s test, which led to a non-significant result ($F = .387$, $p = .536$), indicating that the assumption of equal variances was met ($p > .05$). Furthermore, the results of the t-test revealed that the difference in mean pretest scores between the experimental and control groups was not statistically significant ($p = .492$, $p > .05$). Therefore, there was no significant difference in the participants’ writing self-efficacy levels between the experimental and control groups before the intervention. It is noteworthy that the effect size (Cohen’s d) for the difference in pretest scores between the experimental and control groups was 0.17. Cohen’s d was used because it is widely regarded as the appropriate measure of effect size for t-tests, which compare the means of two groups (independent samples t-test) or the means within one group at two different times (paired samples t-test) (Lakens, 2013). In contrast, eta-squared (η^2), another common measure of effect size, is more appropriate for ANOVA or when analyzing multiple groups, as it explains the proportion of variance in the dependent variable accounted for by the independent variable (Richardson, 2011). According to Cohen (1988), the interpretation of Cohen’s d follows these general benchmarks: a small effect size is considered to be $d = 0.2$, a medium effect size is $d = 0.5$, and a large effect size is $d = 0.8$. These categories help in understanding the practical significance of differences between groups. In the current study, where Cohen’s d was 0.17, the effect size is small.

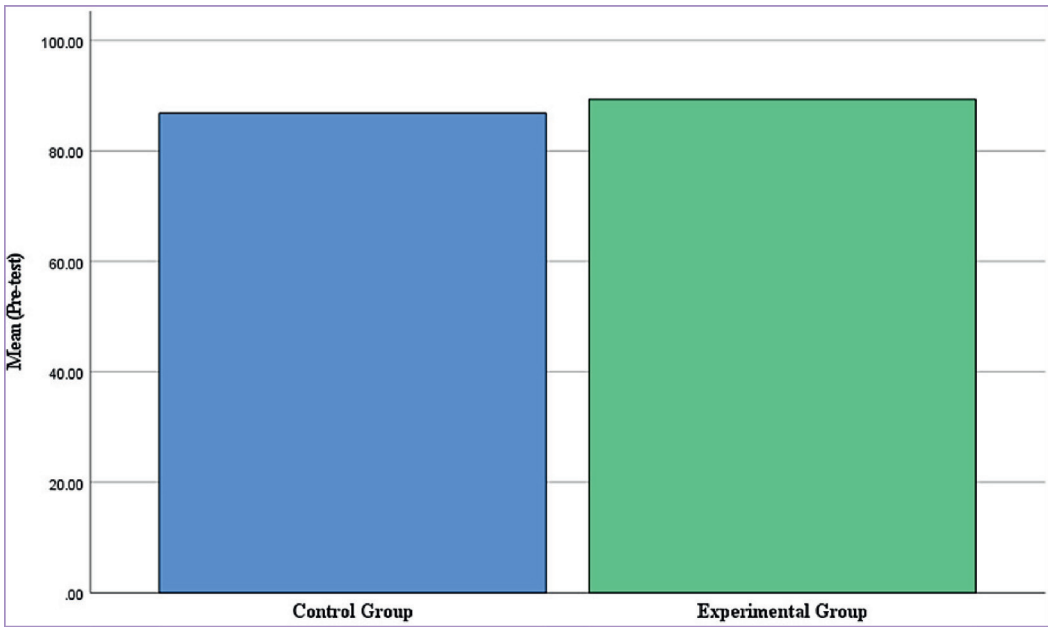


Figure 1. Pretests of control and experimental groups

Figure 1 shows that the level of the control group was slightly higher; however, the results of the independent samples t-test indicated that the difference between these two groups was too small to be considered significant.

Posttest Phase

The descriptive statistics of the posttest scores are presented in Table 5.

Table 5. Descriptive statistics of posttest scores

Group	N	Minimum	Maximum	Mean	Std. error	Std. deviation statistic
Control	30	66.00	116.00	90.3000	2.44110	13.37045
Experimental	30	79.00	131.00	106.2000	2.68045	14.68145

The descriptive statistics of the posttests indicate differences in the mean scores of writing self-efficacy between the experimental and control groups. The experimental group, which received instruction in interactive writing strategies, showed a substantially higher mean posttest score ($M = 106.20$) compared to the control group ($M = 90.30$), which indicates that the interactive writing intervention has a positive effect on participants' writing self-efficacy. However, further inferential statistical analysis is required to determine the significance of the differences. Therefore, another independent samples t-test was conducted to compare the mean posttest scores of the experimental and control groups on the writing self-efficacy questionnaire (see Table 6).

