

# An Anova Repeated Measures Analysis on Measuring the Effect of Direct Written Corrective Feedback in L2 Writing Class

Mutiarani Pionera<sup>1</sup>

Universitas Muhammadiyah Palangkaraya  
[mutiaranipionera@gmail.com](mailto:mutiaranipionera@gmail.com)

Tazkiyatunnafs Elhawwa<sup>2</sup>

Universitas Muhammadiyah Palangkaraya

<sup>1</sup>Corresponding author: Email: [mutiaranipionera@gmail.com](mailto:mutiaranipionera@gmail.com)

## Abstract

The study is aimed at measuring the difference of the learners' progress on writing scores: before, during, and after the implementation of Teacher Direct Written Corrective Feedback (WCF) in L2 writing. The study was conducted at the seventh semester students of Universitas Muhammadiyah Palangkaraya of 2021/2022 academic years. The study is quasi-experimental research using repeated measure design. The findings revealed that: (1) Based on the output of a one-way repeated measure ANOVA, there was effect for time, Wilk's Lambda= 0.056, F= 1.94,  $p < 0.005$ , multivariate eta squared= 0.94. it was interpreted that there was significant difference on EFL learners' writing progress: before (mean=57.04), during (mean=63.56), and after (mean= 72.88) the treatment. It meant that teacher direct WCF gave significant effects to EFL learners' writing ability in writing academic essay for both during and after the treatment. In addition, the analysis result of both teaching and learning process and the subjects' learning result inferred that EFL learners' writing ability improved after the Teacher Direct WCF implementation.

## Keywords

A one-way ANOVA repeated measures, teacher direct written corrective feedback, L2 essay writing

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## Introduction

For many years, offering Written Corrective Feedback (WCF) to EFL learners has been a source of contention. Researchers have examined the effects of WCF on L2 writers with varying results over the years; Truscott (1999), for example, believed that providing feedback on errors was not a good approach for teaching L2 writing. Other scholars, however, such as Li (2010), Russell & Spada (2006), and Saito & Lyster (2012), argue that WCF plays a crucial role in L2 writing. Corrective feedback has been observed from several perspectives over many years. Errors were viewed as indications of non-learning in the 1950s and 1960s behaviorist approach and were to be addressed at any costs. According to Bitchener and Ferris (2012), errors were perceived significantly more harshly than today's education. The communicative approach thus dominated L2 learning in the early 1970s. Until the end of the 1980s, Truscott (1996) advocated for no mistake correction at all. Truscott (1999) provided compelling evidence that feedback on error does not function. Bitchener and Ferris (2012) also offered questions about the reasons for rectifying errors. According to the other researchers, WCF has an impact on helping language learners increase their accuracy in the usage of linguistic features (Bitchener, 2008; Bitchener & Knoch, 2008, 2010a, 2010b; Sheen, 2007; Van Beuningen, et al., 2012). Written Corrective Feedback plays an important function in the L2 learning process (Goo & Mackey, 2011; Russell & Spada, 2006; Saito & Lyster, 2012). As a result, Elhawwa et al. (2019a, and 2019b) discovered that teacher direct feedback had a significant effect on learners' writing ability both during and after treatment, because the teachers determined the errors to be corrected, how to correct them, and involved the learners so that they could be a part of the learning process, gender, and different types of feedback all played a role in increasing learners' writing accuracy. Furthermore, CF enables teachers to describe the accuracy of their students' production by improving awareness of grammatical faults in writing. Giving corrective feedback to learners is an important aspect of the learning process in the context of L2 writing. Corrective feedback provided by teachers can benefit students by eliminating grammatical errors, enhancing writing skills, and making composition writing easier. Teachers play an important role in delivering feedback to students. In this situation, teachers assist L2 learners in improving their skills in order to meet the learning objectives. Feedback benefits learners, according to Ferris (2003). In this case, feedback plays an important and positive function in language development, and learners profit from feedback on their linguistic faults and believe it is powerful. Feedback serves as input supplied by language instructors on learners' writing performance during the teaching process. The goal is to improve writing skills through language growth. The researcher explores the effect of four types of corrective feedback on learners' writing performance in the current study, namely: focus direct feedback (FDF), unfocus direct feedback (UDF), focus indirect feedback (FIF), and unfocus indirect feedback (UIF). Direct Corrective Feedback (DCF) is a model of teacher feedback with proper language form Ferris (2002). It is typically supplied by teachers in response to linguistic faults by providing the correct form (Bitchener et al., 2005). Some methods of providing direct feedback include noting the incorrect words or phrases and placing the correct form. Many models support direct corrective feedback by, for example, striking out the incorrect word, phrase, or morpheme and replacing it with the proper one (Ellis, 2008; Ferris, 2006). Direct Corrective Feedback informs learners on the proper form (Ellis, 2008). For example, the L2 student might write: I buy two apples. I buy two apples, the teacher revised. In his scenario, the teacher demonstrates the error and provides the proper response. According to Ellis (2008), immediate feedback increases student interaction in writing classes. It enhances language control because it prevents the learner from making incorrect corrections. The teacher provided direct feedback by completing correct forms. According to Ferris (2003), it is a type of feedback offered to L2 learners by language instructors who use the correct one. Other sorts of feedback include: Indirect Corrective Feedback (ICF) did not allow the teacher to offer students with right linguistic forms, but just to identify faults. Indirect corrective feedback indicates that there was a linguistic error, but the teacher did not provide the proper form directly (Ferris, 2003). Indirect corrective feedback is used to demonstrate the existence of a linguistic error that was not amended, allowing the learner to fix it (Bitchener, 2008). Indirect feedback happens when language instructors present indicators and make pupils aware of an issue, but do not provide the correct solution. In this scenario, language instructors provide hints regarding the location of the error by using an underlining, a circle, and a code, and then urge L2 learners to revise it. In general, several approaches of providing indirect feedback may include: emphasizing errors, categorizing error categories, and recording the number of errors (Bitchener, & Knoch, 2008). The current study employs both feedback mechanisms. The researcher, on the

