

# THE EFFECT OF WRITTEN CORRECTIVE FEEDBACK ON HIGHER EDUCATION STUDENTS' WRITING ACCURACY

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## Abstract

With the higher demand of accuracy on students' writing in university level, the present study examines the effect of direct and indirect written corrective feedback (WCF) on students' L2 writing accuracy. The study was conducted in a six-week period with 43 Indonesian university student participants majoring IT. The results of the pre- and post-writing tests showed that 1) the writing accuracy improvement of the students receiving direct WCF was statistically significant while the writing accuracy improvement of the students given the indirect WCF treatment was not; 2) the accuracy improvement in the untreatable error rate of the direct WCF group was the most significant compared to all types of error in both WCF student groups. The study concludes that considering the students' current English proficiency level and learning setting with limited English exposure, written corrective feedback, especially the direct one, helps the university students improve their writing accuracy.

**Keywords:** corrective feedback, L2 writing, higher education

## Abstrak

Sehubungan dengan tuntutan yang tinggi terhadap akurasi tulisan mahasiswa di tingkat universitas, penelitian ini mengkaji pengaruh *written corrective feedback (WCF)* secara langsung dan tidak langsung pada akurasi tulisan bahasa kedua (L2) mahasiswa. Penelitian dilakukan selama enam minggu dengan jumlah peserta sebanyak 43 mahasiswa Indonesia jurusan IT. Hasil pra dan pascates menulis menunjukkan bahwa: (1) peningkatan akurasi tulisan mahasiswa yang dilakukan melalui *direct written corrective feedback* terbukti signifikan secara statistik dibandingkan dengan peningkatan akurasi tulisan mahasiswa yang diberi *treatment indirect written corrective feedback*; (2) peningkatan akurasi di tingkat kesalahan dari kelompok yang memperoleh *treatment direct WCF* adalah yang paling signifikan dibandingkan dengan semua jenis kesalahan dari kedua kelompok tersebut. Hasil penelitian menyatakan bahwa dengan mempertimbangkan tingkat kemampuan bahasa Inggris mahasiswa saat ini dan pengaturan pembelajaran dengan pengalaman bahasa Inggris yang terbatas, WCF, terutama *direct written corrective feedback*, membantu mahasiswa dalam meningkatkan akurasi tulisannya.

**Kata kunci:** umpan balik korektif, L2 menulis, pendidikan tinggi

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## INTRODUCTION

Writing is commonly seen as the most challenging language skill for L2 learners to master compared to speaking, reading, or listening. This is mostly because complex skills are involved in writing. In that, in order to produce a good piece of writing, L2 writers need to concern with the planning and organizing, or the macro skills, as well as the accuracy of spelling, grammar, punctuation, and diction, or the micro skills (Richards & Renandya, 2002; Brown, 2004). In an advanced academic level such in the university, students' L2 writing is expected to be well-organized as well as free from the lower surface inaccuracies, reflecting both the macro and micro skills mastery. In reality, however, problems related to grammatical and lexical errors are still frequently found in their writing, which may leave instructors and other audience with confusions and frustrations in processing their work. It should be noted that since accuracy can measure students' progress in language acquisition (Ellis 2008, 2010), a lack of accuracy in the students' L2 writing, especially of grammar, may lead to a harsh judgment of the students' whole literacy abilities and hamper their overall progression in the university (Ferris, 2002). With the high demands of writing accuracy in this higher educational stage, L2 writing teachers should help the students solve the problem.

In response to the issue above, many L2 teachers and researchers have long assumed that written corrective feedback (WCF) helps students to acquire and demonstrate mastery in the use of targeted linguistic forms and structures (Bitchener & Knoch, 2008). Although many SLA theories, such as Chomsky's Universal Grammar theories, cognitive interactionist theories, skill-learning theories, and social cultural theory, claim about the role of corrective feedback (CF) in promoting language acquisition (Ellis, 2010), written corrective feedback (WCF) has remained a disputable topic in SLA studies regarding L2 writing for years. Truscott (1996) argues

that any forms of error correction of L2 student writing are ineffective and significantly bring harmful effects, and, thus such WCF has no room in L2 writing. An immediate response to this came from Ferris (1999), as cited by Frear (2009), claiming that with the demand in students' writing accuracy and their need to develop the ability to self-edit errors, more additional research on WCF should be addressed, to which Truscott (1999) agreed.