Table 6. Independent samples t-test for posttests of the control and experimental groups

Levene's test for equality of variances				t-test for equality of means				
F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% Confidence interval of the difference	
							Lower	Upper
.347	.558	4.386	58	.000	15.90000	3.62544	8.64290	23.15710

According to Table 6, the assumption of equal variances also indicated a nonsignificant result ($F = .347, p = .558$) for the posttests. In other words, this assumption was not violated ($p > .05$). Furthermore, the results of the independent samples t-test revealed that the difference in mean posttest scores between the experimental and control groups was statistically significant ($t = 4.386, df = 58, p = .000$). This means that the experimental group outperformed the control group at the time of the posttest. Therefore, based on the posttest scores, there was strong evidence to suggest that the interactive writing intervention had a significant positive effect on writing self-efficacy levels among participants in the experimental group. The effect size (Cohen's d) for the difference in posttest scores between the experimental and control groups was approximately 1.13, indicating a large difference between the posttest scores of the two groups. In other words, the experimental group scored significantly higher than the control group, with a substantial mean difference, indicating a strong practical impact of the experimental condition on posttest performance. This large effect size demonstrates that the intervention associated with the experimental group has a very significant positive impact compared with the control group. The superiority of the experimental group at the time of the posttest is shown in Figure 2.

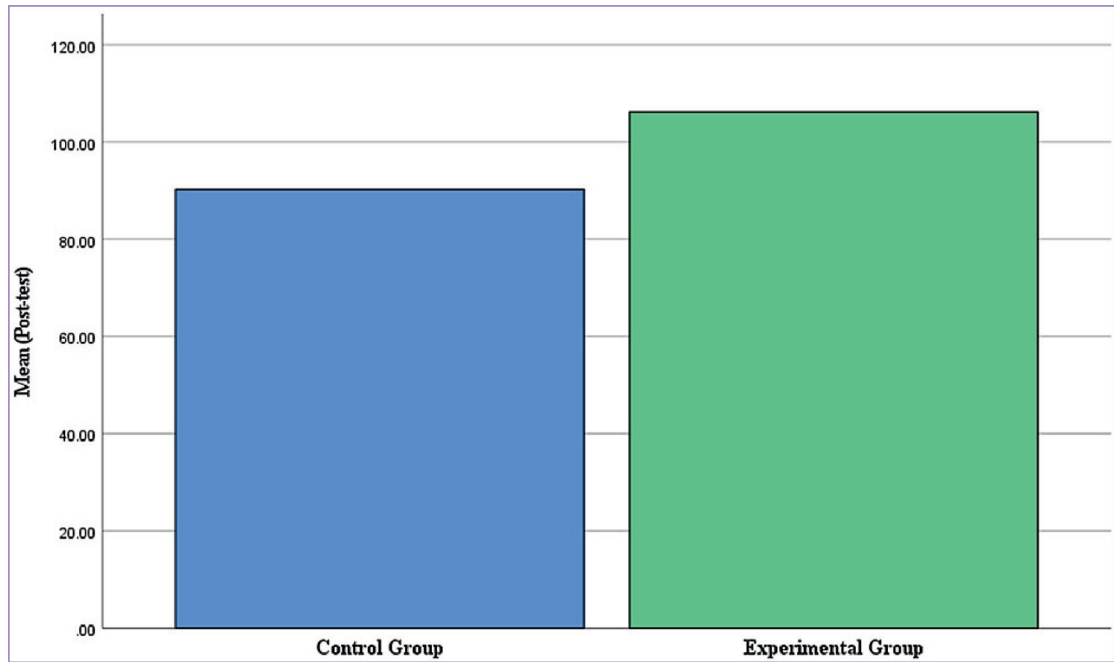


Figure 2. Posttests of control and experimental groups

A paired-samples t-test was used to assess whether there was a significant difference between the mean pretest and posttest scores in the experimental group (see Table 7).

