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Teacher and Peer Online Feedback in EFL Writing: Effects on Writing Performance and Affective Factors

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ABSTRACT

The study aims to examine the effects of teacher and peer online feedback on learners' writing performance, motivation, self-efficacy, and anxiety in writing among EFL learners in Indonesia. A quasi-experimental design was employed with two intact classes that were non-randomly assigned to the treatment groups. 40 EFL learners from one public university in Indonesia were divided into two groups, with 25 learners receiving teacher feedback and 15 learners receiving peer feedback over a period of eight meetings within four weeks. An argumentative writing rubric for pre- and post-tests and a set of questionnaires measuring motivation, self-efficacy, and anxiety in writing were used to obtain the data. The data analysis involved the writing assessment with two raters using the validated rubrics and both parametric and non-parametric statistical analyses. The results showed that the writing performance with teacher feedback significantly differed from the peer feedback, as indicated by their post-test mean scores (p = .009). Of the three variables, even though the results showed a slight improvement, none of them showed a significant difference between the peer feedback and teacher feedback groups in their mean scores. The results showed no significant differences in writing motivation (p= 0.468), self-efficacy (p=0.95), and writing anxiety (p= 0.174) in their mean scores. Implications for online feedback and learners' readiness to give online feedback and learners' readiness in giving feedback are discussed.

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1. Introduction

The inevitability of technological advancement has brought educational practices, including feedback, into an online setting. Online feedback, then, emerges as a consequence of 'digital and educational change' (Pettersson, 2021) and in accordance with the current changes in the

teaching and learning process (Öztürk et al., 2025). Even though such digitalization, for some scholars, has been recognized as an intricate movement (Hauge, 2014; Håkansson Lindqvist & Pettersson, 2019), the practice of online feedback is seen as a beneficial practice since it offers expanded interaction and socialization between teachers and students without time and space constraints (Yang et al., 2021). Also, the setting of online feedback, which allows the giver in an anonymous way, as noted by Alharbi & Al-Hoorie (2020), Liu et al. (2021), is more probable activate learners to generate critical and constructive feedback to their peers. Thus, online feedback is valued as having potential in cultivating an effective environment in learning English as well as triggering learners' motivation (Yang et al., 2021).

Additionally, findings across different studies show that the influence of feedback on learners' affective aspects of learning cannot be treated similarly. Rather, affective aspects, including motivation, self-efficacy, and anxiety, represent psychological responses that are interrelated but never the same. Motivation is connected to learners' willingness and involvement in maintaining writing activities. Self-efficacy reflects the belief in their writing competency to achieve successful writing tasks. Additionally, anxiety is often associated with their responses to uncertainty and threats regarding evaluation that come during the process. Therefore, it can be understood that an increase in one aspect does not always follow from the other aspects.

Several academic investigations (e.g., Lee & Evans, 2019; Campbell & Batista, 2023) found that in regard to peer feedback, active involvement in giving and receiving feedback may provide experience of mastery, self-regulation, and social comparison. The process can also enhance opportunities to build learners' autonomy and interconnectedness, which eventually strengthens their self-efficacy. Consistently, Cui et al.'s (2021) results revealed that trained peer feedback and teachers' feedback may create relatively similar improvements in writing performance and self-efficacy. However, interestingly, it is stated that trained peer feedback demonstrated a stronger effect on autonomous motivation. While the aforementioned studies provide relevant findings on self-efficacy and motivation, other scholarly works have discovered different patterns of findings on anxiety. For instance, Wang et al.'s (2023) results revealed that there is a significant improvement in attitudes and self-confidence through peer feedback, but an insignificant improvement when it comes to anxiety in writing. Han & Hiver (2018) also reported that learners may experience a high level of anxiety while also having a high level of self-efficacy simultaneously. On the other hand, teacher feedback can provide authority, certain diagnostic clarity, and scaffolding that can reinforce the perceptions of competence, although it may come with an evaluative and directive nature that can affect learners' motivation differently, as stated by Yu et al. (2020) and Razmi & Ghane (2024). This, in turn, suggests that the source of feedback does not automatically result in the same affective patterns. This can also mean that developments in motivation or self-efficacy do not necessarily equate to reduced anxiety, and such responses also depend on how learners evaluate the utility, credibility, and evaluative nature of the feedback being received (Tsao et al., 2017; Sari & Han, 2024).

For this reason, even though previous investigations show that feedback sources and characteristics may result in distinct cognitive and affective consequences, they have generally examined only subsets of these constructs. These studies focused on single or combined feedback sources or operated outside the context of online feedback. Accordingly, it remains unclear whether POF and TOF, when compared under identical learning

conditions, simultaneously produce differences in the writing performance, motivation, self-efficacy, and writing anxiety of ELF learners.

Given the various results and findings from previous studies, scholars noted that feedback, whether given by teachers or peers, is able to influence learners, both cognitively and psychologically. However, among myriad previous studies evidencing the influence of teachers' and peers' feedback, little has discussed the effect of teachers' and peers' feedback in an online environment on learners' writing performance and affective domains, particularly motivation, self-efficacy, and anxiety. Such an investigation becomes necessary since the massive practices of teacher and peer feedback have been done in an online environment. Therefore, this current study aims to investigate the effect of POF and TOF on learners' writing performance, motivation, self-efficacy, and anxiety among EFL learners in Indonesia. To guide the current study, the following are the research questions.

1. Is there any significant difference in the writing performance of Indonesian EFL learners between the practice of POF and TOF?
2. Is there any significant difference in motivation, self-efficacy, and writing anxiety among Indonesian EFL learners between the practice of POF and TOF?

Based on the research questions, a set of hypotheses was developed to examine the potential differences in writing performance and affective variables between Indonesian EFL learners who received peer online feedback (POF) and those who received teacher online feedback (TOF). For writing performance, the null hypothesis (H_{01}) stated that there is no significant difference in the writing scores between the two groups, whereas the alternative hypothesis (H_{11}) posited that a significant difference exists. In terms of affective variables, three aspects were examined: motivation, self-efficacy, and writing anxiety. For motivation, the null hypothesis (H_{02}a) proposed that there is no significant difference in the motivation levels between learners who received POF and those who received TOF, while the alternative hypothesis (H_{12}a) suggested that a significant difference is found. Regarding self-efficacy, the null hypothesis (H_{02}b) indicated no significant difference between the two groups, whereas the alternative hypothesis (H_{12}b) asserted that a significant difference is noticed. Lastly, for writing anxiety, the null hypothesis (H_{02}c) stated that there is no significant difference between the groups, while the alternative hypothesis (H_{12}c) proposed the existence of a significant difference in anxiety levels between learners who received POF and those who received TOF.

