

The impact of direct and indirect error treatment on student writing accuracy

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Abstract

The present study investigates whether the type of feedback (direct or indirect) given to 41 intermediate EFL learners on six types of errors (verb tense, noun ending, word choice, sentence structure, article and preposition) results in improved accuracy both in the short and long terms. To this purpose, English students in a writing class at the University of Guilan divided randomly into direct, indirect and control groups were presented with the same topics to write about. The errors on pretest, posttest 1 and posttest 2 in each group were detected and the means of errors were investigated by ANOVA analysis. At last, the study found a significant effect for the indirect feedback on accuracy improvement in the use of the verb tense, noun

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endings, sentence structure and articles in both short and long term periods, but no significant effect for the preposition in the long term and word choice in either time periods. Although the direct feedback significantly affected the accuracy level for the use of noun endings, prepositions, articles and sentence structure in the short term, it did not demonstrate any statistical significance in the long term. Moreover, no effect on verb errors and wrong words were found in either time periods. Finally, the indirect group outperformed the direct one on accuracy improvement for the total number of errors. The study also considered the use of avoidance strategy due to the provided corrective feedback and found that, in spite of the probability of the tendency towards using it, providing corrective feedback is still necessary in improving L2 writing accuracy.

Keywords: student writing, corrective feedback, linguistic error, accuracy improvement, avoidance strategy

1. Introduction

Language teachers spend hours to correct students' writings in different ways. However, there is not still a sense of certainty about how best to provide such corrective feedback (CF). Some educators even believe in abandoning the entire practice of grammar correction (e.g. Truscott, 1996, 1999, 2007). Truscott (1996, 1999, 2007) argued that all forms of error correction of L2 student writing are not only ineffective but also harmful and should be abandoned. On the other hand, Ferris (1999) claimed that Truscott's arguments were premature and he overlooked some positive research evidence on the effects of grammar correction. Although it is generally believed that language learners desire CF on their writing, Truscott (1996) maintains that teachers should not provide it even though their students ask for it. After many years of conducting different research on CF, the question is not whether to

have it or not, but when and how to have it, and other questions as how to carry it out. Providing students with CF becomes more acceptable when writing is considered as a process not just as a product. In this model of writing, providing CF at the revision stage is one of the necessities.

This article will then attempt to explore the impact of two kinds of CF (i.e. direct and indirect) on student writing both in the short and long term periods. It will also compensate for the students' use of avoidance strategy by providing them with two different posttests which are a writing task as well as a cloze test on grammatical errors they made on the pretest.

2. Literature Review

2.1 Background of the Study

Language teachers spend a great deal of time to correct students' writings with the belief that feedback is a crucial factor to help students recognize their grammatical shortcomings (Ferris, 1999, 2003; Lee, 2004; Truscott, 1996; Zamel, 1985). However, the debate has continued for several years between the advocates and opponents of CF on L2 writing (e.g. Chandler, 2003; Ferris, 1999; Truscott, 1996, 1999). Although some researchers (e.g. Semke, 1984; Kepner, 1991; Sheppard, 1992) have rejected the provision of CF, it was Truscott (1996) who began the controversy by rejecting almost all arguments for the practice of grammar correction in his arguable review essay in which he claims:

... That correction is harmful rather than simply ineffective ...[and] that no valid reasons have been offered for continuing the practice in spite of these overwhelming problems...Thus, for the foreseeable future my conclusion stands: Grammar correction has no place in writing classes and should be abandoned. (pp. 360-361)

Truscott (1996) drew such a conclusion based on an analysis of various studies (e.g. Frantzen, 1995; Kadia, 1988; Kepner, 1991; Lalande, 1982; Robb, Ross, & Shortreed, 1986; Semke, 1984;

Sheppard, 1992; Zamel, 1985) and reported that there was no convincing research evidence that CF would improve writing accuracy. He mentioned that error correction, as it is currently being practiced, overlooks the gradual process of acquiring the forms of a second language. His claim, however, has faced a great deal of strong criticisms in different reviews (e.g. Chandler, 2003; Ferris, 1999) and also is premature considering that most of the findings he has cited seem likely to be invalidated by uncontrolled extraneous variables such as the effects of other classroom activities (Guenette, 2007).