Table 7. Paired-samples t-test: experimental group

Paired differences					t	df	Sig. (2-tailed)
Mean	Std. deviation	Std. error mean	95% Confidence interval of the difference				
			Lower	Upper			
-16.86667	5.56301	1.01566	-18.94393	-14.78940	-16.607	29	.000

The results revealed a statistically significant difference between the mean pretest and posttest scores ($t = -16.607$, $df = 29$, $p = .000$) of the experimental group, which led to the conclusion that the interactive writing intervention had a significant effect on the writing self-efficacy levels of participants within the experimental group. The effect size (Cohen's d) for the difference in pre- and posttest scores within the experimental group was approximately 1.20, indicating a large positive impact of the treatment in the experimental group.

Another paired-samples t-test was conducted to determine whether the differences between the pretest and posttest scores of the control group were significant (see Table 8).

Table 8. Paired-samples t-test: control group

Paired differences					t	df	Sig. (2-tailed)
Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
			Lower	Upper			
−3.46667	23.38690	4.26984	−12.19948	5.26615	−812	29	.423

The results show an improvement in the mean scores from pretest to posttest for the control group; however, this change was not statistically significant ($t = -.812$, $df = 29$, $p = .423$). While the scores showed an upward trend, the difference was not sufficient to conclude that any specific intervention had a notable impact on the writing self-efficacy levels of participants in the control group. Consequently, these findings show that the control group did not experience a significant effect during the assessment period. Cohen’s d value for the difference in pre- and posttest scores within the control group was approximately 0.24, which is considered a medium effect size. These results are illustrated in Figure 3.

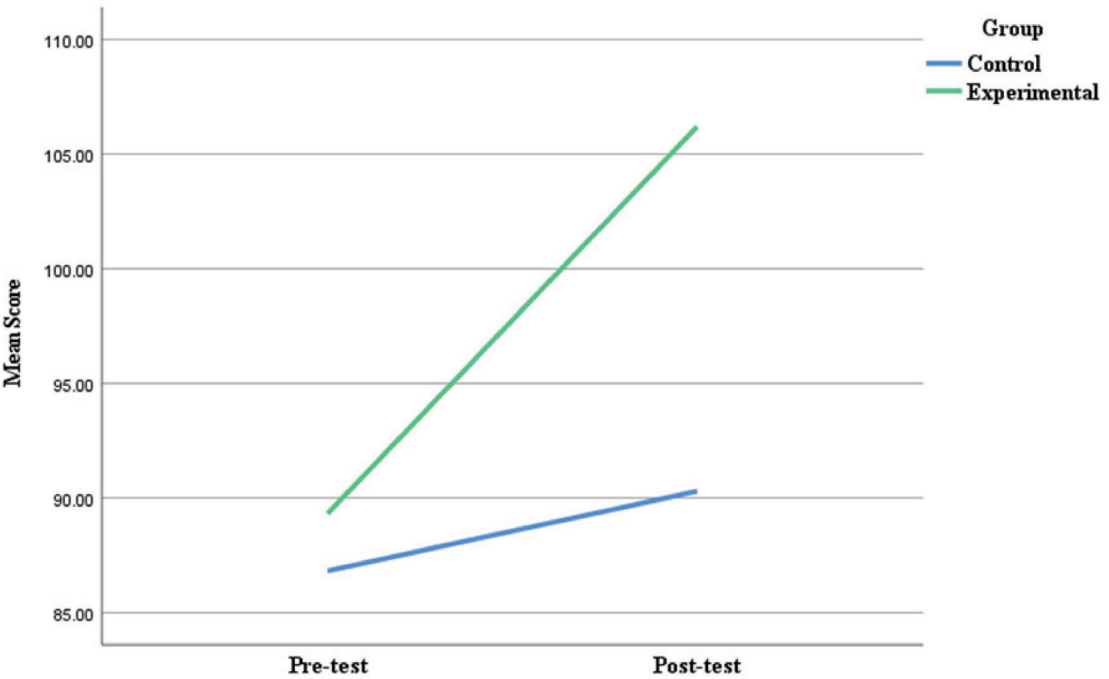


Figure 3. Pretest and posttest scores of the control and experimental groups

As illustrated, the mean score of the participants in the experimental group significantly increased by the time the posttest was completed. However, the participants in the control group did not show significant progress in their writing self-efficacy during the posttest phase. Therefore, the null hypothesis, which stated that using interactive writing has no effect on learners’ writing self-efficacy, and the second alternative hypothesis, which stated that using