2. Literature Review

2.1 Peer Online Feedback and Teacher Online Feedback

Generally, in online practice, teachers give learners feedback called Teachers' Online Feedback (TOF). Such practice becomes more varied due to the existence of a student-centered approach, which slowly influences teachers to utilize peer feedback (Öztürk et al., 2025). Peers' Online Feedback (POF) then appears as an option in feedback practice for several reasons. First, even compared with Automated Corrected Feedback (ACF), Shang (2022) found that the POF could be more positively impacting learners' lexical items and writing mechanic. Further, Shang (2022) also found that learners' mistakes in grammatical aspects were reduced with the application of POF. Second, in terms of the content in the feedback, Liu et al. (2021) found that POF drives learners to engender honest and elaborative feedback to their peers. The finding revealed that the learners were eager to give 'to the

point' comments towards the work by utilizing the anonymous feature. The learners believed that their sharp and precise comments could bring about better improvement to their peers' work. In terms of emotional engagement, POF brings tighter emotional engagement among learners than the conventional one (Zou et al., 2023). The statistical result showed that there was a significant difference in emotional engagement among learners compared with teachers' online feedback practice.

However, without neglecting the TOF's benefits, TOF alone also offers assistances which can overrides POF. Tian & Zhou (2020), for instance, found that the content given by the teacher in their task was more preferable than the feedback from peers. This presumably caused by the rich and grounded knowledge given by the teacher had resulted deep and better writing quality. Previous research, as found in Coll et al. (2014), also showed that not only did the TOF give an improvement in their learning content, but also a positive impact on learners' style in the task and social interactions among learners. The result revealed that teacher encouraged learners to engage with the other discussing the feedback they got from the teacher which to some extent increased their interaction with others. Thus, both POF and TOF are sometimes used interchangeably or go along.

2.2 Self-Determination Theory in Online Feedback

To bridge the discussion of POF and TOF, self-determination theory (SDT) may help to understand the interplay of the two subjects in the nuances of online feedback. Ryan & Deci (2000) showed that human being needs three basic core which are the need of autonomy, the need of competence, and the need of relatedness. To begin with, the need for autonomy echoes a sense of initiative and control over one's actions. Both POF and TOF offer learners the opportunity to experience such senses. For instance, in POF, clearly, learners play role as the giver and receiver's feedback in which consequently they have an autonomy to comments on any aspects as giver and to determine any approaches to revise as the receiver. In TOF, on the other hand, the autonomy of revising their works upon teachers' feedback is on their hand by having choice approach of revising. Next, the need for competence involves a feeling of mastery and confidence in one's ability to succeed. Learners are supposed to give comments and suggestions for improvement on others' work. They, then, are seen as capable and knowledgeable to put their voice on others' work. Lastly, the need for relatedness emphasizes a sense of connection and belonging with meaningful others. The comments given during feedback practice can be a bridge to cultivate sense of belonging in which learners to some extent give feeling of being another author of someone's work.

2.3 Previous Research on Online Feedback and Learners' Affective Factors

Further, as both POF and TOF are mostly found in the writing process in language learning (Cao et al., 2022; Delante, 2017; Guasch et al., 2013; Lam, 2021; Lv et al., 2021), several studies have engaged in the discussion of POF and TOF in relation to some aspects in language learning. Particularly in the affective domain, such as motivation, anxiety, self-efficacy, and the like, previous research found various findings and results in the context of POF and TOF. For instance, when it comes to learners accepting feedback, regardless of who the giver is, positive feedback is most likely able to trigger them to be a motivated learner (Liu et al., 2021). This effect is not limited to positive feedback; when the giver is not being superior, is well-mannered, and has an inspiring voice in their approach to giving feedback, negative feedback is also able to boost learners' motivation (Can & Walker, 2014; Ferguson, 2011).

Anxiety, on the other hand, was found during peer feedback, as noted by Jin et al. (2024), who found that even though the learners' willingness in peer feedback as well as their writing skill were getting improved, the anxiety among them also remained. It was nested in their doubt to revise different obtained peer feedback and lack of ability to revise to match with the giver's desired. Self-efficacy, finally, was affected by teachers' feedback practice. Ghane et al. (2024) found that direct, unfocused teacher feedback delivered to students was able to increase their writing self-efficacy. Along with that, an increase in writing performance and a decrease in writing anxiety were also found.

Noticing the previous studies' discussion, there is a connection among feedback, writing, self-efficacy, motivation, and anxiety. For example, Woodrow (2011) argued that low levels of writing anxiety are linked to high levels of self-efficacy. Learners with high self-efficacy tend to have a strong belief in their ability to complete writing tasks confidently and with resilience. It is confirmed by Zhang (2019), that proper feedback fosters students' sense of competence, which can reduce anxiety by offering clear guidance, constructive support, and encouragement during the writing process. As for motivation, when properly delivered, especially by the teacher, feedback can enhance students' motivation as they feel acknowledged for their effort. A feedback practice done by the teacher is a strong determinant for students' feedback motivation (Gan et al., 2021). Furthermore, course satisfaction can also be determined by the feedback practice in the classroom. Recalling SDT in the previous discussion, in particular the need of autonomy (Ryan & Deci, 2000), feedback, either from teacher or peer, has high probability to enhance students' sense of autonomy by allowing them to practice error detection and revision in which such skills are essential for improving their own writing as well as their critical analysis (Shen et al., 2020).

3. Research Methodology

3.1 Research Design

This study applied a quasi- experimental design in the "Argumentative Writing" course as the setting. The experimental class received peer online feedback instruction. As for the control class, teacher online feedback instruction was given. A set of instruments was applied to evaluate participants' learning in those two classes, including pre-and post-questionnaires and pre- and post-tests on argumentative essay writing.

3.2 Participants

The participants are forty second-year English majors aged 18–20 from a public university in East Java, Indonesia. They were divided into two classes: a control group (n = 25), which received teacher feedback, and an experimental group (n = 15), which received peer feedback. All participants had studied English for more than 10 years and completed comparable paragraph- and essay-writing courses. Their most recent paper-based TOEFL scores ranged from 433 to 542, corresponding to B1 on the Common European Framework of Reference (CEFR). Based on their English-learning experience, proficiency, and prior writing knowledge, the groups were considered equivalent. All participants agreed to participate in the study.