other hand, includes the inquiry with focus and unfocus of direct and indirect corrective feedback. Focus corrective feedback is a type of feedback in which teachers devote extensive attention to a single problem or error category. Focused feedback comprises delivering input on a small number of forms that have been pre-selected. According to Ferris (2010), providing targeted comments may not be enough to enhance writing correctness. In the current study, direct focused corrective feedback focuses on subject-verb agreement for the first writing product, missing words for the second writing product, and punctuation for the third writing product. Unfocus feedback, on the other hand, is the model of feedback in which teachers provide any linguistic faults made by students (Ellis et al., 2008; Ellis, 2009). Giving unfocused feedback entails providing input on all faults. Feedback was offered on all language forms here. Several research have been conducted to study the four categories of feedback. For example, Bitchener (2010) and Young and Cameron (2005) found an advantage for indirect feedback, although Chandler (2003) found evidence for both direct and indirect feedback. Ferris and Roberts (2001) evaluated the relative efficiency of various types of indirect feedback and discovered no difference between them. Numerous research have been conducted to explore the impact of various types of direct written CF on students' accuracy growth. Bitchener et al. (2005) compared the effect of several direct feedback combinations on advanced level pupils. They discovered that students who received direct CF and oral elaborations performed better than the second and third groups in terms of the definite article and simple past tense, but not in terms of prepositions. In contrast to the previous studies, the researcher investigates the learners' development in L2 essay writing class before, during, and after the adoption of Teacher Direct Written Corrective Feedback in L2 writing class. Furthermore, the statistical technique used in this study is one-way ANOVA repeated measures analysis. There are several reasons why the study concentrating on learners' improvement in L2 writing using WCF was conducted. First, this study will provide actual data on writing instruction, as most students still commit grammatical errors when writing an essay. They have difficulty utilizing grammar correctly. As a result, WCF plays a crucial role in decreasing their linguistic faults. Second, the study will propose a viable WCF model based on the faults they committed. Third, WCF is still a point of contention among experts. Some researchers concluded that WCF was not beneficial; others maintained that it was useful and that it helped learners enhance their language skills in a variety of ways. This inspires the researchers to perform a study that investigates the learners' development in L2 writing using WCF. This study will support the theory that WCF is beneficial in EFL writing class while rejecting the theory that WCF is detrimental to EFL learners in EFL writing class. Fourth, preliminary research done on September 17, 2021, discovered that students had difficulty composing essays. For example, they continued to make grammatical errors such as subject-verb agreements, fragments, run-on sentences, misspelling, and punctuation; and they struggled with structuring ideas and producing coherence and unity. According to the questionnaire results, the majority of students required written corrective criticism to improve their writing skills. The disadvantage of this study was that it only used direct written corrective feedback in one class, and the source of input was the teacher. The current study looked at how learners' development on writing scores differed before, during, and after the deployment of Teacher Direct Written Corrective Feedback (WCF) in L2 writing.

