

# Comparative Investigation of the Effects of Immediate and Delayed Error Correction on the Achievement of Male and Female Iranian EFL Learners' Writing Skill

By

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## Abstract

*This paper reports An experimental study investigating the effect of different types of teacher written corrective feedback (immediate & delayed error correction) on Iranian EFL learners' writing accuracy in using two functions of English articles (a/an & the) and simple past tense (regular and irregular). Sixty Iranian learners of English were assigned into six groups of two immediate groups (n=20), two delayed groups (n=20) and two control group groups (n=20). The participating groups' homogeneity was checked by their performance in the proficiency test and the pre-test. During six treatment sessions, all the experimental groups received associated feedback on just the errors related to the use of English articles and the simple past tense but control groups didn't receive any feedback. On two occasions (pre-test and post-test), the participants completed a picture description task. Results of one-way ANOVA revealed that all of the six groups made gains from pre-test to post-test but immediate groups indicated more improvements than the other groups. In fact, teacher immediate feedback was more beneficial than delayed feedback and no feedback. Furthermore, scheffee post-hoc analysis indicated that the immediate group outperformed delayed group and control group, and delayed group was better than control group. The results of two-way ANOVA also indicted there was not a statistically significant difference between scores of males and females participants in experimental groups. The findings are interpreted to have direct implications for EFL teachers and instructors as well as syllabus designers and test developers.*

**Keywords:** *Writing, Corrective Feedback, Error, Error correction, immediate error correction, Delayed error correction*

## 1. Introduction

In language learning and language instruction, including writing in English as a Second or Foreign Language context, the vital role of feedback in students' learning is evident. Student writers gain benefits from sufficient writing practice and revisions. In these processes, student writers often rely on feedback either from a teacher, peer, or self. Feedback that students receive from a source, or a combination of sources, provides them with information about what is good and what needs to be improved so that they can incorporate and use the feedback in their revisions and in the final product of their writings.

A large number of studies have examined the effectiveness of corrective feedback on student writing although agreement on research findings to date is still inconclusive. Most of the studies found that feedback are helpful and effective in improving student writings. However, there have been controversies on the effectiveness of feedback on student writings (e.g., Fazio 2001; Kepner, 1991; Truscott, 1996, 1999, 2004, 2007; Truscott & Hsu, 2008; Sheppard, 1992) and conflicting findings in different areas of feedback such as feedback focus and strategy (e.g., Ashwell, 2000; Bitchener, 2008, 2009; Bitchener & Knock, 2008b, 2009; Bitchener, Young, & Cameron, 2005; Chandler, 2003; Ferris, 1999, 2004; Ferris & Roberts, 2001; Jacobs, Curtis, Braine, & Huang, 1998; Lalande, 1982; Robb, Ross, & Shortreed, 1986). Reviews on previous research reveal that disagreement on the findings on the effectiveness of corrective feedback on student writing may be due to design flaws in those studies as highlighted by Bitchener (2008), Ellis, Sheen, Murakami, and Takashima, (2008), and Guénette (2007). Such flaws may include the absence of a control group and too many areas of errors addressed in the studies.

Direct feedback, as referred to in this context, is “the provision of the correct linguistic form or structure above or near the linguistic error” (Bitchener, 2008) while indirect feedback is the situation where an error is indicated but the correct form is not provided (Ferris & Roberts, 2001). Consequently, these studies did not provide answers to questions of effectiveness of indirect teacher written corrective feedback on student writing with regard correct them immediately or with delay. However, this study adds some more sugar to the work by regarding direct written corrective feedback besides investigating the effects of immediate and delayed written corrective feedback on Iranian EFL learners’ writings accuracy with regard their genders.

### **Objectives of the Study**

The specific objectives of the study can be summarized as follows:

- To explore whether Iranian EFL learners' writing skill is affected by immediate and delayed error correction
- To explore Whether selected error corrections type, will improve student’s writing skill over time
- To find out the effects of gender in using immediate and delayed error correction on writing skill among Iranian male and female EFL learners.