3.3 Instruments

This current research has four instruments including writing prompt and questionnaire for three different variables which cover students' writing motivation in writing, writing anxiety,

and self-efficacy in writing. In addition to those four crucial instruments, a collaborative platform, namely Padlet, was used to assist the process of giving and receiving online feedback in both POF and TOF. The details of each instrument are explained as follows:

3.3.1 Writing Prompt

As this research aimed at analyzing students' performance in writing, a set of writing prompts was utilized for pre- and post-tests. The prompt required students to craft an argumentative essay on three different topics within the allocated time of 60 minutes. The options for the topic were "Do the benefits of artificial intelligence outweigh its potential risks?", "Does social media contribute to increased anxiety among youth?", and "Should five-day schools be maintained in the school system?". Among those three topics, only one topic was chosen to be developed as an argumentative essay which was based on their preference. Other instructions in the prompt cover the time allocation, the minimum words and paragraphs, and the scoring system. To establish the validity of this prompt, two ELT experts were invited to assess the content validity. The result yielded that the prompt was appropriate and suitable for assessing students' writing performance, in this sense, argumentative essay. Thus, the provided prompt was utilized for pre-and post-test for this current study.

3.3.2 Questionnaires

This study used three sets of questionnaires that had been through a pilot to thirty EFL students for maintaining the validity and reliability of all questionnaires. Writing motivation was examined using the questionnaire from Cahyono & Rahayu (2020), which comprises 23 items divided into seven constructs: 5 items about enjoying writing and taking writing classes; 6 items about enjoying writing essay sections; 2 items about writing format; 2 items about using discourse markers; 3 items about lecturer feedback; 2 items about peer feedback; and 3 items about using sources, presentations, and assignment submission. This instrument was selected because, in contrast to tools that evaluate L2 motivation generally (Agawa & Takeuchi, 2016) or English learning motivation specifically (Thompson & Lee, 2018), it evaluates writing motivation. A very high reliability was indicated by the reliability test's coefficient of 0.962.

A questionnaire adapted from Pajares et al. (2001) with ten items about grammar, language use, composition, and mechanical skills to measure writing self-efficacy was also used. A six-point Likert scale, with 1 denoting "not at all confident" and 6 denoting "completely confident," was used to collect responses. In this investigation, retesting with Cronbach's alpha produced a reliability value of 0.905, suggesting strong reliability, despite the original instrument's reliability coefficient of 0.87.

Lastly, Tsai's (2008) questionnaire, which had 28 questions total, including 25 negative (i.e., I get nervous when the time for a writing task is running out) and three positive statements (i.e. I am happy to write sufficient details to support my ideas), was used to examine participants' writing anxiety. Positive items had their scores reversed. A six-point Likert scale, with 1 denoting "strongly disagree" and 6 denoting "strongly agree," was utilized for each question; higher scores denoted greater levels of writing anxiety. A coefficient of 0.918 was obtained from the Cronbach's alpha test. As a result, the full questionnaire was appropriate for data collection and surpassed the reliability criterion.

3.3.3 Padlet as a Medium of Giving and Receiving Online Feedback

To accommodate the giving and receiving of online feedback, an e-collaborative workspace, namely Padlet, was used. The platform allows the users, students and teachers, to post comments, questions, and most importantly is resources which was their draft of essay. Students were instructed to create an account for Padlet; prior to that, a short training on using it was conducted. Students were instructed to post their draft part by part, which was divided into five parts, including the introduction, three developmental paragraphs, and conclusion. By accommodating the comment section feature, feedback was provided by the teacher and /or their peers. Due to its feasibility and ease, Padlet was chosen as the medium for giving and receiving online Feedback. Figure 1 depicts the process of peer online feedback in Padlet. Figure 2 shows the process of teacher online feedback in Padlet.