In addition, Ferris (1999) has noted in her response to Truscott's essay that he has appeared to overstate research findings that support his own case while disregarded research results that contradicted his thesis. Ferris believes that the 'reviewer has under or over stated the findings and claims of the original studies to suit his...own generalizations or arguments' (p.4) while acknowledging that Truscott presented key points considering the nature of second language acquisition process and practical problems with providing CF. Chandler (2003) has also pointed out that Truscott does not support the reported differences by statistically significant evidence. Although several researchers (Chandler, 2003; Ferris, 1999, 2003; Ferris & Roberts, 2001) criticized him for his strong claim, Truscott has not withdrawn his case against grammar correction and maintains that grammar correction is, in general, a bad idea until future research proves that there are particular cases in which it might not be a completely inappropriate practice (Bitchener et al., 2005). On the other hand, it should be mentioned that since the publication of Truscott's review article, a number of other studies have found corrective feedback to be ineffective (e.g. Fazio, 2001; Polio et al., 1998). However, Bitchener (2008), Bitchener and Knoch (2008), Ellis et al. (2008), Rahimi (2009), and Sheen (2007) have provided some evidence that CF can be effective in improving the accuracy of L2 writers. Thus, the controversy continues between the advocates and opponents of CF.

2.2 Research Evidence against CF

Several researchers have concluded that written CF does not result in improved accuracy (Fazio, 2001; Kepner, 1991; Semke, 1984; Polio et al., 1998; Sheppard, 1992; Truscott, 2007). For example, Sheppard (1992) investigated the effects of two types of CF (indirect error coding vs. holistic comments in the margins) on three grammatical categories. (i.e. verb tense, punctuation, and subordination). The author reported that the group which received holistic comments outperformed the group receiving CF. He also noted that the CF group became worse over time. It was due to avoidance strategy in using complex structures as a result of CF.

This led to the conclusion that grammar correction had a negative effect. Kepner (1991) also made the same conclusion while providing CF and message related comments on American University learners' written Spanish through journal writing. The results of his study did not lead to a significant improvement in accuracy. Based on this result, Kepner claimed that CF which focuses on grammar has little value. Nevertheless, Kepner (1991) found his comment group wrote significantly longer essays (more fluent) than grammar correction group over time. This result was partially replicated in Fathman and Whalley's (1990) study which concluded that the comment group had written more words in the revised essays than the error correction and the mixed groups. The interesting point in this study is that the no feedback group wrote the longest essays. But in terms of accuracy, fewer grammatical errors were made by students who received error feedback.

Polio et al. (1998) conducted a study in which the experimental group receiving error correction were required to write half as many journal entries as the control group because of their editing activities. They reported that the grammar correction group did not differ significantly from the feedback group in terms of accuracy over time and from the original essay to the revised essay.

2.3 Research Evidence for CF

Previous research has not been greatly successful in showing that written CF can have a positive effect on the development of L2 writing accuracy (e.g. Fathman & Whalley, 1990; Ferris & Roberts, 2001; Robb et al., 1986). As Guenette (2007) reports:

After reading the many studies on corrective feedback carried out since the early 1980s, I am not much further ahead than I was when I first started teaching. Should teachers provide corrective feedback on form or should they not? The debate still rages between proponents of both options because research so far has not been able to prove, beyond a reasonable doubt, that providing corrective feedback is a decisive factor in the attainment of language fluency and accuracy. (p. 41)

Guenette's (2007) exhaustive critical review of written CF research identified a number of problematic issues in L2 writing research (e.g. the lack of control group, the difficulty in controlling various classroom activities that might have an influence on writing development and the incentive factor of students' grades) and reports that differences in research design, (e.g. population, comparison between groups, longitudinal or cross-sectional designs), methodology (e.g. treatment and instrument), procedures and student incentive have resulted in different conclusions. For example, some researchers only analyzed the revisions and evaluated students' improved accuracy (e.g. Fathman & Whally, 1990; Ferris & Roberts, 2001). Other researchers considered the new pieces of writing (e.g. Chandler, 2003; Robb et al., 1986). An increasing number of studies have been investigating whether certain types of CF than others help L2 students improve the accuracy of their writing. Although the results as reported by Guenette, may be uncertain, they are still worthy to be considered.

