The Impact of Direct-indirect Corrective E-feedback on EFL Students' Writing Accuracy

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Abstract—**The purpose of this study was to investigate the effect of direct-indirect corrective feedback via e-mail on the writing accuracy students at kindergarten section, Suez Faculty of Education, Egypt. The design of the study was a pre-post quasi experimental design. The main instrument of the study was a pre-post writing test. The participants were forty eight junior EFL students at the kindergarten section, randomly divided into two groups: experimental group (n=25) and control group (n=23). Both groups were tested using the pre-post writing test before and after the experiment. During the treatment, the experimental group received direct-indirect teacher corrective feedback on their writing compositions via e-mail while the control group received no feedback. Differences between the participants' mean scores on the pre test and post test were calculated for each group separately using Paired Samples T-Test which revealed significant differences between the pre-test and posttest of the experimental group mean scores. Independent Samples T-Test was used to calculate the differences between the experimental and the control groups' mean gain scores on the pre and post test of writing. Significant differences existed in favor of the experimental group mean gain scores.**

Index Terms—**direct corrective feedback, direct-indirect corrective feedback, indirect corrective feedback, kindergarten University students, writing accuracy**

I. INTRODUCTION

Writing is a very challengeable skill for EFL/ ESL learners who need it as a tool for employment and promotion (Graham & Perin, 2007). Celce-Murcia (2001) believes that a major achievement for EFL/ESL learners is to express their ideas in writing with reasonable accuracy that even many native speakers of English never master. Also, for many researchers (e.g., Celce-Murcia 1991; Schmidt 1994; Shaw & Liu 1998) writing accuracy is essential for FL learners to achieve their educational and professional goals. Additionally, in many educational contexts, especially Egypt, teaching writing is based on examination, with accuracy as the most significant criterion of assessment (Ghassemi, et al. as cited in Talatifard, 2016). Therefore, writing accuracy is one of the important pillars for writing appropriate and acceptable texts (Kadkhodaei, Gorjian, & Pazhakh, 2013).

Improving students' writing accuracy is an essential factor in effective writing because the effectiveness of a piece of writing will be determined, in part, by its accuracy (Baleghizadeh & Gordani, 2012). That is why corrective feedback has received so much attention in the recent decades (Maleki & Eslami, 2013). Although it is not easy for EFL students to reach writing accuracy (many FL speakers may have similar difficulty), they should do their best to improve it to make their writing as readable as possible (Baleghizadeh & Gordani, 2012). Therefore, many FL writing teachers try hard to help their students produce accurate writings (Almasi & Tabrizi, 2016).

As a lecturer of TEFl, the researcher noticed that most students in the kindergarten section suffer from low levels of writing accuracy. Most of them have difficulty discriminating English phonemes that do not already exist in the phonology of their native language (i.e. Arabic) (August, Shanahan, & Escamilla, 2009; Gilmore, 2011; Yeung & Chan, 2012; Escudero, 2014), therefore most of their word spellings are wrong (e.g., spelling "hed" instead of "head", and "sed" instead of "said"). Also, reviewing their results in the subject of *"English for non-English major students"* revealed that most students perform badly in the exams that are accuracy based. Even their achievement in the subjects taught in English (e.g., *Ways of teaching English*) is very low because they lack the ability of writing readable paragraphs. In the Egyptian context**,** Ghoneim and Elghotmy (2015) found weaknesses in kindergarten university students' reading accuracy and phonemic awareness but no study, to the researcher's knowledge, examined the writing accuracy of EFL students in the kindergarten section.

The kind of corrective feedback provided to students is one of the important variables for developing the writing accuracy of EFL learners (Tafazoli, Nosratzadeh, Hosseini, 2014). Burstein et al. (2004) assures that the best way for learners to improve their writing accuracy is to write, receive feedback, revise depending on the feedback, and finally repeat the whole process as often as possible.