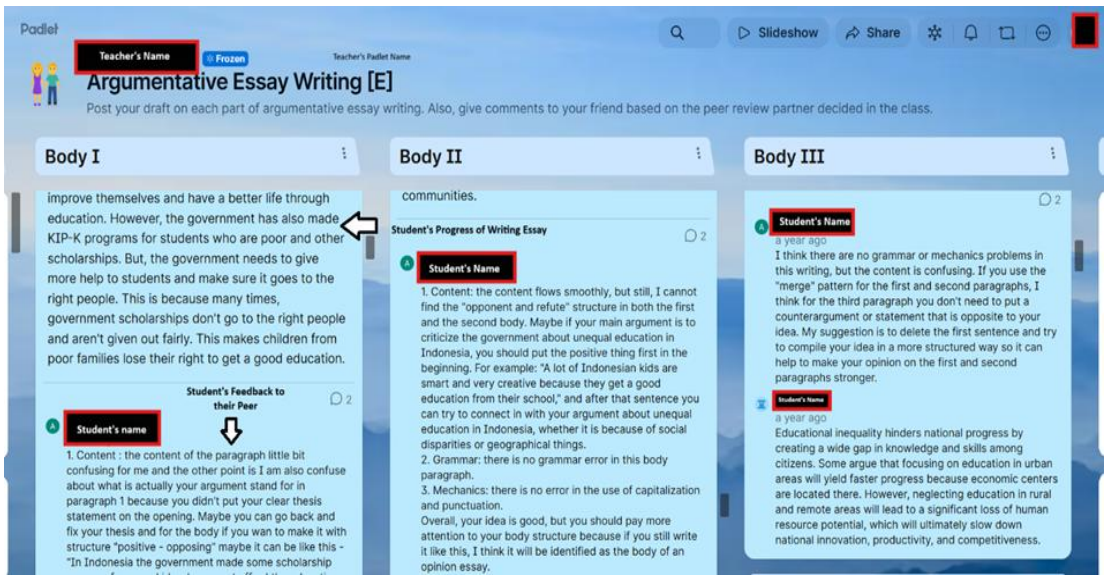


Figure 1. Process of Peer Online Feedback in Padlet

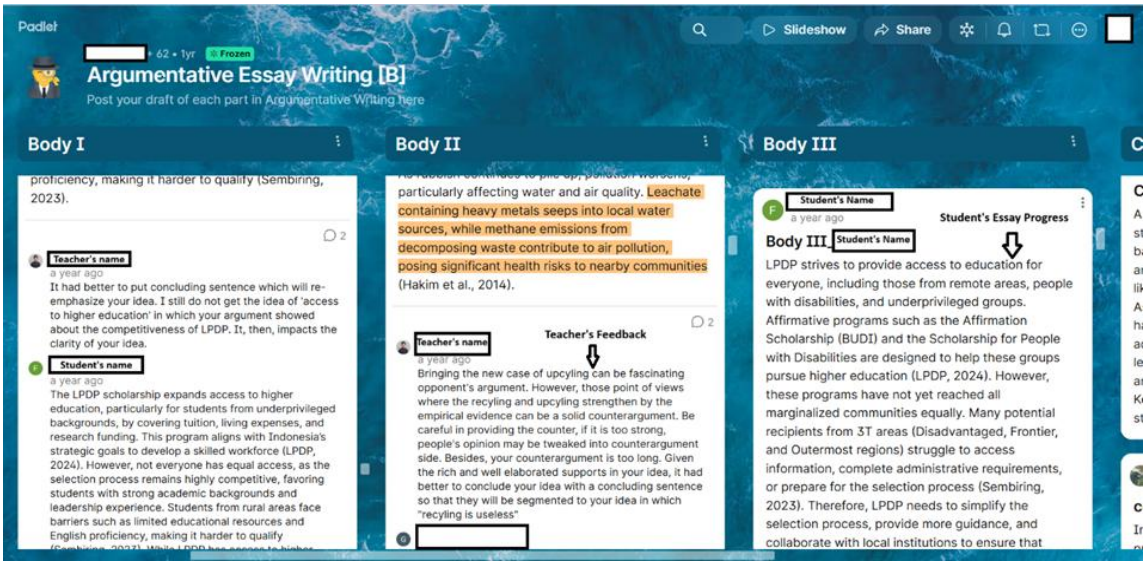


Figure 2: Process of Teacher Online Feedback in Padlet

3.4 Data Collection Procedure

Prior to give the treatment, the participants already passed the related subjects which connect with writing such as intensive writing, paragraph writing, and essay writing. The final course related to writing skills is argumentative writing. It offers biweekly meeting provided within 16 weeks, as a result, the total meetings for this subject are 32 meetings for each meeting least for 100 minutes. Those meetings divided into 8 sessions for opinion essay, followed by 8 meetings for argumentative writing, and the rest is intended to do the project as the university required project-based learning approach. From that point, they are assumed that the composition of writing paragraph as well as the knowledge about essay are sufficient. Even so, before giving the feedback, they still got materials discussing about composition in an essay, idea delivery, mechanics, grammatical aspects, and organization of the idea.

Eight sessions of the course were used for the treatment. A pretest was administered in the first session. In the second session, participants learned about the concepts, structure, patterns, and language use in argumentative essays through sample essays, introduced on Padlet, and experimental group participants were paired for peer review. The third session deepened the structure and language of the introduction section, and then all participants uploaded a draft of the introduction to Padlet. Before the fourth session, the experimental group provided comments and suggestions on their partner's draft, while the control group received feedback from the instructor through the comments section. In the fourth session, they discussed the development of body paragraphs, including topic and supporting sentences, paragraph types, and topic sentence structure; afterward, they wrote the first body paragraph. They received feedback using the same procedure in the fourth session. The sixth session discussed counterarguments, rebuttals, and inter-sentence and inter-paragraph relationships, and then participants wrote the second and third body paragraphs. Feedback on all body paragraphs was provided before the seventh session. The seventh session reviewed the previous material and discussed the conclusion, including alignment of ideas, paraphrasing, and concluding statements; participants then completed their essay drafts. The eighth session was used for the posttest and post-treatment questionnaire. During the second through seventh meetings, the lecturer also provided enrichment materials in the form of videos, guidebooks, additional reading, and assignments. The series of research procedures is presented in Table 1:

Table 1: Schema of Intervention Procedure

Meeting	Topic	Activities	Output
1	Pre-test	Students completed a pre-test to measure their initial argumentative writing ability.	Pre-test essay
2	Introduction to argumentative writing	Students learned the concept, structure, language features, writing patterns, and sample essays. They were introduced to Padlet, and students in the experimental group were paired for peer review.	Understanding of argumentative writing and Padlet
3	Introduction paragraph	Students learned how to write an effective introduction and uploaded their introduction draft to Padlet.	Introduction draft

4	Feedback & Body Paragraph 1	Students received feedback on their introduction (peer feedback for the experimental group; lecturer feedback for the control group). The lesson focused on body paragraph structure, topic sentences, and supporting details. Students then uploaded the first body paragraph.	First body paragraph
5	Feedback on Body Paragraph 1	Students received feedback on their first body paragraph using the same feedback procedure as in Meeting 4.	Revised first body paragraph
6	Counterargument & Refutation	Students learned to write counterarguments, refutations, and transitions, then drafted the second and third body paragraphs.	Second and third body paragraphs
7	Conclusion	Students learned how to write conclusions, including signposting, paraphrasing, and closing statements, and completed their argumentative essay.	Complete essay draft
8	Post-test & Questionnaire	Students completed the post-test and post-questionnaire.	Post-test and questionnaire

3.4 Data Analysis Techniques

As this research aimed to find out the influence of POF and TOF on writing performance and the affective domains, including motivation, anxiety, and self-efficacy in writing, several analyses were utilized. A set of rubrics that had been checked and agreed by two experts was used to assess students' essays. The components involved five aspects: structure and organization, introduction, body, conclusion, and language and mechanics. To assess the students' essays, two instructors, A and B, were invited. They had the same background as the essay instructor and had a master's degree in ELT. The given scores from instructor A were combined and divided by two with score from instructor B. By doing so, the students' writing performance could be found in both in pre- and post-test. The analysis of the pre- and post-distribution questionnaire results, on the other hand, was conducted using parametric and non-parametric tests. These statistical tests were applied to compare the mean scores of both groups so that any significant differences between them could be calculated. By employing these methods, the study ensured an objective evaluation of changes in responses before and after distribution. The decision of using two methods were considered by the results of the assumption test. This current study followed four assumptions by Setyowati and Sukmawan (2021) that need to be fulfilled. The first requirement is that the dependent variable should be measured on an interval scale. The second condition states that the data must be independent, meaning one observation does not influence another. The third assumption involves checking for significant outliers, while the fourth ensures that the data follows a normal distribution. While the first two assumptions can be confirmed without statistical tests, the third and fourth require statistical analysis to validate. The figures below show the results for outliers.