### **Research Questions**

**RQ1.** Does immediate error correction have any effect on Iranian EFL learners’ writing skill?

**RQ2.** Does delayed error correction have any effect on Iranian EFL learners’ writing skill?

**RQ3.** Is there any significant difference between immediate and delayed error correction types?

**RQ4.** Is there any significant different between Iranian male and females learners writing skill?

## **2. Related Research**

### ***Feedback in Teaching of EFL Writing***

The role, importance, and effect of feedback in English as a Foreign Language (EFL) have been key issues in several studies in the teaching of writing (Paltridge, 2004; Reichelt, 1999). The large number of research studies focusing on different types of feedback and their impacts on student writing is evidence that many scholars and researchers believe that feedback plays influential roles in the writing process. Feedback on student writing can make learning more effective, as noted by Cardelle and Corno (1981), the more feedback students receive of their performance the better they understand what they need to do to correct their mistakes. The understanding of why they made mistakes and how to correct such mistakes helps students correct their mistakes and increase their achievement (Kulhavy, 1977). Student writers who receive feedback will have information about which parts of their texts need to be corrected and improved. Carless (2006) confirms that students who receive feedback during the writing process have a clearer sense of how well they are performing and what they need to do to improve. Feedback can also modify students’ thinking or behavior toward their work and focus their attention on the purpose of writing. Furthermore, feedback can provide assessment on how well the students perform their work or their accomplishment of a given task (Schwartz & White, 2000) as feedback is meant for helping students narrow or close the gap between their actual ability and the desired performance (Brookhart, 2003). Teachers are responsible for helping students develop their ability to reach their learning goals through teachers’ feedback.

Feedback raises students’ awareness of the informational, rhetorical, linguistic expectations of the reader (Hedgcock & Lefkowitz, 1994). As Williams (2005) suggests, feedback in writing can stimulate explicit knowledge of student writers. Williams (2005) describes explicit knowledge as the knowledge of language rules that students can articulate and provide reasons that certain rules should be applied. Students who receive feedback will resort to their prior knowledge about language and writing rules that they have learned. In writing, student writers will apply explicit knowledge as stimulated by the feedback on their writing.

Feedback can increase students' attention on the subject they are writing. Students who receive feedback will pay more attention to what they have written that, beyond their knowledge or awareness, their work does not meet certain standards. The feedback that they receive draws students' attention to those aspects of their writing that need remediation, and by doing so; they learn how to improve their performance. The increase of attention will lead to writing improvement which can be defined as a gain in accuracy in both form and content of writing as indicated by Ashwell (2000) and Lamberg (1980).

A large number of studies have been conducted to investigate the effects of feedback on student writing. Studies on feedback in relation to writing performance and accuracy have ranged from feedback source, function, focus, strategy, to feedback media. Among studies on feedback source which include teacher, peer, and self, are studies such as those conducted by Jacobs, Curtis, Braine, & Huang, (1998); Keh (1990); Min (2006); Tsui and Ng (2000); and Zhang (1995). Also among studies on feedback function, which include informative and corrective feedback, lies studies conducted by, Fazio, (2001); Ferris and Roberts (2001); Frantzen, (1995); and Hyland and Hyland (2001). Other studies conducted on feedback strategy such as direct and indirect feedback such as those conducted by Ashwell (2000); Bitchener (2008); Bitchener et al. (2005); Chandler (2003); Ferris and Roberts (2001); Lalande (1982); Robb et al. (1986). Studies on feedback media including written, oral, and electronic were conducted by Bitchener et al. (2005); Goldstein (2004); Hyland (1998); Liu and Sadler (2003); and Matsumura and Hann (2004) among others. The many studies on feedback in its many forms and its efficacy on student writing demonstrate the paramount place of feedback in the teaching and learning of writing.