Many studies on WCF have been conducted since Truscott's (1996) work. A number of L2 writing studies (Ashwell, 2000; Chandler, 2003 ; Ferris, 2006 ; Ferris & Roberts, 2001) have all reported the positive effects of WCF. Further, the more recent SLA studies on WCF (Bitchener & Knoch, 2008; Bitchener et al., 2005; Ellis et al., 2008; Sheen, 2007) have also presented reliable and convincing evidence that as Ferris (2010) puts it, "under the right conditions, (written CF) can facilitate L2 development and help students improve the accuracy of their writing, at least for the particular features under consideration" (p. 186). Related to this, a number of studies about WCF have concerned specifically on writing accuracy. Comparing group(s) receiving WCF and a group without WCF, the studies by Bitchener & Knoch (2008), Ellis et al (2008), van Beuningen, de Jong, & Kuiken (2008) and Frear (2009) have reported WCF is effective in helping ESL students improve the accuracy of their writing; in that, the group(s) with WCF was able to outperform the group without WCF in terms of writing accuracy. None of the studies conducted, however, investigate the effect of direct and indirect WCF on EFL students in an EFL higher educational setting.

Two issues are, thus, addressed here. First, there is a need of more data to answer the question of whether error correction can be an effective way to improve the accuracy of L2 writing. Secondly, there is a gap in investigating the direct and indirect WCF in EFL setting. Referring to the issues, the present study aims to make a contribution in WCF

research, especially in investigating the effect of direct and indirect written corrective feedback on the improvement in accuracy of L2 student writing in an EFL context. Specifically, the study attempts to answer the questions: 1) is there a difference between direct and indirect written CF in the improvement of the EFL students' L2 writing accuracy? and 2) in which type of error (the treatable or untreatable errors) does the students' accuracy improve the most in relation to the two different methods of written CF? For the purpose of the study, there would be 15 types of errors which were grouped into 'treatable' and 'untreatable' error categorization. The categorization is based on the distinction of 'treatable' and 'untreatable' errors by Ferris (1999, 2010). Finally, the findings of the study are expected to provide more data in responding the dispute on whether error correction can be an effective way to improve the accuracy of L2 writing and help writing teachers and instructors in evaluating and considering the use of WCF in their classroom.

## METHOD

The study applies a quantitative research design with 43 Indonesian student participants majoring in IT, studying English as a foreign language in a private university in Indonesia. The students were taking *Basic English* course as one of the compulsory English courses for the students of the IT department. The goal of the course is to equip the students with basic English grammar competence, such as English tenses, the use of pronouns, nouns, and adjectives, making comparison, etc., as well as basic speaking and writing skills through practice. The class only met for 100 minutes once a week for 14 weeks. The assessment of this course included writing two narrative texts in the mid-semester and near the end of the semester.

The forty-three students participated in the study were first- or second-year students, with the age ranges between 19 and 21 years of age. Having a relatively long period of studying English (from the primary and secondary school), however, the students came from different regions in the country. Their English proficiency, therefore, considerably varied at low-intermediate level. These EFL students were taking the Basic English course in two different classes. Both classes were taught by the same teacher-researcher and received error feedback. The first class, receiving the direct WCF (so-called the Direct WCF group), consisted of 20 students, 5 female and 15 male. The other class, receiving the indirect WCF (so-called the Indirect WCF group), contained 23 students, 10 female and 13 male. Before the semester started, the students chose and signed up for the course by themselves. Thus, they were placed randomly into the groups, with no intervention by the researcher.