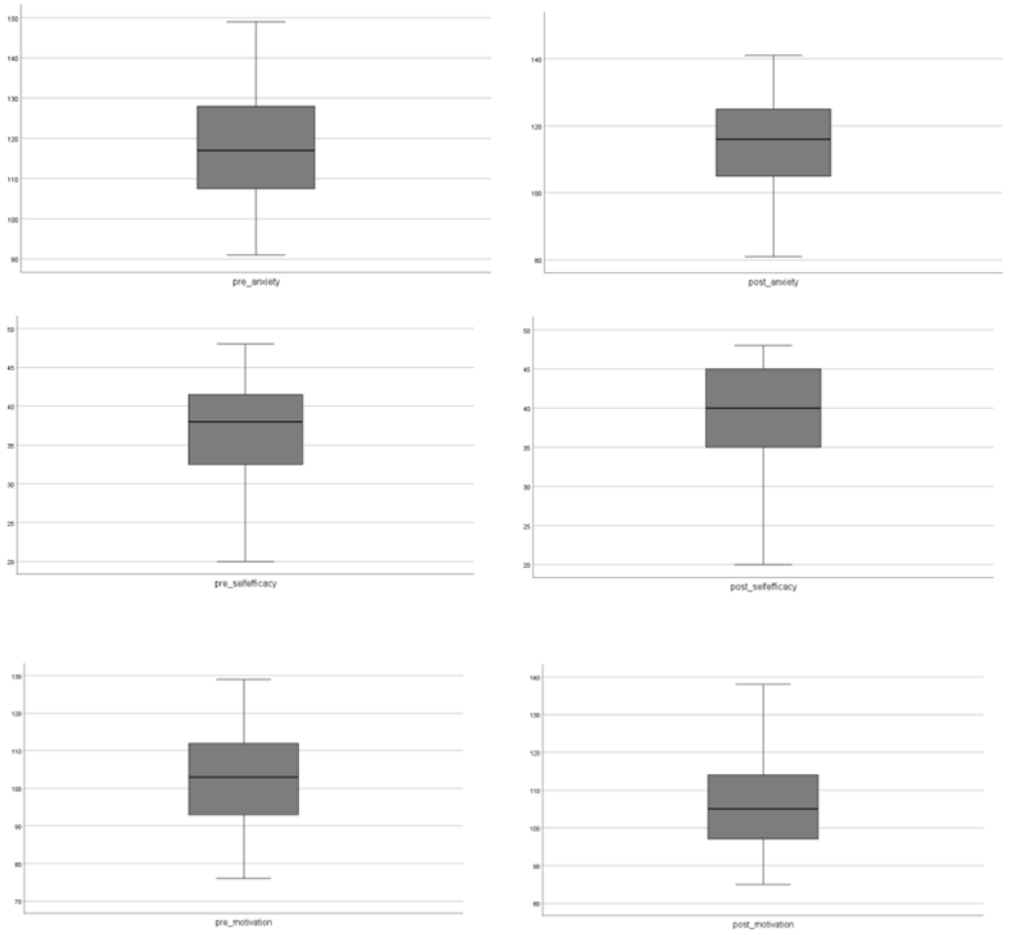


Figure 3: Outliers in all pre-and post-distributed questionnaires

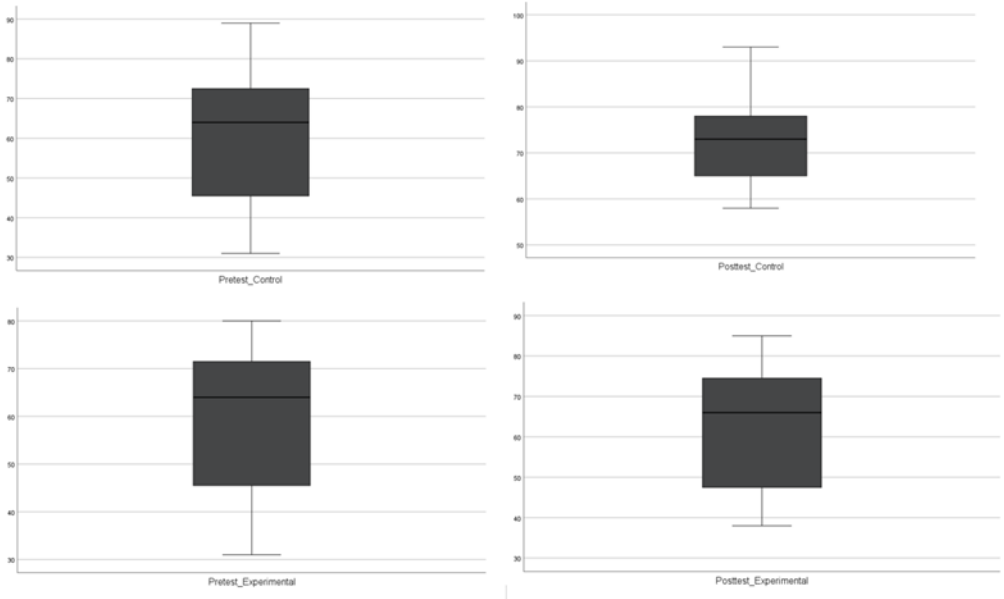


Figure 4. Outliers in pretest and posttest in writing performance for both the control and experimental groups

Noticing the results of the outliers' check in Figures 3 and 4, they indicated that there was no score below or above the fence in the box-and-whisker plots. Therefore, the third assumption was fulfilled. As for the normality test, Table 2 depicts the normality distribution results.