A. Statement of the Problem

The problem of the present study was the low level of writing accuracy among kindergarten junior students at Suez Faculty of Education, Suez, Egypt. Therefore, the present study would integrate the direct and indirect electronic feedback to develop kindergarten students' writing accuracy.

B. Hypotheses of the Study

A. There would be no statistically significant differences in the mean scores of the control group on the pre and post test of writing accuracy.

B. There would be no statistically significant differences in the mean scores of the experimental group on the pre and post test of writing accuracy.

C. There would be no statistically significant difference in the gain score of the control group and that of the experimental group on the post test of writing accuracy.

C. Significance of the Study

A. It is hoped that the findings of this study can serve as evidence on the effectiveness of combining direct and indirect corrective feedback to improve EFL students' writing accuracy.

B. Teachers, curriculum developers, as well as educational authorities should become familiar with integrating direct and indirect corrective feedback strategies into the writing courses in order to create an environment which positively affects the learning process as a whole.

C. It would show the feasibility of integrating technology in writing classes.

D. Terminology

Direct-indirect corrective e-feedback is operationally defined as a proposed strategy of corrective feedback via e-mail. It combines the direct and the indirect types of corrective feedback. It consists of three main phases: The first phase is the encoded indirect phase where the teacher only underlines or circles students' mistakes without giving any symbol indicating the type of the error or how to correct it, giving students the chance to think and try to detect the errors and correct them by themselves. In the second phase, the teacher underlines the mistakes and writes symbols indicating the type of errors in order to help the students correct them. Finally, the direct phase of feedback where the teacher directly corrects the errors the students were unable to correct, by writing the correct form over/behind the mistakes.

Writing accuracy is operationally defined as the improvement in the participants' ability to write a paragraph without committing errors in the following writing aspects: punctuation, articles, subject-verb agreement, spelling, and conjunctions as manifested by their gain scores between the pre test and the post test of writing accuracy.

II. REVIEW OF RELATED LITERATURE

A. History of Corrective Feedback

Before 1996, many teachers, educators, and researchers implicitly agreed that corrective feedback helps in improving EFL learners' writing accuracy (Sameera, Amin, Siddiqui, 2016). However, in 1996, all that changed when John Truscott published his report about the inefficacy of the corrective feedback. He claimed that students feel stressed when they are notified of their errors and this, in turn, prevents them from writing or finding writing as an interesting learning activity. To support his claim, Truscott cited many studies (e.g., Hendrickson, 1980; Robb, Ross, & Shortreed, 1986; and Kepner, 1991) that showed error correction as an ineffective activity. Additionally, he mentioned Semke's (1984) and Sheppard's (1992) studies to assure that corrective feedback can be harmful because it impacts fluency. Building on that, Truscott concludes that corrective feedback should be abandoned (Sameera, Amin, & Siddiqui, 2016).

One of the major opponents to Truscott's views was Dana Ferris who noted that Truscott ignored some positive evidence in favor of corrective feedback. He also acknowledged that more research was required to reach a conclusive answer in discussing whether different types of feedback have different results on students' writing or not. Hyland and Hyland (2006) confirmed that feedback helped students gain control over the writing skill. Also, Sheen, Wright and Moldawa (2009) stated that corrective feedback helped learners to notice their errors and controlled the accuracy of their writing. Students become frustrated if their teachers do not give them feedback on their writing (Hedgcock & Lefkowitz, 1994; Ferris, 1995; Lee, 2004). To evidence the positive effect of feedback, Evans, Hartshorn, and Tuioti (2010) conducted a survey among 1053 ESL and EFL writing instructors and found that 92% of the instructors provide some sort of error correction because: 1) it improves students' ability to correct and understand errors, 2) students expect feedback on their writing, and 3) students prefer it. On the other hand, with the absence of feedback, Brookhart (2008) stated that students become unmotivated, and lose sense of which factors of their writing need improvements. Additionally, Lee (2008) argues that learners may have inaccurate impression about their writing performance with the absence of feedback.