interactive writing has a negative effect on writing self-efficacy, were both rejected. Finally, the first alternative hypothesis, which proposed that interactive writing has a positive effect on writing self-efficacy, was confirmed.

The key findings of this study clearly demonstrate that interactive writing significantly enhances learners' writing self-efficacy. The data showed that participants who engaged in interactive writing strategies experienced notable improvements in their confidence across various aspects of writing, such as organization, vocabulary, and overall performance. These results suggest that incorporating interactive writing activities into language instruction can effectively boost learners' belief in their writing abilities, contributing to improved writing skills and greater motivation.

Discussion

Drawing upon social constructivist and emergent literacy theories, interactive writing emphasizes the active involvement of both instructors and learners in the writing process. Through collaborative decision-making and scaffolded support, interactive writing provides learners with opportunities to engage meaningfully in writing tasks, discuss writing concepts, and refine their language skills (Moqadasizadeh et al., 2023). The role of the instructor as a facilitator and guide is crucial for creating a supportive learning environment. This learner-centered approach supports the development of writing skills and fosters a deeper sense of agency and self-confidence in learners (Graham & Harris, 2001). By incorporating interactive writing into educational settings, learners acquire knowledge and develop essential cognitive and sociocultural processes.

The primary aim of this study was to investigate the effect of interactive writing on the writing self-efficacy of EFL learners. The results revealed a significant difference in the posttest scores between the experimental and control groups, suggesting that interactive writing had a positive effect on writing self-efficacy. Additionally, within the experimental group, there was a significant improvement in writing self-efficacy from pretest to posttest, further supporting the efficacy of interactive writing instruction.

This study contributes to the literature by providing a detailed examination of how interactive writing specifically enhances writing self-efficacy among EFL learners, a focus not covered in previous research. While existing studies have broadly explored the benefits of interactive and participatory learning methods on self-efficacy (Ma et al., 2023; Tsai et al., 2011), this research uniquely illustrates the direct impact of interactive writing practices—such as prewriting, drafting, sharing, and revising—on learners' confidence and self-belief in their writing abilities. By empirically validating the positive effects of interactive writing strategies on self-efficacy, this study offers insights into the effectiveness of structured writing activities in improving writing self-efficacy. In addition, in accordance with social cognitive theory, interactive writing can improve a supportive learning environment that promotes self-efficacy.

The results of this study were consistent with those of Chang et al. (2022), who reported that guiding students through goal setting, in-class discussion, task sharing, self-evaluation, and self-regulation feedback can enhance the level of self-efficacy. Furthermore, Chung et al. (2021) demonstrated the significance of self-assessment, planning, goal setting, and reflection on learners' self-efficacy in general. Although these studies did not specifically target writing self-efficacy, their findings revealed that instructional methods can play a principal role in enhancing learners' overall self-efficacy. Similar to the results of the current study, Al-Hawamdeh et al. (2023) found that process-based writing significantly enhanced learners' self-efficacy. Both studies highlighted the effectiveness of interactive and participatory learning approaches in enhancing self-efficacy. Interactive writing not only engages learners actively in the writing

process but also provides opportunities for reflection and feedback, which are important for building self-efficacy beliefs. In line with the findings of this study, Majed and Muhammad (2020) demonstrated that students exposed to interactive writing strategies showed superior writing skills compared to those in the control group, indicating that interactive writing can positively affect students' writing abilities. Although they supported the notion that interactive writing interventions can improve writing outcomes, they primarily focused on writing skills rather than on writing self-efficacy explicitly. Since enhanced writing skills are often correlated with improved self-efficacy beliefs, their findings indirectly indicate a positive relationship between interactive writing and writing self-efficacy (Seyyedrezaei et al., 2021).