The data were collected from the students' narrative written works. In that, the students needed to write a short narrative text, in approximately 250 words only, two times. The first one, treated as the pre-writing test, was taken in Week 8 of the semester. Then, the second narrative writing, which was also the post-writing test, was held in Week 13. In checking the students' pre- and post-writing tests in the Direct WCF group, the teacher marked (circled or underlined or crossed out) the errors in the students' writing as well as provided the correct form under the errors. In the Indirect WCF group, on the other hand, the teacher only marked the errors without writing the correct form; instead, the teacher-researcher provided a correcting symbol under each error (Table 1), leaving it for the students to notify and analyze the errors by themselves.

**Table 1: Correcting Symbols for the Indirect WCF group**

Symbol	Meaning	Example
Pro	Pronoun (subject, object, and possessive pronouns)	I fell in love with <u>she</u> . → I fell in love with <u>her</u> .
N	Wrong form of noun	public <u>transport</u> → public <u>transportation</u>
	Wrong singular-plural form	I was chased by a <u>dogs</u> . → I was chased by a <u>dog</u> .
Adj	Wrong form of adjective	We sang the <u>nationality</u> anthem. → We sang the national <u>anthem</u> .
		The test was <u>more easy</u> . → The test was <u>easier</u> .
S-V	Subject-Verb agreement	The <u>studentswas</u> happy. → The <u>studentswere</u> happy.
VF	Verb form	We <u>go</u> to Bali last year. → We <u>went</u> to Bali last year.
VT	Verb tense or Verb voice (active-passive)	I went to my room to <u>studied</u> → I went to my room to <u>study</u> .
		It was <u>happened</u> . → It <u>happened</u> .
Art	Need/insert an article (a, an, the)	I was riding motorcycle. Motorcycle was my uncle's. → I was riding <u>a</u> motorcycle. <u>The</u> motorcycle was my uncle's.
	Wrong article	a hour → <u>an</u> hour
WC	Wrong word choice	She was typing using a <u>calculator</u> . → She was typing using a <u>computer</u> .
		I didn't bring <u>many</u> money. → I didn't bring <u>much</u> money.
WO	Word order	I and my friend → My friend and I
^	Missing word	I was listening music. → I was listening <u>to</u> music.
X	Delete the word(s)	The police <b>man</b> officer stopped me. → The police officer stopped me.
SS	Sentence structure problem,	Little experience I had this past week on the sidelines of a hard time → ???

	Confusing sentence	
C	Capitalization	<u>w</u> e went to <u>B</u> ali last year. → <u>W</u> e went to <u>B</u> ali last year.
SP	Wrong spelling	Jim was my <u>fren</u> . → Jim was my <u>friend</u> .
PU	Punctuation	In the morning I woke up late, when my mom could not find her purse she asked me to help her.. → In the morning I woke up late. When my mom could not find her purse, she asked me to help her.

Referring to the correcting symbols shown in Table 1, not all errors classified as treatable or untreatable errors were covered. The present study only focused on the errors that frequently appeared and significantly affected the quality of the narrative written text. There were 15 errors in total, 12 of which were classified into treatable or untreatable errors. The treatable errors, which take place in a rule-governed way so that “are relatively easy, from a linguistic standpoint, to define, describe, and teach” (Ferris 2010: 192), include errors regarding pronouns, nouns, adjectives, subject-verb agreement, verb tense, and articles. The untreatable errors, on the other hand, consist of errors that can “obscure meaning and interfere with communication” (p. 193), which include word choice, missing word, unnecessary word, and sentence structure (either confusing or not natural in the target language). Some errors regarding the technical things, such as capitalization, spellings, and punctuation, were also corrected by the teacher-researcher for the students in both groups made such errors so frequently in their first narrative writing. These technical errors, however, were excluded from the discussion of the study.

After the teacher was done checking the students’ narrative texts, the number of errors (treatable and untreatable) of each students from both

tests was calculated to gain the quantitative data. The quantitative data were then statistically analyzed using the SPSS software version 21.0 to see the improvement of the EFL students’ L2 writing accuracy in relation to the two different treatments of written CF given. The results would be presented in the form of tables and discussed with further explorations referring to theories and previous studies. Finally, based on the findings and discussion, conclusions on the effect of direct and indirect written corrective feedback on the improvement in accuracy of L2 student writing in an EFL context will be drawn.