Different studies have provided direct and indirect feedback strategies and looked for the extent to which they lead to accuracy improvement (Ferris, 1995a, 1995b; Ferris & Hedgcock, 1998; Lalande, 1982; Liu, 2008; Robb et al., 1986). Direct or explicit feedback is provided when the teacher identifies an error and writes

the correct form, but indirect or implicit feedback refers to situations when the teacher only indicates that there is an error but does not provide a correction. Therefore, it is the student who should diagnose and correct it (Ferris, 2002). In addition, indirect correction has been divided into coded and uncoded feedback in some studies. The coded feedback indicates the exact location of an error and the type of error is provided with a code (for example, VE means an error in verb tense). Uncoded feedback refers to instances when the teacher underlines circles or places an error in the margin, but, in each case, it is the student again that diagnoses and corrects the errors. Some researchers compared different types of feedback on form longitudinally (Chandler, 2003; Lalande, 1982; Robb et al., 1986) except for Ferris & Roberts (2001), whose experiment was a one-time occurrence. For example, Lalande (1982) compared indirect (coded) and direct feedback and concluded that indirect group outperformed the direct one. Chandler (2003) examined four different types of feedback and found the opposite. The most significant effects on accuracy were observed with the direct correction and underlining treatment. Ferris & Roberts (2001) compared two types of indirect feedback (i.e. having errors coded and underlined and underlined only) and both experimental groups outperformed the control group. Liu (2008) Conducted a quasi-experimental classroom study to investigate 12 university ESL students' abilities to self-edit their writing across two feedback conditions (direct and indirect). Instances of errors were identified in students' drafts and classified into three categories: morphological errors, semantic errors, and syntactic errors. Results showed that both types of CF helped students self-edit their texts. Although direct feedback reduced students' errors in the immediate draft, it did not improve students' accuracy in a new piece of writing. Indirect feedback helped the students reduce more morphological errors than semantic errors. Survey results indicated that students show a strong preference for underlining and description.

Pashazadeh et al. (2010) carried out a study in which they investigated the long term effect of selective grammar feedback on

article errors. The participants (low-intermediate EFL learners) received corrective feedback on the use of articles and a limited number of various other grammatical categories. The results showed that selective CF can result in short gains, but it may prove to be harmful in the long-term. It was also concluded that learners tend to avoid grammatical features on which they have received corrective feedback.

There are also a number of studies which targeted specific error categories (Bitchener et al., 2005; Ferris, 1995a ; Ferris et al., 2000; Liu, 2008; Lalande, 1982; Sheppard, 1992). They all point to the fact that different linguistic categories should not be treated in the same way. There is a distinction between "treatable" and 'untreatable" errors. "Treatable" errors (verb tense for example) can be found easily in a grammar book while untreatable errors (word choice for example) are idiosyncratic and require learners to use acquired knowledge of language for correction (Bitchener et al., 2005).

In different studies carried out so far, a number of issues concerning the value of CF on L2 student writing have been investigated, but it is evident that the debate still continues and further research is needed to reconsider both the short and long-term effects of CF on different ranges of linguistic error categories as well as on new pieces of writing. In order to reach this aim, the following 15 week study was carried out with 41 intermediate English literature students at the University of Guilan in Iran to investigate the extent to which direct and indirect CF on targeted linguistic forms helped students improve the accuracy of new pieces of writing both in the short and long run. It would also examine the individual learner's behavior and change in responding to CF during revisions and new draft writing to find the effect of avoidance strategy in new pieces of writing. This type of focused attention was not observed in previous studies and it has not been clearly shown whether reduction in students' errors was due to the provided CF or the use of avoidance strategy.

3. Research Questions

This study is an attempt to identify the effects of the two kinds of CF in Iranian EFL context. It is intended to answer the following research questions:

- (1) Does the Indirect CF decrease the number of both total grammatical errors and the specific errors within each category in Iranian EFL writing and thus contribute to their grammatical accuracy both in the short and long-run?
- (2) Does the direct CF decrease the number of both total grammatical errors and the specific errors within each category in Iranian EFL writing and thus contribute to their grammatical accuracy both in the short and long-run?
- (3) Does provision of CF affect avoidance of the treated grammatical categories?