More specifically, this study's findings were in line with Coon et al. (2019) and Talaat (2021), who emphasized the importance of interactive teaching approaches in enhancing self-efficacy, but not specifically in the domain of writing. These studies highlighted the value of incorporating interactive elements into instructional practices to foster learners' confidence and belief in their abilities, which is consistent with the rationale behind employing interactive writing strategies in the current research. In the same vein, the results of the present study align with those of Storch (2005), who found that interactively written texts scored higher than individually written texts in terms of accuracy. Similarly, Nixon and McClay (2007) reported that interactive groups outperformed individuals in writing tasks regarding communicative quality, organization, and linguistic appropriateness. Consistent with these findings, Jafari and Ansari (2012) found that learners who worked collaboratively produced more accurate texts than those who worked independently. They attributed this enhanced accuracy to the learners' increased motivation to focus on grammatical precision and their active participation in the revision process.

In fact, the positive outcomes observed in this study can be justified by the nature of the interactive writing interventions employed. Interactive writing activities inherently provide opportunities for learners to engage actively in the writing process, receive immediate feedback, and collaborate with peers (Arman, 2021), which can generate a sense of competence and mastery experiences, in line with the social cognitive theory of self-efficacy (Hetthong & Teo, 2013). By participating in the writing process and receiving support and guidance from instructors and peers, learners are likely to develop greater confidence in their writing abilities, which can lead to enhanced self-efficacy beliefs. In addition, peer feedback, which was one of the main steps in the writing processes of this research is considered a kind of peer scaffolding that can lead to more effective writing performances (Coon et al., 2019). Furthermore, based on Shang (2022) and Yu and Liu (2021), this feedback provision can improve the level of writing in learners, which enhances the responsibility of learners not only for their own writings but also for their peers' texts. In the same vein, an effective prewriting process as a stage in interactive writing has been reported to be necessary in helping learners express their ideas, which can also develop their self-efficacy as well (Tsao, 2021).

Theoretically, the findings were consistent with the principles of social cognitive theory, which states that self-efficacy is influenced by four primary sources of information: mastery experiences, vicarious experiences, social persuasion, and physiological and affective states (Bandura, 1977). Through interactive writing activities, learners have the opportunity to experience success and improvement in their writing skills, which in turn may enhance their mastery experiences. In addition, observing peers' successful writing attempts and receiving positive feedback from instructors and peers can further increase learners' self-efficacy beliefs, in line with the principles of vicarious experiences and social persuasion. Furthermore, the interactive nature of the writing interventions likely contributed to the creation of a supportive and collaborative learning environment, which is conducive to self-efficacy development (Dunbar et al., 2018).

The advantages of interactive writing are manifold, but this does not mean that independent writing is lacking educational value (Danoff-Burg et al., 2010; Park, 2020). These authors suggest that free and independent writing is conducive to producing a greater volume of written text and reducing anxiety. Students can apply the skills they have learned in interactive settings to their own writing, thus strengthening their understanding and mastery of writing processes. Therefore, a good strategy is that teachers use group projects that require collaborative writing (e.g., group essays or reports) and individual contributions, allowing students to experience both formats.

Pedagogical Implications

The findings of this study have several pedagogical implications for teachers, learners, and material developers in the context of EFL instruction. Teachers can implement activities such as collaborative writing tasks, peer feedback sessions, and guided writing exercises that actively engage learners in the writing process (Sukirman, 2016). For example, teachers might organize small groups where students collaboratively write a short story, allowing them to negotiate meaning and language use. Research indicates that such collaborative writing tasks not only foster a sense of shared responsibility but also improve language accuracy and fluency as learners work together (Storch, 2013; Wigglesworth & Storch, 2012). By providing specific praise and constructive criticism during peer feedback sessions, teachers can help learners recognize their strengths and areas for improvement, thereby enhancing their confidence and self-efficacy.

Engaging in collaborative tasks enhances learners' writing fluency and allows them to experiment with language in a low-pressure environment, which can reduce writing anxiety and improve outcomes (Swain, 2006). Teachers should guide students in setting realistic and achievable goals for their writing tasks, considering their current skill levels and areas for improvement (Schunk, 2003). For instance, a teacher might encourage students to focus on improving their use of descriptive language in their next writing assignment. By setting clear goals and monitoring their progress, learners can enhance their sense of control and efficacy in writing.