## Method

The design of this research is quasi-experimental research using repeated measure design. In the current research, the participants are the seventh semester EFL students of Universitas Muhammadiyah Palangka Raya of 2021/ 2022 academic years. The subjects of the study were 30 students (male and female) at the end of the study, the amount of participants became 25 students because of the condition in students' village (signals, electricity, and others) that can be influenced the data. There are two instruments developed in the study, namely, writing tests and observation to collect the data. The writing score is the main source of data collection. In the present study, the one-way ANOVA repeated measures analysis is considered to be the novelty of the study since the previous studies on the WCF did not use the design. Here, the type and source of feedback used in the study was teacher direct WCF in L2 writing class.

## Procedures

To answer the research question, the data were collected from tests and observations. In the first step, the researcher taught the participants about academic essay. This covered: introduction to

academic writing, thesis statement, body paragraphs, and concluding paragraph. Then, before the teacher direct WCF being implemented in L2 writing class, the participants were given Test 1. The aim was to know the learners' writing ability before the treatment given. They were assigned to write an academic essay as proposed by Smalley (2008). Afterward, all participants were given treatment. Here, the teacher practiced Teacher Direct WCF in L2 writing class. First, the lecturer observed the learners' writing product by scanning the introduction, looking for the thesis statement. Then, she checked the body for the topic sentences to see that the thesis statement and the topic sentences of each paragraph were closely related. Then, the teacher read the composition line by line. This was done to check the language form including errors the learners made. Then, she gave comments on students' essay at whole. Afterwards, she classified and calculated the errors. Next, she practiced direct WCF by directly correcting the learners' errors and giving comment and advice to the learners' error in order to improve their writing. The teacher provided the learners with the correct form. In this case, she classified the errors as those classified by Bitchener (2010) covering language forms, contents and organization. During the implementation of teacher direct WCF, the participants were given Test 2. The aim was to know the learners' progress during the treatment. They were assigned to write an academic essay about 450- 500 words. Finally, after the implementations of the teacher direct WCF, the participants were given Test 3. The aim was to know the learners' progress after the treatment. Before analyzing the data, the assumption test for ANOVA Repeated Measures was conducted, such as testing the normality (Sig.0.348, 0.299, 0.056> p. 0.050, and testing sphericity (Sig. 0.132> p.0.050. To analyze the data on the students' progress of writing scores: before, during, and after the implementation of Teacher Direct Written Corrective Feedback in L2 writing class, a one-way ANOVA Repeated Measures was employed. It was a statistical computation used to test significant difference or compare three or more group means where the participants were the same in each group. The repeated measured design was appropriate since the study explored the learners' progress in L2 writing: before, during and after the treatment. The students' writing products were scored using the primary trait scoring method as developed by O'malley & Pierce (1996, p. 43) and scoring standard of Universitas Muhammadiyah Palangka Raya. It was done to produce the right criteria to score the idea development aspects of students' essay writing. The scores of the three groups were investigated using a one way ANOVA repeated measured and the outcomes were compared to see the significance effect on the learners' progress of using WCF in L2 writing class. Finally, the interpretation of the result was made to see whether there was a significant difference on writing score among: before, during, and after the WCF implementation or not. Meanwhile, the researcher also observed the learners' writing product in order to know the learners' progress individually and more detail the progress of each learner.

## Findings

This section dealt with research finding from the statistical calculation analysis and observation on the learners' writing product.

### Result From Statistical Calculation

In order to see the students' progress of writing scores: before, during, and after the implementation of WCF in L2 writing class, the result of the three test scores were compared. In the study, the subjects' writing ability was measured three times: before, during, and after the implementation of WCF. The comparison was described in Table 1.