### ***The effectiveness of WCF***

A number of studies conclude that WCF is effective in helping ESL students improve the accuracy of their writing but many of these (Chandler, 2000; Ferris, 1995, 1997, 2006; Ferris & Helt, 2000; Ferris *et al.*, 2000; Lalande, 1982) were designed without a control group so there is no way of knowing whether the improvements in accuracy were a result of only the WCF treatment. Seven studies, however, have compared groups of students who received WCF and those who did not. Five of these studies (Ashwell, 2000; Bitchener, 2008; Fathman & Whalley, 1990; Ferris & Roberts, 2001; Sheen, 2006) report that WCF had a positive effect on accuracy.

The other two studies (Kepner, 1991; Polio, Fleck & Leder, 1998) that included a control group in their design report that WCF was not effective in helping students improve the accuracy of their writing. However, it needs to be realized that both of these studies contained design flaws and therefore must be read with this in mind.

Other studies (Chandler, 2000; Ferris, 1995, 1997, 2006; Ferris & Helt, 2000; Ferris *et al.*, 2000; Lalande, 1982) that have not included a control group are unable to claim that it was WCF alone that facilitated improvements in accuracy. At best, they can be read as indicative of the potential that WCF might have for helping learners improve the accuracy of their writing. Overall, it can be seen that the currently available evidence is far from conclusive and that a body of well-designed studies is needed if this key issue is to be resolved.

## **3. Methodology**

### ***Design of the study***

The present study was designed to compare the effects of immediate corrective feedback and delayed corrective feedback on the participants' writing skill. The design of this study is quantitative experimental one. As Given (2008), the objective of quantitative research is to develop and employ mathematical models, theories and hypotheses pertaining to phenomena. The process of measurement is central to quantitative research design which is in line with the aims of this study.

### ***Population***

The participants in this study were 90 male and female EFL learners (their L1 was Persian). They were aged between 15 and 29. After administration of the proficiency test, 60 learners who scored between, 26-35 were selected and were divided into six groups randomly; four experimental groups (20 males and 20 females in each group) and two groups that served as control groups (10 males and 10 females). Two first experimental groups (one male and one female group) were called IG (with immediate feedback) and the third and fourth experimental groups (one male and one female group) were called DG (with delayed feedback). Finally two control groups (one male and one female group) were called CG. All the participants were at the same level of language proficiency, namely pre-intermediate and the study was conducted at an English teaching Institute in Shiraz.

### **Instruments and Materials**

#### ***Instructors***

A teacher was asked to assist the researcher in carrying out the present research. The selection of the teacher was based on his willingness to participate and his availability during the treatment sessions. The teacher was native speaker of Persian and fluent speaker of English and had a master's degree in English teaching and had been teaching for 10 years. He was assigned into treatment conditions by the researcher (teacher for all three male groups). Before the actual experiment, the teacher was given a booklet to assist him in holding treatment sessions. The booklet contained descriptions of the current study's objectives, schedule, general procedure and treatment material. The researcher herself (teacher for all three female groups) was in charge of preparing the instruments and rating the learners' exam.

#### ***Raters***

The researcher herself was the first rater of the learners' exam. The researcher did the inter-rater reliability because Mackey and Gass (2005) claim that it is essential to have the second rater to increase the reliability of the research results. A second rater then scored the total written data from each test (pre- and post-tests). In order to do this the second rater was provided with the guidelines of scoring. The researcher calculated the correlation between the scores. The inter-rater reliability of pre-test, post-test, and delayed post-test was 0.78 and 0.86.

#### ***Instruments***

All instruments which were used in the study are going to be described in more details in the following section.

#### ***Oxford Placement Test***

This test which included vocabulary, grammar, reading and writing questions was used in order to get homogenous groups of participants. This test included 46 multiple choice questions of grammar and vocabulary from easy to difficult and from elementary to pre-intermediate. It included a reading text with 5 graded comprehension questions and an essay writing question. All the students who were the candidates took it. The participants who scored from 26 to 35 were considered as pre-intermediate level.

#### ***Treatment Material***

There were six treatments. They were six topics and the learners were asked to write a composition about them.