## FINDINGS AND DISCUSSION

To answer the first research question “is there a difference between direct and indirect written CF on the improvement in L2 writing accuracy of the EFL students?” a paired t-test was used to see the pre- and post-test’s different results within each group. The students’ accuracy was shown by the change in the mean numbers of errors of the pre-tests and post-tests in both groups. In Table 2 below, the mean numbers of errors from the pre-tests and post-tests in both Direct and Indirect WFC groups decreased (in the Indirect WCF group, the mean number of errors went from 37.26 to 31.09; in the Direct WCF group, the mean number of errors in the pre-test went from 58.55 to 31.15).

**Table 2: Comparing mean numbers of errors within Groups**

		Paired Samples Statistics						
		Mean	N	Std. Deviation	Std. Error Mean			
Pair 1	Indirect WCF - PreTest Errors	37.26	23	19.538	4.074			
	Indirect WCF - PostTest Errors	31.09	23	13.948	2.908			
Pair 2	Direct WCF - PreTest Errors	58.55	20	20.824	4.656			
	Direct WCF - PostTest Errors	31.15	20	14.368	3.213			

  

		Paired Samples Test								
		Paired Differences			95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)	
Pair 1	Indirect WCF PreTest Errors - Indirect WCF PostTest Errors	6.174	17.847	3.721	-1.544	13.892	1.659	22	.111	
Pair 2	Direct WCF PreTest Errors - Direct WCF PostTest Errors	27.400	15.267	3.414	20.255	34.545	8.026	19	.000	

The results show that there was improvement in the students' accuracy within both Direct and Indirect WCF groups. However, the two groups indicated different significance of the accuracy improvement. With the change of the mean number of error 6.17, it was revealed that there was no significant improvement in error rate based on the results of pre-test and post-test in the Indirect WCF group (with  $t=1.717$ ,  $P = 0.05$ ; the  $t$  value 1.659 and the  $P$  value 0.111). On the other hand, with the change of the mean number of error 27.4, there was a statistically significant improvement in accuracy in the

Direct WCF group (with  $t=1.717$ ,  $P = 0.05$ ; the  $t$  value 8.026 and the  $P$  value 0.000).

Analysis of variance was also used to test the pre-test differences and post-test differences between the Direct and Indirect WCF groups. Table 3 shows the comparison of the mean number errors between the two groups. With  $F=4.079$  and  $P=0.05$ , there was a significant difference between the Direct WCF group and the Indirect WCF group on the pre-test. On the other hand, there was no significant difference between the Direct

WCF group and the Indirect WCF group on the post-test ( $F=0.000$ ,  $P=0.988$ ).

**Table 3: Analysis of variance: Comparing mean numbers of errors between groups**

		Sum of Squares	df	Mean Square	F	Sig.
Pre-test Errors	Between Groups	4848.476	1	4848.476	11.948	.001
	Within Groups	16637.385	41	405.790		
	Total	21485.860	42			
Post-test Errors	Between Groups	.043	1	.043	.000	.988
	Within Groups	8202.376	41	200.058		
	Total	8202.419	42			

In other words, with a significant difference in the pre-tests between the two groups, it resulted a statistically similar outcome in the post-tests. Related to the previous result of the t-test, it was the group which received the Direct WCF that indicated the more significant improvement in accuracy.

From the result, the study found that EFL students who received either direct or indirect WCF improved their writing accuracy. It was revealed that the writing accuracy improvement of the students receiving direct WCF was statistically significant while the writing accuracy improvement of the students given the indirect WCF treatment was not. This also answers the first research question of the study affirmatively that there is a difference between direct and indirect written CF on the improvement in L2 writing accuracy of the EFL students, in that, the improvement in writing accuracy as a result of direct WCF treatment was statistically significant, while the accuracy improvement from indirect WCF treatment was not. The first finding also shows that a single WCF treatment, especially the direct WCF, is effective in helping learners improve the accuracy of their writing. The finding confirms the

earlier studies (Chandler, 2003; Bitchener et al., 2005; Sheen, 2006; Bitchener&Knoch, 2008; Ellis et al., 2008) for the dominance of direct feedback in improving accuracy and thus, provide further evidence to refute the claim that error correction is ineffective in L2 writing.