**Table 1.**

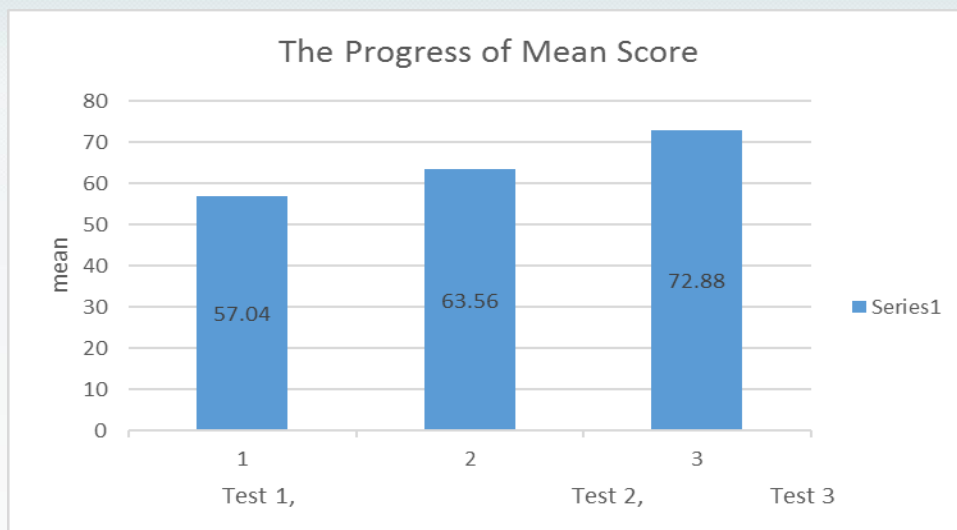
The Comparison of the Students' Scores: before, during, after the Implementation of Written Corrective Feedback.

No	Subjects	Test 1	Test 2	Test 3	Improvement from test 1 to test 3
1	AP	54	61	72	+18
2	ARD	62	64	75	+13
3	AF	61	65	74	+13
4	ANZ	61	66	72	+11
5	APD	55	65	75	+20
6	AIM	71	73	77	+6
7	BHA	51	56	65	+14
8	DBM	40	50	62	+22
9	EP	55	55	65	+10
10	FB	51	51	65	+14
11	HR	57	67	76	+19
12	IM	50	61	73	+23
13	IAB	62	66	75	+13
14	JA	56	66	74	+18
15	JW	53	63	75	+22
16	MH	65	65	79	+14
17	MAR	71	75	85	+14
18	MA	58	68	74	+22
19	MDP	47	56	60	+13
20	MGY	59	67	72	+21
21	MR	61	70	80	+19
22	OA	54	61	75	+21
23	RM	61	71	77	+16
24	RS	40	51	60	+20
25	SD	71	76	85	+14
	Lowest score	40.00	50.00	60.00	
	Highest score	71.00	76.00	85.00	
	Means	57.08	63.56	72.88	
	Standard deviation	8.19	7.20	6.74	

**Source:** own research

Based on the data above, it was said the mean score the students' writing product before using WCF as follows: the highest score was 71; the lowest score was 40; and the average score was 57.04. It meant that the class was on average category between 50- < 60. Then, the mean score the students' writing product during the implementation of WCF was as follows: the highest score was 76; the lowest score was 50; and the average score was 63.56. It meant that the class was on fair category between 60- < 70. Finally, the mean score the students' writing product after the implementation of WCF was as follows: the highest score was 85; the lowest score was 60; and the average score was 72.88. It meant that the class was on fair category between 70- < 80. The standard deviation was 6.74. Based on the data above, it was found that there was a lot of progress on the students' writing score in writing academic essay after WCF was implemented. This could be seen from the progress of the average score of each test. In the first test, before the implementation of WCF, the average score of the students' writing achievement was 57.08 in a 10.00 to 100.00 scales. Then, in the second test, during the implementation of WCF, the average score of the class increased slightly to 63.56 in a 10.00 to 100.00 scales. This was a slight increase of progress. Moreover, in the third test, after the implementation of WCF, the average score of the class increased dramatically to 72.88 in a 10.00 to 100.00 scales. Comparing with the first test score, this was a sharp increase of progress, as described in figure 1.

**Figure 1.** The Progress of Mean Score



Based on the progress of the average score of academic essay class, it could be stated that the students' writing ability in writing academic essay using WCF gradually progressed. Comparing among the three scores of Test 1, Test 2, and Test 3, the learners' writing ability in L2 writing had a lot of progress in academic writing, as described in Table 2.