4. Methodology

4.1 Participants

The participants of this study were 45 fresh man students (33 females and 12 males) in the field of English literature, studying at the University of Guilan, in Iran. They were enrolled in the writing class and met once a week for 90 minutes. The course had a writing component with a focus on grammar. The age of the participants ranged from 18 to 36, with the mean age of 18.7. They were randomly divided into direct, indirect and no feedback (control) groups. 41 students completed all the writing tasks. Students (4 students) with incomplete data sets were excluded from the final data analysis and as a result, the number of participants in the direct, indirect and control groups reduced to 15, 12, and 14 respectively.

4.2 Instruments

The instruments used for this study consisted of five narrative writing tasks as well as a cloze test (essay type). The students were

required to accomplish five writing tasks for which four topics had been chosen (Table 1). The topics were selected in a way to encourage students to add as many details as possible. The first writing task was considered as the pretest since students had not received any kind of feedback before that. They continued to write on the three left topics and the fourth writing task was considered as the first posttest which was assumed to reveal the short term effect of CF. The topic in this task was different from the one used for pretest considering that Truscott (1996, 1999) and Ferris (1999, 2004) pointed out that the efficacy of error feedback can only be assessed by measuring accuracy on new texts.

The fifth writing task which contained the same topic as that of the pretest was presented after a six week interval to see the probable long term effect of CF. This task was considered as the delayed posttest (posttest 2) to explore the exact change of the students' previous committed errors on the first writing task due to the provided CF.

On the other hand, cloze tests were constructed based on the students' committed errors on the first writing task (pretest) to compensate for the use of avoidance strategy. It has been argued that learners tend to avoid the categories that have been the subject of corrective feedback (Sheppard, 1992; Truscott, 1996). Truscott (1996) persuasively argued that this avoidance strategy prevents natural language acquisition simply because grammar feedback encourages students to avoid risk-taking and experimenting with the grammatical forms that they have not fully mastered. Thus, the cloze tests were designed to help the researchers focus on targeted linguistic errors and their change during CF provision. Cloze tests were created for each individual based on their committed errors on the first writing task. Each student took a test on his/her own errors to reveal her/his acquired linguistic knowledge due to the provided CF and in this way he/she could not avoid the committed errors anymore (See appendix C).

Table 1: Topics which were chosen to be written about

First topic	You were driving in the desert when your car broke down. You were with a friend, but your cell phones were not working.
Second topic	Write about the most memorable event in your life
Third topic	You were driving on your way back home; suddenly you saw an old man stagger and fall down on the street. What did you do?
Forth topic	What happened when you saw a man steal some money from another man in a shop?

4.3 Procedure

In the first session, the course and its components were introduced to the students. The instructor introduced the narrative writing, what it is and what details are needed to be included in such writing. For the last 30 minutes of the class time, students started writing on the first topic. Considering the specific error categories (Table 2) the original essays were corrected and returned to the students in the second session. The participants in the direct group were provided with the correct forms for their errors while the indirect group had only their errors underlined without correction (See appendices A & B). The Control group did not receive any correction but for keeping them still motivated in writing, their essays were signed as great/ very good/good and not bad. There was no in-class writing in this session and some general writing rules for being a good narrative writer were presented without any focus on grammatical points. Only Students in direct and indirect groups were asked to rewrite the first essay and submit the revisions for the next session in order to make them pay attention to the provided feedback. In the third session, the students submitted the revisions and started the second writing task on the second

topic. The procedure of writing in class (i.e. receiving feedback and submitting revisions) continued in the same pattern for the two left topics. After collecting the fourth essay revision, another writing with the same pretest topic was administered with a 6 – week interval (delayed-posttest).

The next session, the students did not receive any kind of feedback and took the cloze test which did not necessarily include the sentences and structures they had used in the first writing. The texts were constructed in a careful manner to lead the students to use the grammatical points they had problems with

Table 2: Description for error categories

Verb errors (VE)	All errors in verb tense or form, including relevant subject verb agreement
Noun ending errors (NEE)	Plural or possessive ending incorrect, omitted, or unnecessary.
Article errors (AE)	Article or other determiner incorrect, omitted, or unnecessary.
Wrong words (WW)	All lexical errors in word choice or word form, including pronoun errors .
Sentence structure (SS)	Errors in sentence/clause boundaries, word order, and unidiomatic sentence.
Preposition errors (PE)	Any errors in the use of prepositions