In addition, unlike most of earlier studies which were conducted in SL settings, the finding of this study was tested with EFL students as the participants in an EFL context. The findings revealed that the EFL students, with limited English exposure in the EFL setting, considerably had their writing accuracy improved significantly by the direct WCF. I see this had to do with the amount of language input that the students received as well as the English proficiency level of the students. While SL students as well as those who study English in an L2 setting have the opportunity to extensively engage themselves with the target language, the EFL students in this study did not. They were experiencing a full English engagement only in the classroom. Correspondingly, these students lacked of the target form input and that disadvantaged their accuracy in producing a piece of writing in English. It can be seen in the pre-test results of both groups in

Table 2 that the mean numbers of errors were relatively high for a 250 word piece of writing. Therefore, the direct WCF was found effective to improve the students' writing accuracy because the direct WCF from the teacher-researcher could provide these EFL students with more exposure and input of the target language that they lacked of and needed for their writing.

As for the proficiency level of the students, the low-intermediate students in this study were limited in their English knowledge and mastery. The high mean numbers of errors from the pre-test results of both groups in Table 2 show how the students still had problems to write a grammatical and acceptable sentence. Their current grammar competence and writing skills were still unable to promote their narrative writing. Therefore, giving them with error corrections explicitly (the teacher identified both error and provided the correct target form) could help students in their writing accuracy more efficiently than only indicating the errors they made without giving the correct target

form. In that, the direct corrections provided students with the correct models of the target language forms used in the context. The feedback enabled them to see right away how their ideas should be expressed into English sentences and thus, learn from it as well as use it for future writing. Indeed, for the low-intermediate EFL students, direct WCF was found more helpful in improving their writing accuracy than indirect WCF.

Since the students' accuracy in both groups improved, with the Direct WCF group showing a more significant improvement, I also wanted to find out in which specific types of errors the accuracy improved more. This was to answer the second research question "in which type of error (the treatable or untreatable errors) does the students' accuracy improve the most in relation to the two different methods of written CF?" As seen in Table 4, a t-test was also used to compare the mean numbers of treatable and untreatable errors within each group.

**Table 4: Comparing mean numbers of treatable-untreatable errors within groups**

<b>Paired Samples Statistics</b>					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	IWCF Treatable (Pre)	17.74	23	6.936	1.446
	IWCF Treatable (Post)	16.70	23	7.606	1.586
Pair 2	IWCF Untreatable (Pre)	19.52	23	14.746	3.075
	IWCF Untreatable (Post)	14.39	23	8.228	1.716
Pair 3	DWCF Treatable (Pre)	28.25	20	10.681	2.388
	DWCF Treatable (Post)	17.90	20	8.162	1.825
Pair 4	DWCF Untreatable (Pre)	30.30	20	12.654	2.829
	DWCF Untreatable (Post)	13.25	20	7.887	1.763



		Paired Samples Test								
		Paired Differences				95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper				
Pair 1	IWCF Treatable (Pre) - IWCF Treatable (Post)	1.043	8.182	1.706	-2.495	4.582	.612	22	.547	
Pair 2	IWCF Untreatable (Pre) - IWCF Untreatable (Post)	5.130	13.367	2.787	-.650	10.911	1.841	22	.079	
Pair 3	DWCF Treatable (Pre) - DWCF Treatable (Post)	10.350	9.869	2.207	5.731	14.969	4.690	19	.000	
Pair 4	DWCF Untreatable (Pre) - DWCF Untreatable (Post)	17.050	9.070	2.028	12.805	21.295	8.407	19	.000	