**Table 2.**  
The Learners' Progress in L2 Writing

Category	Score scale	Test 1		Test 2		Test 3	
		Number	%	Number	%	Number	%
Fail	0- < 50	3	12%	0	0%	0	0%
Poor	50- < 60	12	48%	5	24%	0	0%
Average	60- < 70	7	28%	14	56%	6	24%
Fair	70- < 80	3	12%	5	20%	16	64%
excellent	80- < 100	0	0%	0	0%	3	12%
Total	1.00	25	100%	25	100%	25	100%

Based on the table above, it was seen that in test 1, the participants who got fail category (0- < 50) was 3 out of 25 students or 12%; poor category (50- < 60) was 12 students or 48%; average score (60- < 70) was 7 students or 28%; fair score (70-79) was 3 students or 12%; and there was no participants obtaining excellent score. The average score was in poor category (57.04). Then, in Test 2, the participants who got poor category (50- < 60) was 6 out of 25 students or 24%; average score (60- < 70) was 14 students or 56%; fair score (70-79) was 5 students or 20%; and there was no participants obtaining excellent score. The average score was in average category (63.56). Finally, in Test 3, the participants who got average score (60- < 70) was 6 out of 25 students or 24%; fair score (70- < 80) was 16 students or 64%; excellent score (80- 100) was 3 students or 12%; and there was no participants obtaining fail and poor scores. The average score was in fair category (72.88).

### Testing Hypothesis using One Way ANOVA Repeated Measures

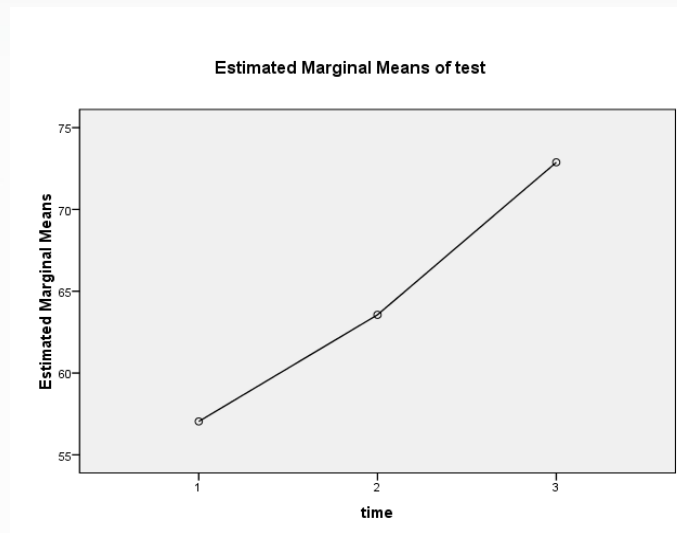
To begin with, the researcher formulated the null hypothesis to be rejected. It was formulated that there was no significant difference on the students' writing progress: before, during, and after the implementation of WCF in L2 writing class. Using One way repeated Measures ANOVA, the researcher analyzed the data, as described in Table 3:

**Table 3.**  
Descriptive Statistics

	Mean	Std. Deviation	N
Test 1	57.0400	8.19797	25
Test 2	63.5600	7.20578	25
Test 3	72.8800	6.74117	25

Based on descriptive statistics above, it was shown that in Test 1, before the implementation of WCF, the average score of the students' writing achievement was 57.08 in a 10.00 to 100.00 scales. Then, in Test 2, during the implementation of WCF, the average score of the class increased slightly to 63.56 in a 10.00 to 100.00 scales. This was a slight increase of progress. Moreover, in Test 3, after the implementation of WCF, the average score of the class increased dramatically to 72.88 in a 10.00 to 100.00 scales. Comparing with the first test score, this was a sharp increase of progress. The estimated margin of test was as described in Figure 2.

**Figure 2.** The estimated margin of test



The next step was to see the result of Multivariate Tests as shown in Table 4.

**Table 4.**  
Multivariate Tests<sup>a</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
time	Pillai's Trace	.944	1.948E2 <sub>a</sub>	2.000	23.000	.000	.944
	Wilks' Lambda	.056	1.948E2 <sub>a</sub>	2.000	23.000	.000	.944
	Hotelling's Trace	16.941	1.948E2 <sub>a</sub>	2.000	23.000	.000	.944
	Roy's Largest Root	16.941	1.948E2 <sub>a</sub>	2.000	23.000	.000	.944

a. Exact statistic

b. Design: Intercept Within Subjects Design: time

Based on the multivariate test, it was shown that the sig. Value of Wilks' Lambda was 0.000. It was

less than 0.05. Therefore the researcher concluded that there was a statistically significant difference for time. This suggested that there was a change in confidence scores across the three different time periods: before, during, and after the implementation of WCF in L2 writing class.