4.4 Design and Measures

Data were collected from the three writing tasks (first, fourth and fifth writing tasks) as well as a cloze test constructed based on

participants' committed errors on the first writing task. The direct group was provided with direct correction with the errors underlined and corrected while students in indirect group received indirect correction with the errors only underlined. Both groups were required to submit the second draft after revising the errors in each writing task. As Truscott (1996, 1999) and Ferris (1999) pointed out, the efficacy of error feedback can only be assessed by measuring accuracy on new texts. Therefore, the fourth writing was on a new topic different from that of the pretest to be considered as posttest 1. And after a 6 week interval the fifth writing had the same topic as that of the pretest to see the long term effect of CF which was considered as posttest 2. The dependent measure in this study was a calculation of error rate on the three writing tasks. As the text length of the drafts varied, a measure of errors per 1000 words was calculated (total number of errors/total number of words X 1000) which resulted into the mean of errors in each error category.

5. Results and Discussion

Three writing tasks out of five (the first, fourth and fifth) were analyzed and marked considering each participant's grammatical errors at six categories (VE, NEE, WW, SS, AE, PE), and time periods at 3 levels, week1 (pretest), week 7 (posttest 1) and week 14 (posttest 2). Statistical procedures used to analyze the data included percentages, means, and standard deviations via ANOVAs to analyze error reduction across the three groups. Moreover, if a test showed a significant change, Post Hoc tests were further conducted to measure differences among specific means of errors in each category. The means of errors and standard deviations of the three writing tasks for each group are shown in Tables 3, 4 and 5. The greatest number of errors was observed in the verb category, followed by, respectively, prepositions, articles, sentence structure, word choice and noun endings. As it is shown in table 3, the Control group did not show any significant error reduction on the three writing tasks.

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Table 3: Error reduction in Control group

	Control Group	Mean of errors	Std. Deviation	Std. Error	F	Sig.
VE	Pretest	15.55	5.84	6.344	.018	.982
	Posttest1	15.21	6.33	8.226		
	Posttest 2	15.59	5.16	7.883		
NEE	Pretest	5.32	3.50	2.289	.316	.731
	Posttest1	4.85	3.73	2.254		
	Posttest 2	4.32	2.56	2.629		
WW	Pretest	6.83	5.29	3.388	.045	.958
	Posttest1	7.35	4.79	4.165		
	Posttest 2	6.89	5.01	3.515		
SS	Pretest	6.72	4.68	4.027	1.598	.215
	Posttest1	6.14	3.13	2.545		
	Posttest 2	8.96	5.14	3.376		
AE	Pretest	7.78	5.72	2.887	.011	.989
	Posttest1	7.78	4.97	2.485		
	Posttest 2	8.03	5.009	1.816		
PE	Pretest	10.50	5.38	6.266	.818	.449
	Posttest1	9.42	6.30	4.642		
	Posttest 2	9.42	4.10	4.058		
Total	Pretest	52.72	8.94	7.854	147.	.864
	Posttest1	50.78	9.29	12.617		
	Posttest 2	51.74	10.18	10.427		

On the other hand, the two experimental groups (Direct and Indirect) revealed some significant error reduction due to the provided feedback (Tables 4 and 5).

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Table 4: Error reduction in Indirect group

	Indirect Group	Mean of errors	Std. Deviation	Std. Error	F	Sig.
VE	Pretest	16.42	6.07	1.752	13.44	.000
	Posttest1	5.61	4.67	1.350		
	Posttest 2	7.30	5.63	1.626		
NEE	Pretest	6.04	1.88	.543	8.575	.001
	Posttest1	2.62	2.34	.677		
	Posttest 2	3.42	2.34	.606		
WW	Pretest	5.65	5.48	1.583	.222	.802
	Posttest1	5.16	3.37	.975		
	Posttest 2	6.31	3.56	1.028		
SS	Pretest	7.64	1.95	.563	8.828	.001
	Posttest1	3.63	2.28	.660		
	Posttest 2	5.48	2.72	.786		
AE	Pretest	6.49	3.04	.878	4.252	.023
	Posttest1	3.93	2.06	.594		
	Posttest 2	3.97	2.15	.623		
PE	Pretest	8.83	5.43	1.569	3.015	.063
	Posttest1	4.41	2.99	.865		
	Posttest 2	5.66	4.83	1.394		
Total	Pretest	51.08	9.38	2.708	21.12	.000
	Posttest1	25.38	9.58	2.766		
	Posttest 2	32.16	11.06	3.195		