Material developers should also incorporate interactive writing activities into instructional materials for EFL learners. For example, they can design writing tasks that promote active participation, collaboration, and peer interaction, while providing opportunities for learners to receive feedback on their writing. Materials should facilitate collaborative learning and practical application of writing skills, as these methods have been shown to enhance learner engagement and writing performance (Ellis, 2009). By engaging learners in real-world tasks and contexts, instructional materials can help bridge the gap between classroom learning and practical language use, thus increasing learners' motivation and writing efficacy (Richards, 2006). However, challenges such as varying levels of student engagement and differing proficiency levels within groups should be acknowledged, as they may impact the effectiveness of these collaborative activities.

Conclusion and Further Research

The findings revealed that interactive writing interventions significantly positively impact the writing self-efficacy levels of EFL learners. Implementing strategies that foster positive and supportive relationships with students is imperative in the classroom. These strategies may include offering interactive feedback throughout various stages of the writing process. Such targeted interventions are instrumental in strengthening students' self-efficacy, enabling them to trust their ability to overcome future writing challenges. Building self-confidence in writing

is crucial, as research indicates that students with high levels of self-efficacy tend to be more skilled writers.

Interactive writing activities, such as collaborative writing tasks, peer feedback sessions, and reflective writing practices, play an important role in helping learners develop their writing skills and overcome challenges in the writing process. This learner-centered approach not only enhances engagement and motivation but also generates a sense of ownership and responsibility for their writing development. The significance of teacher support and guidance in facilitating learners' self-efficacy development cannot be overlooked. By fostering a supportive and encouraging learning environment, teachers can nurture learners' confidence and belief in their writing abilities, resulting in the development of independent and proficient writers.

Future research should investigate the effectiveness of different types of interactive writing interventions, including collaborative writing tasks, peer feedback sessions, and online writing communities, in enhancing learners' self-efficacy in writing. In addition, combining quantitative analyses of writing performance with qualitative analyses of learners' experiences and perceptions can provide a richer perspective. While interactive writing offers many benefits, language teachers and researchers should not neglect the educational advantages of independent writing strategies. Combining interactive and independent writing activities can enhance student learning by leveraging the strengths of both approaches, fostering collaboration, skill development, and individual expression. Acknowledging potential challenges, such as varying student engagement levels and the need for differentiated instruction, will be essential in maximizing the effectiveness of these pedagogical strategies.

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Appendix A

Sample lesson plan for the experimental group

Stages of interactive writing	Procedures	Materials	Timing
Warm-up	• The students were grouped. • The concepts of descriptive, narrative, and expository writing were introduced in this section. • The importance of these types of writing was emphasized.	—	10 minutes
Prewriting	• Brainstorming ideas • Making a list • The topic was decided.	Showing pictures on the screen	15 minutes
Drafting	• The writing structures and main elements were explained. • The writing was composed interactively. • Additional details would be added.	Presenting some writing models on the slide	15 minutes
Sharing	• Students were asked to exchange their writings to be checked by their teammates.	—	15 minutes
Evaluating, Revising, and Editing	• Students were asked to reread their work, check the accuracy of the structure and meaning, and follow the model structure.	—	15 minutes
Publishing	• The writing by the teacher and students was used as a reference. • It can be attached to the working wall and displayed in the classroom.	—	10 minutes
Wrap-up	• The key components were interactively summarized. • Students' questions were discussed.	—	10 minutes

Appendix B

Sample lesson plan for the control group

Control Group (90 minutes)	Material: Academic Writing Resources
Warm up (15 minutes)	• Greeting each other • Calling the roles • The type of writing to be taught was specified.
Direct instruction in writing (Teacher-based writing class) (60 minutes)	• The topic was written on the board. • One of the following types of writing was taught: descriptive, narrative, or expository, each covered in four sessions. • The rules and elements of writing were explained directly and explicitly. • Students were asked to follow the models in the book.
Wrap up (15 minutes)	• Responding to students' questions • A topic was given to students to write at home based on the lesson.