**Table 5.**  
Tests of Within-Subjects Effects

Measure: test		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Source							
time	Sphericity Assumed	3168.987	2	1584.493	235.457	.000	.907
	Greenhouse-Geisser	3168.987	1.722	1840.220	235.457	.000	.907
	Huynh-Feldt	3168.987	1.843	1719.744	235.457	.000	.907
	Lower-bound	3168.987	1.000	3168.987	235.457	.000	.907
Error (time)	Sphericity Assumed	323.013	48	6.729			
	Greenhouse-Geisser	323.013	41.330	7.816			
	Huynh-Feldt	323.013	44.225	7.304			
	Lower-bound	323.013	24.000	13.459			

Then, the further step was to examine The Tests of Within-Subjects Effects table. It explained if there was an overall significant difference between the means at the different time points. From this table, it was able to discover the F value for the "time" factor, its associated significance level and effect size ("**Partial Eta Squared**"). It was said that when using an ANOVA with repeated measures with a Greenhouse-Geisser correction, the mean scores for CRP concentration were significantly different ( $F(1.722, 41.330) = 235.457, p < 0.0005$ ). The results presented that there was an overall significant difference in means of test 1, test 2, and test 3.

**Table 6.**  
Tests of Between-Subjects Effects

Measure: test Transformed Variable: Average						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	311954.253	1	311954.253	2.064E3	.000	.989
Error	3626.747	24	151.114			

Based on the Tests of Between-Subjects Effects, it was shown that the value of Eta Squared, given in the multivariate test output box was 0.989. Using the guidelines proposed by Cohen, 1988 (0.01= small, 0.06= moderate, 0.14 large effect), this result suggested a very large effect size. To sum up, A one way repeated measures ANOVA was conducted to compare scores of the students' writing test with three different conditions: Test 1, before the implementation; Test 2, during the implementation; Test 3, after the implementation of WCF in L2 writing. Based on the output, it was said that there was effect for time, Wilk's Lambda= 0.056,  $F = 1.94, p < 0.005$ , multivariate eta squared= 0.94. Based on the above statistical calculation, it was interpreted that there was significant difference on the students' writing progress: before (mean=57.04), during (mean=63.56), and after (mean= 72.88) the implementation of WCF in L2 writing. It meant that WCF gave significant effects to the students' writing ability in writing academic essay for both during and after the WCF implementation.



## Result from Observation

The other way to know whether or not the learners' progress in L2 writing using WCF, the researcher analysed qualitatively the data taken from the observation checklist, field notes, and student's final composition. The analysis was focused on the result of the teaching and learning process and the subjects' learning result in writing academic essay. The analysis in details was elaborated below.

### Result from the Teaching and Learning Process

The results of the teaching and learning process were analyzed using data gathered from the observation checklist and field notes. The analysis focused on the students' progress through each step of process writing and the teacher's classroom activities. The following is the outcome of the observation of the teacher's performance in applying WCF. From the students' perspective, it was discovered that participants made relatively little progress during the teaching and learning process during the third meetings. Prior to WCF installation, 12 of 25 respondents showed little improvement since they could only meet two of the three indications (exploring and picking ideas) for a good prewriting category (exploring, selecting, and organizing ideas). As a result, their accomplishments fell into the low-level group. In comparison to the 12 subjects, only one indicator was achieved: concept exploration. They continued to have difficulty picking and organizing thoughts. Their ability to form a thesis statement, add or delete facts to maintain unity, and rearrange ideas to maintain coherence remained limited. Their inability to establish a thesis statement and to give claims and counterclaims in their essay demonstrated this. Additionally, they continued to use ineffective transitional signals and made some errors in spelling, capitalization, and punctuation. Additionally, some EFL students frequently produced additional grammatical errors, such as incorrect word order, spelling, articles, subject-verb agreement, pronoun agreement, run-on sentences, plural forms, missing words, verb tense, and prepositions. During the WCF implementation, 14 of 25 participants improved significantly on three metrics (subject selection, thesis statement development, and essay writing). They received a score in the middle of the pack in their category. Additionally, five of them received a passing grade in their respective categories. Only six students received a failing grade and struggled to produce concepts. They continued to encounter difficulties when it came to crafting a thesis statement. Additionally, they lacked a firm grasp on how to apply the corrective rules. Their inability to proofread their friends' compositions for spelling, capitalization, and punctuation errors demonstrated this. In general, when compared to their writing ability before to the WCF implementation, participants made marginal gains. All participants' academic essay writing improved after the WCF implementation. No one received a failing or low grade. In terms of academic essay writing, they could do it. There were three great scores and 16 fair scores among the 25 contestants. Writing an introduction, developing a thesis statement and finishing a paragraph were all skills that they were able to learn. Transitional signals and correct punctuation and capitalization were also used to reduce some errors in spelling and capitalization. As a result, some EFL learners were able to correct various grammatical problems, such as word order and spelling as well as subject-verb agreement, pronoun agreement, run-on sentence and plural forms. In addition, they showed a good grasp of the principles for editing. It was demonstrated by their capacity to check the spelling, capitalization, and punctuation of his friends' papers. WCF implementation had a significant impact on participants' writing abilities.