Table 2: Normality Test Results for All Questionnaires

Variable	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	K-S Sig.	Statistic	df	S-W Sig.
pre_experimental_anxiety	0.089	15	0.200	0.972	15	0.893
post_experimental_anxiety	0.119	15	0.200	0.957	15	0.645
pre_experimental_selfefficacy	0.144	15	0.200	0.959	15	0.673
post_experimental_selfefficacy	0.262	15	0.007	0.869	15	0.032
pre_experimental_motivation	0.1	15	0.200	0.985	15	0.993
post_experimental_motivation	0.156	15	0.200	0.95	15	0.517
pre_control_anxiety	0.124	15	0.200	0.96	15	0.690
post_control_anxiety	0.154	15	0.200	0.931	15	0.283
pre_control_selfefficacy	0.191	15	0.147	0.941	15	0.402
post_control_selfefficacy	0.134	15	0.200	0.961	15	0.714
pre_control_motivation	0.133	15	0.200	0.934	15	0.313
post_control_motivation	0.152	15	0.200	0.906	15	0.119
pre_control_writing	0.146	15	0.200	0.952	15	0.554
post_control_writing	0.139	15	0.200	0.962	15	0.727
pre_experimental_writing	0.174	15	0.200	0.909	15	0.130
post_experimental_writing	0.144	15	0.200	0.924	15	0.222

For the normality test, a significance level (α\alphaα) of 0.05 was used as the threshold for determining normality. If the p-value (Sig.) is greater than 0.05 (α> 0.05), the data is normally distributed. Conversely, a p-value below 0.05 (α<0.05) suggests a significant deviation from normality. The results showed that all variables except post_experimental_selfefficacy had p-values greater than 0.05 (α> 0.05) in both Kolmogorov-Smirnov and Shapiro-Wilk. This indicated that they followed a normal distribution. However, post_experimental_selfefficacy displayed a significant deviation from normality with a p-value of 0.032 (α< 0.05) in the Shapiro-Wilk test and a p-value of 0.007 in the Kolmogorov-Smirnov test, which suggested that this variable may not be normally distributed. Given these results, the parametric statistical test, the independent t-test, was applied to all variables except the self-efficacy questionnaire. For the pre- and post-self-efficacy questionnaires, a non-parametric test Mann-Whitney U test was used to find out the difference between mean scores in self-efficacy questionnaire in writing.

4. Results

This section presents the results beginning with the pre-test outcomes, followed by the post-test findings for all measured variables.

4.1. Research Question 1: Is there any significant difference in the writing performance of Indonesian EFL learners between the practice of POF and TOF?

Table 3: Independent t-test of pre-test in writing performance

Variable	Groups	N	M	SD	t	df	Sig.
Writing Performance in Pretest	Experimental	15	57.80	15.428	.084	38	.933
	Control	25	58.28	18.449			

Table 3 shows the mean scores in the pre-test from the experimental and control groups. The results showed a slight difference in base points between the control and experimental groups in their mean score. Going deeper, the results depict the experimental (n=15) mean score (M= 57.80; SD=15.428) and the control group (n=25) (M=58.28; SD= 18.449). The further analysis in terms of whether this slightly different led to a significant difference or not yielded a result that there is no significant difference between their mean scores in pretest at writing performance t(.084) = 38, p= .933. This indicates that, at the initial stage, to be exact, before the treatment, both control and experimental groups showed no significant difference. They can be assumed to have comparable writing skills.

Table 4: Independent t-test of post-test in writing performance

Variable	Groups	N	M	SD	t	df	Sig.
Writing Performance in posttest (Argumentative Essay Score)	Experimental	15	61.87	15.743	2.759	38	.009
	Control	25	72.44	8.574			

Table 4 depicts the results of post-test mean scores from the experimental and control groups. The results revealed that there is a statistically significant difference in writing performance mean scores between the experimental group (M = 61.87, SD = 15.74) and the control group (M = 72.44, SD = 8.57), t(38) = 2.76, *p*= .009. In relation to writing performance, the results showed a statistically significant difference in argumentative essay scores between the control and experimental groups. This suggests that teacher-provided online feedback, as applied in the control group, was more effective than peer-provided online feedback in the experimental group, which leads to improved student performance. Recalling the hypotheses, this result rejects the null hypothesis (H_{01}) stated that there is no significant difference in the writing scores between the two groups, however the alternative hypothesis (H_{11}) hypothesized that a significant difference exists, even though control group outperformed the experimental group, is accepted.

4.2. Research Question 2: Is there any significant difference in motivation, self-efficacy, and writing anxiety among Indonesian EFL learners between the practice of POF and TOF?

In this section, the presentation of the results shows the pre-test results, followed by the post-test results for all variables. Table 5 reveals the pre-test results of each group. It is necessary to note that self-efficacy writing was conducted using the Mann-Whitney U test for all calculations comparing mean scores.

Table 5: Pre-test results of motivation, self-efficacy, and anxiety on experimental and control groups

Variables	Groups	N	M	SD	t	df	Sig.
Writing Motivation	Experimental	15	104.2	11.92	.570	38	.572
	Control	25	102.0	12.20			
Self-Efficacy in Writing	Experimental	15	20.58	-	-	-	.955
	Control	25	20.37	-			
Writing Anxiety	Experimental	15	116.4	17.16	-1.07	38	.292
	Control	25	122.0	13.13			

Table 5 depicts the mean score in experimental group on the writing motivation, self-efficacy in writing, and writing anxiety was 104.2, 20.58, and 116.4. The control group, on the other hand, with the same variables, yielded mean scores of 102.0, 20.37, and 122.0, respectively.

Even though the experimental group seems to outperform the control group based on their mean score, the statistics show that there is no significant difference between the means. It shows that the writing motivation t (38) =.570, p= .572, self-efficacy in writing p= .955>.05, and anxiety in writing t (38) =-1.07, p= .292. The results point to the established hypothesis, in which the researchers are unable to accept the alternative hypothesis. The null hypothesis is accepted as the final decision in the pre-test. Additionally, these results also emphasized that the experimental and control groups were homogeneous in motivation, self-efficacy, and anxiety in writing.

The investigation moved to calculate whether the mean score in pre-and post-test in control group differed by their mean score. Using the same strategy as in the experimental group, the control group yielded some results as follows:

Table 6: Post-test results of motivation, self-efficacy, and anxiety on experimental and control groups

Variables	Tests	N	M	SD	t	df	Sig.	d
Writing Motivation	Experimental	15	107.2	14.2	-0.799	38	0.468	-2.867
	Control	25	104.8	7.82				
Self-Efficacy in Writing	Experimental	25	23.3	2.73	-	38	0.95	-
	Control	15	15.83	1.71		38		
Writing Anxiety	Experimental	25	114.1	16.11	-0.746	38	0.174	5.867
	Control	15	116.13	14.05				

Table 6 shows the results of motivation, self-efficacy, and anxiety in writing. An independent t-test showed no statistically significant difference in writing motivation between the experimental (M = 107.2, SD = 14.2) and control (M = 104.8, SD = 7.82) groups, t(38) = -0.799, *p*= .468, which indicated that the intervention did not significantly affect students' writing motivation, as seen from their mean scores. Moving on to the Wilcoxon test for self-efficacy in writing, it showed no statistically significant difference in self-efficacy in writing between the experimental (M = 23.3) and control (M = 15.83) groups, *p*= .95.