Table 5: Error reduction in Direct group

	Indirect Group	Mean of errors	Std. Deviation	Std. Error	F	Sig.
VE	Pretest	15.57	6.34	1.638	.413	.664
	Posttest1	13.08	8.22	2.124		
	Posttest 2	14.51	7.88	2.035		
NEE	Pretest	5.43	2.28	.591	2.942	.064
	Posttest1	3.26	2.25	.602		
	Posttest 2	4.47	2.62	.678		
WW	Pretest	7.75	3.38	.874	.458	.636
	Posttest1	6.47	4.16	1.075		
	Posttest 2	7.28	3.51	.907		
SS	Pretest	7.69	4.02	1.039	2.935	.064
	Posttest1	4.80	2.54	.657		
	Posttest 2	5.60	3.37	.871		
AE	Pretest	7.96	2.88	.745	10.418	.000
	Posttest1	4.23	2.48	.641		
	Posttest 2	7.48	1.81	.468		
PE	Pretest	11.53	6.26	1.618	2.656	.082
	Posttest1	7.57	4.64	1.198		
	Posttest 2	8.17	4.05	1.047		
Total	Pretest	55.95	7.85	2.028	9.554	.000
	Posttest1	39.21	12.61	3.257		
	Posttest 2	47.54	10.42	2.692		

But it should be noted that the changes were not in the same manner for each grammatical category. Consequently, the separate patterns were investigated via Post Hoc tests and the effect of the different feedback type on each linguistic error category (VE, NEE, WW, SS, AE, PE) has been examined and the results are presented below.

5.1 Verb Errors (VE)

For verb errors, the direct group did not indicate any significant change both in posttest 1 and 2. However, the indirect group revealed significant error reduction ($F= 13.44$; $p=0.00$) in both posttests which confirmed the impact of provided feedback in both short and long terms.

5.2 Noun Ending Errors (NEE)

For noun ending errors, the direct group indicated a significant change in posttest 1 but this change did not reach any statistical significance in posttest 2. Thus, the direct CF did not reduce errors in the long-run. On the other hand, the means in indirect group decreased significantly both in the short and long terms ($F= 8.57$; $p = 0.001$).

5.3 Wrong Words (WW)

For wrong words, although both indirect ($F= 0.22$; $p=0.80$) and direct ($F= 0.45$; $p=0.63$) groups showed some reduction in means of errors, the SPSS analysis did not reveal any statistical significance. This result may be investigated by considering the difference between treatable and untreatable errors. As Bitchener et al. (2005) has mentioned there is a distinction between "treatable" and "untreatable" errors. "Treatable" errors can be found easily in a grammar book. Learners can refer to the set of rules to correct the errors while untreatable errors are idiosyncratic and require learners to use acquired knowledge of language for correction.

5.4 Sentence Structure (SS)

For sentence structure errors, the direct group showed significant error reduction in posttest 1 but it was not significant in posttest 2. Thus, the direct CF did not reduce errors in the long-run. On the other hand, the means in indirect group decreased significantly both in the short and long-run ($F=8.82$; $p=.0001$).

5.5 Article Errors (AE)

For article errors, the direct group showed significant change in posttest 1 but this change did not reach statistical significance in posttest 2. Thus, the direct CF did not reduce errors in the long-run. On the other hand, the means in indirect group decreased significantly both in the short and long-run ($F=4.25$; $P=0.023$).

5.6 Preposition Errors (PE)

For preposition errors, the direct group showed significant change in posttest 1 but this change did not reach statistical significance in posttest 2. Thus, the direct CF did not reduce errors in the long-run. The indirect group also followed the same way and did not reveal any significant change in the long run.