#### ***Pre- and Post-test***

Both pre- and post-test were picture description tasks. They were adapted by the teacher and prior to the actual research they were piloted in order to estimate the allotted time to complete the task or to improve any possible error or misunderstanding. Picture description task included sequential pictures with the key words written next to each picture.

### ***Procedure***

Prior to taking any step in doing the present research, participants were required to take a proficiency test. Based on the scores obtained, subjects whose scores ranged from 26 to 35 participated in the study and were assigned into six comparison groups. In order to make sure that there was no statistically significant difference among six groups, a one-way ANOVA was run, which confirmed that there was no significant difference across the six groups. Following the ethics of research, after the participant recruitment, the researcher informed all the participants orally of the general purpose and procedure of the study of the research. The researcher said to the participants that the study was about feedback, but the hypothesis and the kind of feedback was not explained. The consent form were administered and collected before the administration of the pre-test.

Two days before the treatment sessions, the six participating groups took the pre-test. A one-way ANOVA ran on the scores revealed no statistically significant difference among the six groups.

According to Tarone (1985, as cited in Salaberry& Ortega, 1998) no single task can assess the accurate use of the learners' any grammatical system so the pre-test and post-test included two tasks, two picture description tasks.

In order to help the learners in constructing or retelling stories, following Muranoi (1996, 2000) in picture description task, a series of word cues was provided to the learners. The first word cue of both tasks included adverb of time (e.g., once upon a time) "in order to prompt the use of the past tense" (Salaberry& Ortega, 1998). They have reported that "this type of prompting was successful in generating past-tense narrations".

Hulstijn and Hulstijn (1984, as cited in Salaberry& Ortega, 1998) claimed that the greatest difference in accuracy occurs when participants are under time pressure. So a time pressure of 30 minutes was given to each student to complete the test. Ellis (1985, as cited in Salaberry& Ortega, 1998) states that there is no objective means of determining task completion time unless doing the task itself by the learners. In order to make sure about allotted time, the tests were piloted prior to the experiment and time period in which the pilot group students completed the tests was 22 to 30 minutes.

Participants in all six groups were involved in six treatment sessions. Each writing task lasted about 30 to 45 minutes. The selection of the treatment tasks was based on (a) it must elicit the use of past tense forms and articles in the learners' writing production; (b) the students feel comfortable while completing the tasks; (c) the activities do not focus on forms exclusively (Long & Robinson, 1998), it should have meaningful contexts; (d) all tasks should involve output production which is in line with Swain's output hypothesis (1995) and Schmidt's noticing hypothesis (2001) which claims that output production with feedback may assist the learners to notice the mismatch between the input and output.

Prior to the use of the treatment and testing instruments, the researcher piloted them in the pilot group, which was at the same level as the participating groups and from the same pool of the study as well.

Once the student writings were produced, the teachers provided immediate, delayed or no feedback in response to students' errors consistently depending on the experimental and control conditions.

Teachers just indicated the errors associated with the use of English articles and simple past tense (regular and irregular) by underlining them for the no feedback group. For immediate groups, teachers gave the correct forms of the related errors in the learners' sheets at that session. And for delayed groups, teachers gave delayed feedback to the students' sheets at the next session and. Participants in control groups didn't receive any feedback.

The post-test was administered to all six groups after treatment sessions. It also included picture description tasks. The pre- and post-test were parallel and the researcher used two versions (A & B) of picture description task during the two testing sessions; so the participants could not rely on their memory from the previous test to do the task.

#### **Target structures**

This study concentrated on student errors on just two types of grammatical structures; English indefinite and definite articles (*a/an* for referring to something for the first time, i.e., first mention and *the* for referring to something already mentioned, i.e., subsequent mention), and simple past tense (regular and irregular).

## **4. Data and Result**

Descriptive statistics for the scores of the learners on pre-test was conducted after the pre-test administration. Table 1 shows the results.