B. Theoretical Perspectives of Corrective Feedback

The idea of corrective feedback has a strong foundation in major learning theories that focus on what happens inside the learner's head by focusing on the effective role of attention and rehearsal in facilitating the process of acquisition (Kim, 2012; Almasi & Tabrizi, 2016).

Firstly, corrective feedback is based on Schmidt's (1990) noticing hypothesis which underlines the significant role of grammar and conscious attention to form in fostering the process of language learning. He argues that learners' awareness of the existence of differences between their target language and their interlanguage (i.e., "noticing") is "the necessary and sufficient condition for converting input to intake" (p. 129). In 2001, Schmidt states that for language acquisition to take place there must be some exclusive attention to form. Accordingly, error correction (also known as grammar correction or written corrective feedback) is important as it draws learners' attention to language form (Ji, 2015).

To the behavioral theories, feedback is considered as a means of encouraging learners' motivation and ensuring their linguistic accuracy. Ellis (2009) shows that feedback may be positive or negative. To him, positive feedback occurs when a learner's response is correct. This positive feedback provides affective support to learners, fosters their motivation, and encourages them to continue learning (Ellis, 2009).

According to the cognitive load theory the working memory should have as less load as possible to optimize learning (Sweller, 1988). For learning to take place, there should be a link between schematic structures of long term memory and new data for the learning to be lasting (Sweller, 1988). Therefore, corrective feedback helps learners' to focus on the areas they have difficulty with while freeing their minds to process language content (Maleki & Eslami, 2013).

C. Types of Corrective Feedback

Many researchers and theoreticians (e.g., Bates, Lane, & Lange 1993; Ferris, 1995; Ferris & Hedgcock, 1998; Ferris & Roberts, 2001; Ellis, 2009) have agreed upon two main kinds of corrective feedback, namely direct corrective feedback and indirect corrective feedback.

Direct (Explicit) Corrective Feedback

Direct feedback is a strategy that helps students correct their errors by providing the correct linguistic form (Ferris, 2006). The teacher provides students with the correct form of their errors or mistakes orally or in written (Bitchener, Young, & Cameron, 2005; Elashri, 2013). Direct feedback takes different forms; it may be done by striking out an incorrect word; inserting a missing word, phrase, or morpheme; and providing the correct linguistic form usually above the wrong form or in the margin (Ferris, 2006; Ellis, 2008). Bitchener and Knoch (2010) argue that direct feedback is more helpful to writers because it explicitly shows learners what is wrong and how it should be written correctly; minimizing students' confusion over teachers' feedback. Therefore, this type is more appropriate to student writers of low proficiency level who do not have the ability to self-correct their errors even when they are marked for them (Ferris & Roberts, 2001; Ferris & Hedgcock, 2005; Ellis, 2009).

Many researchers (e.g., Ko & Hirvela, 2010; Elashri, 2013) argue that direct teacher feedback is one of the least effective methods of giving feedback to students. Clements et al. (2010) as well as Elashri (2013) believe that this type leaves no work for learners to do and no chance for them to think about the errors. Rewriting teacher's corrections is a passive action that does not teach students how to recognize or correct errors on their own. Therefore, it does not lead to long-term learning because it requires minimal processing on the part of the learner (Khodareza & Delvand, 2016).

Indirect (Implicit) Corrective Feedback

On the other hand, indirect feedback is a feedback strategy that indicates the existence of an error without providing the correct form (Ferris & Roberts, 2001). In this type, teachers only provide indications that make students aware about their errors but they do not provide the students with the correction (Ferris & Roberts, 2001; Lee, 2008). For example, teachers can provide general clues about the location and type of an error by using a line, a circle, a code, a mark, a highlight or a cursor to show omissions in learner's text (O'Sullivan & Chambers, 2006), or by placing a cross in the margin next to the line including the error (Talatifard, 2016). In this type, Elashri (2013) mentions two sub-types: Coded and uncoded indirect feedback. As for the coded indirect feedback, the teacher underlines the error and writes the symbol above that error, and then he/she gives the composition to the student to correct the error as this symbol encourages the student to think. In the uncoded indirect feedback, the teacher underlines or circles the error without writing any symbols and the student has to think what the error is and corrects it. These symbols and codes indicate the location and type of error (Ibid).