5.7 Total Number of Errors

The total number of errors was considered as a separate category to investigate the effect of provided CF in general. Since the nature of specific error categories is different, the effects of the same corrective feedback can also be different. Although the researchers noticed some error reduction in all categories, it was not confirmed by statistical significance for all of them. Thus, the total number of errors was considered as a separate category to investigate the effect of provided CF in general. For total errors, the direct group revealed significant error reduction in the short term while it was not significant in the long term. On the contrary, the indirect group indicated significant change both in the short and long terms. It should be noted that although both groups showed significant

change in the short term, the indirect group significantly outperformed the direct group at level 0.05.

Truscott's review of studies by Kepner (1991), Semke (1984), and Sheppard (1992) claimed that error correction does not have a significant effect on improving L2 student writing. Considering this limited range of studies, the present study sought to expand the base by investigating the effect of two types of feedback on the accuracy performance of six targeted linguistic error categories.

It was found that the Control group did not show any significant difference in the error reduction neither in posttest 1 nor 2 for all error categories. The indirect feedback had a significant effect on the accuracy both in the short and long term periods for articles, sentence structures, noun endings, verbs and total errors. However, it was not the case for prepositions and wrong words. For prepositions, it was only significant in the short term and for wrong words, it did not reach any statistical significance in the two posttests. The use of verbs, articles, sentence structures and noun endings are determined by sets of rules, however those concerning the use of prepositions and word choice are more idiosyncratic. As Ferris (1999) suggests, the former are more "treatable" than the latter. Considering the other type of feedback, the direct group did not show any significant error reduction for VE and WW on the two posttests. For other error types (i.e. NEE, SS, AE, PE, and Total), it indicated significant change only in the short term period. As a result, the direct feedback did not show any long term effect on the six targeted linguistic categories. For total errors, although both indirect and direct groups showed significant error reduction in the short term, it was the indirect group which outperformed the direct one.

To answer the third research question, the students' writings were observed to explore the probable use of avoidance strategy. Avoidance is a common communication strategy and could be divided into several categories. Syntactic or lexical avoidance within a semantic category is the most common type of this strategy (Brown, 2001). It has been argued that learners tend to

avoid the categories that have been the subject of corrective feedback (Sheppard, 1992; Truscott, 1996).

Truscott (1996) persuasively argued that this avoidance strategy thwarts natural language acquisition simply because grammar feedback encourages students to avoid risk-taking and experimenting with the grammatical forms that they have not fully mastered.

The two experimental groups in this study were provided with different CFs and they both were asked to revise their writing tasks. It is clear that the direct group did not have to reflect much during revision stage since they were provided with the corrected forms. On the other hand, the other experimental group experienced this process in a completely different way. They had their errors only underlined without any clues or correction. Accordingly, this group was forced to investigate and search for the correction by themselves. This different process during revision stage raised some questions.

Do the students search for the correction or do they just give up and omit the wrong form? Do they correct the mistakes or do they change them with the other forms of conveying the same meaning rather than those which have been underlined. Considering this, it may be concluded that the significant reduction of errors in indirect group can be due to the use of avoidance. They just did not use the wrong language they had become aware of.

In order to compensate for the use of avoidance strategy, cloze tests were constructed based on the students' committed errors on the first writing task (pretest). They were developed for each individual, thus, each student took a test on his/ her own errors to examine the acquired linguistic knowledge due to the provided CF. In this way, they could not ignore their committed errors any more. Table 6 shows the percentages of committed errors successfully corrected in the different categories. Percentages were derived by dividing right answers (i.e. the number of errors corrected) by the number of blanks in the cloze test (number of committed errors of each individual on the pretest). It is clear that both groups which received CF outperformed the control, "No CF" group.

Table 6: percentages of error correction

Group	VE %	NEE %	WW %	SS %	AE %	PE %	Total %
Direct	52	75	40	60	67	61	56
Indirec t	77	50	58	66	65	62	68
No CF	16	9	20	23	20	29	19

The percentages revealed that although the use of avoidance strategy is inevitable, the effects of CF cannot be underestimated. Table 6 shows that the students in both treatment groups outperformed the control group and could correct more than 50% of their errors except for the Wrong Words in the direct group. The indirect group outperformed the direct group for VE, WW, and the difference for SS, PE was not salient. It was the direct group which outperformed the indirect one for NEE.