Note: IWCF Treatable (Pre) – the treatable errors in the pre-test by the Indirect WCF group, IWCF Treatable (Post) – the treatable errors in the post-test by the Indirect WCF group, IWCF Untreatable (Pre) – the untreatable errors in the pre-test by the Indirect WCF group, IWCF Untreatable (Post) – the untreatable errors in the post-test by the Indirect WCF group, DWCF Treatable (Pre) –

In the Indirect WCF group, there was statistically no significant difference of improvement in accuracy in both the treatable and untreatable error rates (with  $t=1.717$ , the treatable errors resulted  $t=0.612$  and  $P=0.547$ , while the untreatable errors showed  $t=1.841$  and  $P=0.079$ ). In the Direct WCF group, meanwhile, both the treatable and untreatable errors' mean rates showed significant difference in improvement in accuracy (with  $t=1.729$ , the treatable errors resulted  $t=4.690$  and  $P=0.000$ , while the untreatable errors showed  $t=8.407$  and  $P=0.000$ ). Seen from the mean numbers of

the treatable errors in the pre-test by the Direct WCF group, DWCF Treatable (Post) – the treatable errors in the post-test by the Direct WCF group, DWCF Untreatable (Pre) – the untreatable errors in the pre-test by the Direct WCF group, DWCF Untreatable (Post) – the untreatable errors in the post-test by the Direct WCF group.

errors, however, it was the untreatable errors in the Direct WCF group that had the highest rate of change in the mean numbers of errors (with the change in the mean numbers of errors was 17.05, going from 30.30 (pre) to 13.25 (post)). Compared to all errors in both groups, the improvement in accuracy in the untreatable error rate of Direct WCF group was the most significant.

As for the second finding in the study about the treatable and untreatable errors, it was revealed that the improvement in accuracy in the untreatable error rate of Direct WCF

group was the most significant compared to all errors in both Direct and Indirect groups. This also answers the second research question that it was the untreatable errors in the Direct WCF group at which the students' accuracy improved the most. The indication of this might lead us back to the fact that the students were low-intermediate EFL students. As suggested by Ferris (2010: 193), untreatable errors are errors that "obscure meaning and interfere with communication. This type of errors may be considered as more difficult for students to deal with, compared to the treatable ones. As we refer to Table 4, the EFL students indeed found problems mostly with the untreatable errors, as can be seen in the mean numbers of untreatable errors which were considerably higher than the treatable errors. Ferris (1999) also states that untreatable errors require learners to utilize acquired knowledge of the language to correct the error. With the low-intermediate English proficiency and limited target form input, however, such attempt would be really challenging for the EFL students to carry out. Providing the students with explicit error identification and correction as with direct WCF would help them more in dealing with untreatable errors. In that, they could receive more target language forms and models to learn from and improve their grammar and communicative competence for their future learning, especially writing.

## CONCLUSION

This study was designed to investigate 1) whether there is a difference between direct and indirect written CF in the L2 writing accuracy improvement of the EFL students and 2) in which type of error (the treatable or untreatable errors) the students' accuracy improve the most in relation to the two different methods of written CF. Concerning the first objective, it was found that there is a difference between direct and indirect WCF on the

improvement in L2 writing accuracy of the EFL students. In that, the improvement in writing accuracy of the EFL students as a result of direct WCF treatment was statistically significant, while the accuracy improvement from indirect WCF treatment was not. The result of the direct WCF giving a more significant improvement in the students' accuracy may be influenced by the students' low-intermediate level of English proficiency as well as the EFL learning setting which provided relatively insufficient English exposure for the students. In that, the teacher's direct WCF supported the students with the language input they needed to improve their accuracy when writing the next narrative composition. With respect to the second objective, the study found that it was the untreatable errors in the Direct WCF group of which the students' accuracy improved the most. The given explicit error identification and correction by the teacher helped the low-intermediate EFL students to deal with the meaning obscuring and communication interfering challenges more effectively. The study was not without its limitations, however. Since this study reports on the findings of only one post-test within a considerably short period of study, further research is thus required to determine whether learners can maintain or even improve the level of accuracy over a more extensive period in an EFL setting.

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