This result demonstrated that the intervention did not have a measurable effect on students' self-efficacy in writing. Last, an independent t-test showed no statistically significant difference in writing anxiety between the experimental (M = 114.1, SD = 16.11) and control (M = 116.13, SD = 14.05) groups, t(38) = -0.746, *p*= .174, which leads to a conclusion that the intervention did not significantly affect students' writing anxiety. All in all, none of the three variables (writing motivation, self-efficacy in writing, writing anxiety) showed a statistically significant difference between the experimental and control groups (all $p > .05$).

After calculating the results in both the pre- and post-tests, the researchers moved to calculate the mean score in each group. In this sense, a paired-sample t-test and Wilcoxon test were utilized to find out whether the pre-and post-test scores in the same group showed a significant difference.

Table 7: Results of paired sample t-test in control group pre-and post-test scores

Variables	Tests	N	M	SD	t	df	Sig.	d
Writing Motivation	Pre-test		116.48	17.16	-.799		.432	-3.040
	Post-test		114.12	16.11				
Self-Efficacy in Writing	Pre-test		-	-	-		.067	-
	Post-test	25	-	-		24		
Writing Anxiety	Pre-test		104.2	11.92	.437		.666	2.360
	Post-test		107.2	14.20				

Table 7 shows the results of paired sample t-test from pre-and post-test score in control group. The results depict that no variables are in the significant difference in terms of their means. It shows that the writing motivation pre-test (M= 116.48; SD= 17.16) and post-test (M= 114.12; SD= 16.11) t (24)= -.799, p= .432, d= -.3.04, self-efficacy p>.05 = .067, and writing anxiety pre-test (M= 104.2; SD= 11.92) and post-test (M=107.2; SD= 14.20), t(24)= .437, p=.666, d= 2.36. These results of the analyses emphasized that the null hypothesis cannot be rejected. Also, no significant difference was found in the pretest and posttest results in the control group, as seen from the mean scores.

The investigation moved to calculate whether the mean score in pre-and post-test in experimental group differed by their mean score. Using the same strategy as in the control group, the experimental group yielded some results as follows:

Table 8: Results of paired sample t-test from experimental group in the pre-and post-test mean score

Variables	Tests	N	M	SD	t	df	Sig.	d
Writing Motivation	Pre-test		102.0	12.20	-.799		.468	-2.867
	Post-test		104.8	7.82				
Self-Efficacy in Writing	Pre-test		-	-	-		.950	-
	Post-test	15	-	-		14		
Writing Anxiety	Pre-test		122.00	13.13	-.746		.174	5.867
	Post-test		116.13	14.05				

Recalling the previous results in the control group, there is no significant difference found in the provided variables. In the experimental group, particularly the mean scores in pre- and post-tests, the results resulted in the acceptance of the null hypothesis. The writing motivation pre-test (M= 102.0; SD= 12.20), as for post-test (M=104.8; SD= 7.82), t (14) =-.799, p= .468, d= -2.867. Self-efficacy in writing also shows the same result with no significant difference between mean score in the pre- and post-tests (p> 0.05 = .950).

5. Discussion

This study examines the effects of TOF and POF on EFL students' writing as well as their motivation, self-efficacy, and anxiety in writing. Based on Table 4, the teachers' feedback class and the control class, yielded a higher and statistically significant in the writing performance seeing from their post-test score. This is in line with Khanlarzadeh & Nemati (2016), who found that the teachers' follow-up engagement with students in feedback sessions played a significant role in enhancing learners' future writing outcomes. In addition, Fidan & Carkit (2026) also highlighted that teacher feedback enhances learners' writing

performance by supporting their cognitive development. In this current study, direct discussions with the teacher would allow participants to clarify uncertainties and misunderstandings regarding feedback so they could revise their writing more appropriately.

Furthermore, the quality of the feedback from the teacher can be another reason of the significant improvement in writing performance. Tian & Zhou (2020) found that students preferred lecturer feedback because it was perceived as more authoritative, expert, and reliable. Also, Wu & Schunn (2023) showed that feedback quality was more influenced by the assessor's expertise in specific aspects than by their overall writing ability. In a similar context, Allen & Mills (2016) also discovered that proficiency level did not influence the amount of feedback, but rather its quality. Therefore, teacher feedback usually appears to be more effective in enhancing writing quality because it is supported by stronger disciplinary knowledge and assessment skills.

Even though Teacher feedback is considered to have higher quality, peer feedback can also be comprehensive and meaningful when the givers were given a series of training and exposure to giving feedback rather than receiving feedback. Zong et al. (2021) examined seven measures representing three types of feedback experiences: the quality of received feedback, the quantity of received feedback, and the quantity of provided feedback. They findings showed that the quality of received feedback and the quantity of provided feedback consistently predicted improvements in feedback quality, whereas the quantity of received feedback did not. In addition, previous studies (e.g., Ion et al., 2019; Li & Grion, 2019; Martin & Sippel, 2024) have shown that providing feedback is more consistently associated with learning outcomes than receiving peer feedback. Therefore, although the teacher feedback in this study resulted in better writing performance and the participants had taken several writing courses, their experience in providing feedback appeared to be limited.

In addition, the different performance between the experimental and control groups in this study can also be understood by considering the intensity of the training and students' experiences in playing a role as feedback givers, not merely based on the source of the feedback itself. In accordance with this argument, Cui et al. (2021) also found that trained peer feedback and teacher feedback yielded an increase, that is, a relatively similar increase, in students' writing competency when students had been trained in giving feedback in a systematic way over a period of one semester before finally implementing the peer feedback in the following semester. This distinction is important because, despite having participated in several writing courses, the participants in this study had relatively limited experience in providing feedback to their peers. Lee & Evans (2019), in this regard, emphasize that the benefit of peer feedback is not from the process of receiving the feedback; instead, it may come from the experience of mastery, self-regulation, social comparison, and lack of understanding. For that reason, the positive side of TOF in writing performance in this current investigation does not necessarily mean that teacher feedback is inherently more effective than peer feedback. It may reflect the difference in students' readiness to play the role of evaluative feedback givers, which is needed in POF. When students do not have sufficient experience to identify problems, evaluate their peers' writing quality, and produce trusted recommendations, the positive potential of POF cannot be optimally executed. Conversely, repeated and structured training may be able to facilitate the activity of giving feedback, which later becomes the learning process. Ultimately, the difference between TOF and POF may depend on who gives the feedback and how prepared students are to do such tasks.