**Table 1: Descriptive Statistics for Scores on Pre-test by Gender**

Source	Gender	N	M	SD
DG	Male	10	13.02	0.380
	Female	10	12.95	0.368
IG	Male	10	13.42	1.253
	Female	10	13.22	0.880
CG	Male	10	12.85	0.529
	Female	10	12.72	0.463

**Table 2: One-Way ANOVA for Scores on Pretest**

Source	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.894	2	1.447	2.902	0.063
Within Groups	28.426	57	0.499		
Total	31.320	59			

The results (Tables 1 & 2) show that three groups' did not perform differently.

**Table 3: Descriptive Statistics for Scores on Post-test by Gender<sup>60</sup> EFL Learners**

Source	Gender	N	M	SD
DG	Male	10	16.48	0.423
	Female	10	16.72	1.208
IG	Male	10	17.16	0.429
	Female	10	17.34	0.400
CG	Male	10	15.68	0.423
	Female	10	15.58	0.370

Before discussing the main results of two-way ANOVA, it should be mentioned that the groups, enjoyed homogeneous variances (Levene's  $F=1.46$ ,  $Sig> 0.05$ ). Table 4 shows the result.\

**Table 4: Test of Homogeneity of Variances for Scores on Post-test**

F	df1	df2	Sig.
1.463	5	54	.217

As there are two independent variables, namely type of error correction and gender, the present data analysis utilized a two-way ANOVA to explore the impact of sex and type of error correction on learners' writing skill. As can be seen in Table 5 there was a statistically significant main effect for group ( $p=0.000 < 0.05$ ). Using Cohen's (1988) criterion, the effect size for this difference (partial eta squared =.562) can be considered as large. These results suggest that immediate error correction had a significant effect on students' writing accuracy.

As shown in Table 6 the p-value of gender was higher than 0.05 ( $.50 > .05$ ). It indicates the fact that there was no significant main effect for gender and gender had not a significant effect on students' writing accuracy. The interaction effect between gender and error correction type was not statistically significant either ( $.65 > .05$ ). This indicates that there was no significant difference in the effect of error correction on writing ability for males and females.

**Table 6: Two-way ANOVA for Scores on Post-test**

Source	SS	Df	Mean Square	F	Sig.	Partial Eta Squared
Group	26.585	2	13.293	34.656	.000***	.562
Gender	.171	1	.171	.445	.508	.008
Group*Gender	.329	2	.165	.429	.653	.016
Error	20.712	54	.384			
Total	16369.600	60				

A Post-hoc multiple comparisons was run to examine the differences between the three groups statistically and to pin down where the differences exactly lie, as shown in Table 7 The results obtained from these comparisons indicated that the mean score for DG ( $M=16.60$ ) was significantly different from both IG ( $M=17.25$ ) and CG ( $M=15.63$ ) and also the mean score for IG ( $M=17.25$ ) was significantly different from CG ( $M=15.63$ ). These comparisons coupled with the descriptive statistics presented in Table 5 revealed that experimental group two (IG) outperformed delayed experimental groups (DG) and control groups (CG) and delayed experimental groups (DG) performed better than control groups (CG).

**Table 7: Post-Hoc Tests (Multiple Comparisons) of the Three Groups for Scores on Post-test**

Group		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
DG	IG	-.6500*	.19585	.005	-1.1220	-.1780
	CG	.9700*	.19585	.000	.4980	1.4420
IG	CG	1.6200*	.19585	.000	1.1480	2.0920
	DG	.6500*	.19585	.005	.1780	1.1220
CG	IG	-1.6200*	.19585	.000	-2.0920	-1.1480
	DG	-.9700*	.19585	.000	-1.4420	-.4980

## 5. Conclusion

The findings of the current study shed light on the role of teacher written corrective feedback in improving EFL learners' writing accuracy. The results of this study can be used to inform ESL/EFL teachers and researchers interested in applying or investigating teacher various types of written corrective feedback as used in this study. The finding that participants in the treatment groups in this study gained in grammatical accuracy, may encourage teachers and researchers in the ESL/EFL field to provide corrective feedback with confidence that students can benefit from feedback. Additionally, teachers should feel confident that providing direct feedback is more effective and helps learners to improve better in accurate use of target forms than indirect feedback.

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