6. Conclusion

In order to contribute to the need for further research on the value of providing corrective feedback on second language writing (Ferris, 1999; Truscott, 1996), the present study investigated the extent to which two types of corrective feedback on six targeted error categories helped EFL writers improve in accuracy. It found that indirect feedback enabled them to use the verb tense, articles, sentence structure, noun endings with significantly greater accuracy in both short and long terms than was the case with their use of prepositions and word choice. The other corrective feedback, the direct one, showed significant error reduction in the use of noun ending, sentence structure, article and preposition only in the short term. This was not the case for the word choice and verb tense which did not reach the statistical significance. After all, it was the indirect feedback group which outperformed the direct feedback group for the total number of errors.

This study is also an attempt to follow the recommended research by Bitchener et al. (2005) that suggested further research

do well to compare the effects of both direct and indirect written feedback to see if the same differential effects are observed between "treatable" error categories and the less "treatable" ones. As a result, not only the present study found that the indirect feedback had a greater effect than the direct feedback, but it also found that both direct (only in the short term) and indirect feedback (in short and long terms) facilitated improvement in the more "treatable", rule-governed features (VE, NEE, SS, AE) than in the less "treatable" feature (WW, PE). Consequently it is recommended that teachers provide the learners with corrective feedbacks on the more "treatable" types of linguistic error on a regular basis. The present study also found that although CF provision may lead to avoidance strategy and decrease in the length of the written work (Semke, 1984), no feedback is not an option. Grammar correction (whether direct or indirect) generally improve accuracy in the revised essays and it is more probable in new writings and long term for the indirect corrective feedback.

The findings of this study have demonstrated that EFL writers can improve the accuracy of their use of rule-governed linguistic features due to the provision of the indirect feedback both in the short and long terms.

Further research would need to be undertaken to see whether the present study's findings are also true for other linguistic forms where rules of usage are more complex and idiosyncratic than they are for the use of verb tense, article, noun ending and sentence structure. It is also recommended to consider other methods of corrective feedback on other different error categories.

Finally, it should be mentioned that students' output in writing process cannot improve if they do not receive teacher's systematic comments to change and remove their errors. It shows them that what they have produced is incorrect and thus helps them 'notice the gap between their own deviant productions and grammatically correct productions (Ellis, 1998, p.52). This is what grammar correction hopes to achieve.

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Appendix A: Example of error correction in the direct feedback group

my friend and me decided ^{to} go to Lima last year
My friend and I

everything was ok and we were going to Lima but
 suddenly our car stopped we got out of the car and
 checked if our car had broken down we were
 in terror in desert under hot sun and without
 anyone for helping I told call to police for help
 but our phones ^{were not working} were not working here we were disappointed
 at that situation but Good God sent a help car see
~~the police car was coming from there~~
 a police car was coming from there when ^{they} saw
 us stopped and we got very happy. we went
 with them to Lima and thanked them from them

Appendix B :Example of corrective feedback provision in the indirect group

Subject		
Year	Month	Date

Once upon a time I and my friend had a exciting day at a desert. one day I and my friend was driving in a desert and had a very interesting time but suddenly my car broke down. I didn't know that what was happening to my car and did a lot of works to repair it but none of the ways worked. for example my friend said that it's battery is not working because of the hot weather & then we decided to spray water on the battery but it didn't work.

It was noon and both of us was tired. then we decided to call my parents & ask them to help us. when I wanted to use my cellphone I've understood that my cellphone doesn't work too. after trying so hard for repairing the car, we got no results and it was 3:00 o'clock & we didn't have water to drink or food to eat so I decided to go & look for some help. 15

I leaved my friend alone & went through to hot and dangerous desert. After an hour I found a village and they went to help my friend. that night we stayed there and rested & we called our parents & at last we survived. 20

Appendix C :Example of cloze tests constructed based on students' committed errors.

Cloze test 1 was created for the written work in appendix B.

- We had (exciting day). We (enjoy) the trip although both of usvery tired. Suddenly my friend said that the engine (make) a terrible noise. I got out of the car to check what the problem
- I(understand) that
I didn't know anything about cars but I decided to go through

Cloze test 2 was created for the written work in Appendix C.

- 2) I was lost so Ithe police and asked for help. They arrived soon and one police officerthe car andnear me. He asked me to use my cell phone to call my parents but I told him that it Then they gave me a ride and helped me find my home. My parents got relieved and(thank) the police.