Furthermore, the affective domain variables, writing motivation, writing anxiety, and self-efficacy in writing, did not differ significantly between the experimental and control groups, nor did they change within groups over the intervention period. These findings suggest that while peer online feedback may bolster students' confidence in their writing abilities, it remains insufficient to catalyze meaningful shifts in their motivation or writing-related anxiety. Such outcomes imply that these affective constructs are deeply rooted in stable individual traits and broader contextual factors that necessitate more sustained, multifaceted pedagogical support (Lee, 2022). Indeed, the influence of social dynamics within peer-review dyads may introduce variability that mitigates the potential for standardized affective gains (Ravand et al., 2025). One explanation is that these affective constructs are relatively stable, shaped by factors extending beyond classroom feedback such as prior experiences, personality traits, perceived language proficiency, and the broader learning environment. Given that these emotional responses are often rooted in deep-seated challenges such as low competence beliefs or a lack of writing enjoyment, a singular focus on peer-mediated interaction may be insufficient to disrupt entrenched negative associations with the writing process.

Furthermore, although previous studies have indicated that anonymous peer interaction can help reduce anxiety (Chen et al., 2023) and enhance motivation, such benefits may not occur automatically through the introduction of peer feedback. Peungcharoenkun & Waluyo (2024) suggested that peer feedback needs to be systematically integrated into a coherent instructional framework that addresses the complex and multidimensional nature of learner engagement. From this perspective, the absence of significant changes in motivation and writing anxiety in this current study may be partly attributed to the limited duration of the intervention. A short-term exposure to peer feedback may not provide sufficient opportunities for students to develop sustained engagement with the feedback process, which could limit its potential to reshape their motivational orientations or alleviate writing-related anxiety. Turning to writing self-efficacy, the findings revealed no significant difference between the teacher-feedback group and the peer-feedback group. This result challenges the assumption that the source of feedback alone can produce different effects on students' writing self-efficacy. In contrast, Ruegg (2018) found that students who received teacher feedback experienced a significantly greater increase in writing self-efficacy than those who received peer feedback.

The non-existence of a significant difference in motivation, anxiety, and self-efficacy also demonstrated that the three constructs do not necessarily respond to POF and TOF through the same mechanism. In one experiment conducted by Weng et al. (2023), the findings also showed that peer feedback helps students develop their attitudes towards writing lessons and self-confidence in writing as compared to teacher feedback, but only to a limited extent for anxiety in writing. The pattern also proves that an increasing level of motivational responses or beliefs in students' writing skills does not need to remove the existence of anxiety in writing. Given this, the absence of change in the three constructs simultaneously in this study should not be considered a contradictory finding. Another study conducted by Campbell & Batista (2023) compared peer editing with a control condition in an online EFL academic writing course and found that both groups experienced increased self-efficacy, with no significant advantage observed for the peer editing group. In this current study, the qualitative data also demonstrated that two concurrent processes occurred: peer interaction

fostered learning and social connectedness, yet students simultaneously questioned the accuracy of some peer feedback. Thus, the social and motivational benefits of peer feedback can coexist with uncertainty regarding feedback credibility, potentially limiting changes in self-efficacy or anxiety. Additionally, Tsao et al. (2017) showed that how students assess feedback from peers and teachers is related to intrinsic motivation and different types of writing anxiety. The results indicate that motivation and anxiety are not only results of the feedback experience but also personal traits that affect how feedback is viewed and used, even if their survey methodology restricted drawing causal inferences. According to this viewpoint, the lack of affective changes in the current study might be due to the interaction between the participants' initial traits, the reliability of the feedback source, their experience giving feedback, and the length of the intervention; as a result, merely switching the feedback source from teacher to peer might not be enough to result in consistent changes across these three affective aspects.

In conclusion, the affective findings suggest that improvements in writing performance do not necessarily translate into immediate changes in students' writing motivation, anxiety, or self-efficacy. This apparent disconnect indicates that affective development may require more sustained and deliberate instructional support than performance improvement alone. One possible explanation is that the constructive processes involved in peer feedback, particularly explaining feedback, evaluating suggestions, and implementing revisions, may not be sufficient to generate broader affective changes without appropriate scaffolding. As suggested by Waluyo & Panmei (2024), peer feedback studies should therefore examine how these processes can be more deliberately structured and supported to foster not only improvements in writing performance but also meaningful changes in students' affective experiences.

6. Conclusion

This study captured the two different situations in feedback provision for EFL learners: peer and teacher online feedback. Through a series of interventions, the results showed that the writing performance score in which the participants experienced teachers' feedback outperformed the peer feedback. As for the affective domains, motivation, anxiety, and self-efficacy, all of them showed no significant difference when comparing the results of their mean scores.

Further, several implications can be drawn from the obtained results in the realm of feedback, especially peers' and teachers' feedback. First, the use of online media can be suggested to address learners' hesitation and shyness in giving feedback to their peers. When the teacher intends to encourage learners to express useful and corrective feedback, an online medium with an anonymous feature can be applied. Thus, the feeling of uneasy which typically revolves around the learners after giving feedback can be anticipated. Second, since peers' online feedback has been found to have a positive effect on learners' self- efficacy, teachers are expected to incorporate their confidence with firm foundational aspects in writing. By doing so, learners are not merely eager and confident to give feedback, but they are also able to give useful constructive feedback. Last, despite the motivation and anxiety of the learners were found no significant difference, teachers should not overlook these affective factors in the implementation of peer feedback activities. Motivation and anxiety may be influenced by various internal and external factors beyond the feedback medium itself. Therefore, teachers

are encouraged to create a supportive learning environment, provide clear feedback guidelines, and offer sufficient training on how to deliver constructive comments. Such practices may help learners engage more actively in peer feedback while minimizing potential anxiety and maintaining their motivation throughout the writing process.

Finally, to address some limitations in this current study, such as the number of participants, the length of the intervention, and the limited affective domain involved. Future researchers are expected to expand to a greater scale of participants to possibly find variation and new results in greater number of participants. Since this current study conducted minimal intervention within six meetings, a prolonged intervention done by future researchers may yield different results to add to the discussion in this field. Lastly, while motivation, anxiety, and self-efficacy play a crucial role in writing, some other factors seem overlooked. In this sense, future researchers may add other affective domains such as mindset, emotions, and the like to predict the influence of other affective domains that are not included in this current study.

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