### Result from the Learners' Learning Results

One of the ways to explore the learners' progress was done by analyzing the learners' learning results. The analysis of the learning results was done on the basis of the result of the subjects' final products. Here, the researcher analyzed three of 25 participants. The description of each subject' improvements in writing academic essay were as follows. The first subject was BHA (her initial name). Compared to the ability before the implementation of WCF, she gained little improvement in writing academic essay. It was proved by her ability to write academic essay in which its organization, content and language form was categorized as "poor (scored 51)". The ideas were about a topic selected, somewhat relevant to the outline, not fluent, not clearly stated, limit supported, confused and disconnected, a little bit loosely organized but the main ideas stand

out, lack of development, lack of logical sequencing, and inadequate cohesion. In relation to the organization, the ideas of her essay were unevenly organized; they were weakly connected. In grammar, the errors commonly found were the incorrect use of verb. For instance: We are live in an IT revolution era. Actually, this sentence should be "We live in an IT revolution era". However, after the implementation of WCF, she had a lot of progress in writing academic essay. It was proved by her ability to write academic essay in which its organization, content, and language form was categorized as "average (scored 60)". The ideas were about a topic selected, mostly relevant to the outline, sufficient, rather clearly stated, adequately expressed, a little bit loosely organized but the main ideas stand out, generally developed, in some logical sequencing, enough supported and few sentences break out cohesion. In relation to the organization, the ideas of her essay were evenly organized; they were connected. She could write a strong claim in her thesis statement. The second was DBM (his initial name). Similar with BHA, DBM gained a little improvement. He was not able to write a good academic essay. It was proved by his ability to write academic essay in which its organization, content, and language form was categorized as "poor" (scored 50). In terms of language form, there were some errors in grammar. For example, he wrote: "Currently many potentials leaders will provide free education for the citizens." It should be revised: "Currently many potential leaders will provide free education for the citizens." The other errors commonly found were the incorrect use of verb. For instance: "This is what will creating opportunities crimes". It should be revised: "This is what will create opportunity for crimes. The same case, he wrote: "It can be concluding that free education is just a promise." It should be revised: "It can be concluded that free education is just a promise. However, after the implementation of WCF, he had a lot of progress in writing academic essay. It was proved by his ability to write academic essay in which its organization, content, and language form was categorized as "average (scored 62)". In terms of content, he developed information with some details. In terms of organization, the essay was organized with ideas that were generally connected but has few or no transitions. The ideas were about a topic selected, mostly relevant to the outline, sufficient, rather clearly stated, adequately expressed, a little bit loosely organized but the main ideas stand out, generally developed, in some logical sequencing, enough supported and few sentences break out cohesion. The essay exhibited control over sentence boundaries and sentence structure, but sentences and word choice might be simple and unvaried. The third was EP (his initial name). Similar with BHA and DBM, EP also gained a little improvement during the WCF implementation. He failed to write a good academic essay. It was proved by his ability to write academic essay in which its organization, content, and language form was categorized as "poor" (scored 55). In terms of organization, his essay was unevenly organized. The introduction and conclusion were inadequate and too short for a good academic essay. However, after the implementation of WCF, he had a lot of progress in writing academic essay. It was proved by his ability to write academic essay in which its organization, content, and language form was categorized as "average (scored 65)". In terms of content, he developed information with some details. In terms of organization, the essay was organized with ideas that were generally connected but has few or no transitions. The ideas were organized sequentially; the errors in grammar were few and did not interfere with understanding and errors in spelling were few as well.

## Discussion

Based on the out put, it was said that there was effect for time, Wilk's Lamda= 0.056,  $F= 1.94$ ,  $p < 0005$ , multivariate eta squared= 0.94. Based on the above statistical calculation, it was interpreted that there was significant difference on the students' writing progress: before (mean=57.04), during (mean=63.56), and after (mean= 72.88) the implementation of WCF in L2 writing. It meant that WCF gave significant effects to the students' writing ability in writing academic essay for both during and after the WCF implementation. In addition, based on the result of the analysis of both teaching and learning process and the subjects' learning result, it could be inferred that EFL learners' writing ability improved after the WCF implementation. This finding was consistent with a research conducted by Karim (2013). Karim's findings revealed that both direct and indirect CF might considerably enhance both grammatical and non-grammatical accuracy. This discovery was also supported by other studies. Sheen (2010), for example, discovered that written direct correction was more effective than oral recast in helping learners improve their grammatical accuracy. Some study also suggested that direct CF allows students to rapidly internalize the

precise form offered by their teacher (Chandler, 2003). (Bitchener & Knoch, 2010; Van Beuningen, 2010). Hartshorn and Evans (2012) discovered that direct unfocused WCF can improve accuracy. Furthermore, Elhawwa et al. (2020) proposed that when providing electronic feedback to learners, language teachers consider the students' cultural background. Truscott, on the other hand, argued that CF had no place in L2 courses (2004, 2007, 2009).

## Conclusion

To sum up, A one way repeated measures ANOVA was conducted to compare scores of the students' writing test with three different conditions: Test 1, before the implementation; Test 2, during the implementation; Test 3, after the implementation of WCF in L2 writing. Based on the out put, it was said that there was effect for time, Wilk's Lamda= 0.056, F= 1.94,  $p < 0.005$ , multivariate eta squared= 0.94. Based on the above statistical calculation, it was interpreted that there was significant difference on the students' writing progress: before (mean=57.04), during (mean=63.56), and after (mean= 72.88) the implementation of WCF in L2 writing. It meant that WCF gave significant effects to the students' writing ability in writing academic essay for both during and after the WCF implementation. In addition, based on the result of the analysis of both teaching and learning process and the subjects' learning result, it could be inferred that EFL learners' writing ability improved after the WCF implementation. In the teaching and learning process, all the subjects were able to: (1) explore, select, and order ideas; (2) make an outline for academic essay; (3) write the first draft of an academic essay; (3) check the draft whether it contained a topic sentence or not, add or delete all supporting details for unity, and rearrange ideas for coherence; and (4) practice WCF by proofreading the draft for accuracy and correctness in terms of organization, content, spelling, capitalization, and punctuation; (5) write the second draft of an academic essay to be corrected by the teacher and given comments and suggestions; and (6) revise the draft and rewrite the composition of an academic essay based on the comments and suggestions. In relation to the subjects' final compositions, all the subjects were able to achieve average level (scored 60) for successful writing academic essay. In test 1, there were 15 out of 25 learners achieved poor category. Then, in test 2, there were only 6 out of 25 learners achieved poor category in writing academic essay. Finally, in test 3, none of the participants got poor score. The average score was in fair category (mean score 72.88). They could achieve fair level in terms of language form, content, and organization.

## Pedagogical Implications and Recommendation

The findings of the study proposed some considerations regarding written corrective feedback in L2 writing class that might be beneficial for EFL writing teachers. To begin with, EFL learners should be made aware of the importance of receiving written corrective feedback. Therefore, EFL writing teachers should explain the EFL learners about the whole procedure and set the goals together with the learners. EFL writing teachers should plan well and do carefully to implement WCF, since the students would get the advantages of WCF, if it was well planned. Moreover, teachers should determine, which errors they wanted to correct, how they wanted to correct them and when they were planning to make the correction and involved the learners so that they could be a part of the process. Furthermore, the teachers' feedback should be clear that when learners understand to the teachers' want. Finally, EFL teachers should monitor the learners during the process of correction in order to observe their language development in L2 writing class. As this research was conducted with only 25 EFL writing learners, it was not very likely to generalize about the findings. Therefore, further researches might work with greater number participants so that they could reach at conclusions that are more generalizable. Another recommendation for future researcher was to conduct the same or a similar study with a different level of students. Since this study was carried out with university level of students, it was recommended to conduct a similar study with senior high school level of students.

## Declarations

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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