In the indirect feedback, students are cognitively challenged to correct the error based on their informed knowledge. This type increases students' engagement and attention to forms and improve their problem-solving skills which many researchers (e.g., Ashewell, 2000; Ferris, 2003; Bitchener & Knoch, 2008) agree that it is beneficial for fostering long-term acquisition. The advantages of this type has been supported by Moser and Jasmine's (2010) study which revealed that students who were indirectly corrected by using an error code in revising their essays achieved significantly greater gains than those whose writing assignments were directly corrected by the instructor. On the other hand, Srichanyachon (2012) argues that students with low level of writing proficiency may be unable to recognize and correct errors even when they become aware of their location.

Regardless the type of corrective feedback, it is crucial to consider how the students respond to the provided correction (Khodareza & Delvand, 2016). When the teacher provides the feedback, he/she should expect a new version of the writing assignment that shows how the students have responded to his/her comments. In this way, feedback

becomes a part of the language learning process because students become able to diagnose the mistakes they have made then correct them. If students have made the changes to their writing assignment and correct them, the process of feedback is now finished (Khodareza & Delvand, 2016). If students, as Harmer (2001) argues, refer to books of grammar or dictionaries to correct the errors, the provided feedback has achieved its positive outcome.

Corrective E-Feedback

Nowadays, the role of net-worked communication in language learning process is inevitable. The integration of technology and foreign language learning shows itself in electronic feedback (Farshi &Safa, 2015). Several types of technologies have been implemented in FL writing classes to investigate their role in increasing the efficiency of the process of feedback (Saadi & Saadat, 2015). The last decade has witnessed a huge interest in the study of electronic email in general (Trenchs, 1996), and e-feedback via e-mail as one of the most prevalent applications of computers in writing classes in particular (e.g., Nagata, 1997; Tuzi, 2004).

Many researchers suggest many benefits of electronic feedback, such as greater levels of participation (Gonza 1ez-Bueno, 1998), more motivation and interest (Skinner & Austin, 1999 as cited in Shang, 2007), providing non-threatening environment (Colomb & Simutis, 1996), reducing anxiety (Kupelian, 2001), etc. Additionally, Learners can contact and communicate their teachers and even their peers at any time and even more easily; by doing so, the distance between learners and teachers becomes much closer than past (Farshi &Safa, 2015).

In Koolivand and Iravani's study (2013), students who received electronic corrective feedback made greater improvement than learners who received traditional feedback. Also, Tafazoli, Nosratzadeh, and Hosseini's (2014) study revealed that electronic feedback has positive effect on the writing accuracy of Iranian ESP students. The obtained results from Farshi and Safa's (2015) study showed that electronic feedback was more effective and profitable than traditional type.

Direct-Indirect E-Feedback

Many researchers (e.g., DeKeyser, 1998; Hulstijn, 1995) think that there is a connection between direct and indirect knowledge bases. Accordingly, the researcher suggests integrating direct and indirect corrective feedback to develop the writing accuracy of EFL students. Through indirect feedback, learners can diagnose their errors and use their mind, resources to correct their errors. Then, through the direct feedback, the researcher can fill the gaps in their linguistic knowledge and provide them with the direct knowledge concerning the complex structures. Therefore, the process of feedback follows the following steps:

Encoded Indirect Feedback Through E-mail.: The students send their paragraphs to their teacher via e-mail. The teacher underlines or circles the error or the mistake without writing the correct answer or any symbols above or behind the error, and the student thinks about errors and tries to correct as many errors as possible. The aim of this step is to engage students in deeper processing. After correcting as many errors as possible, each student has to re-send the essay to the teacher via e-mail.

Coded Indirect Feedback Through E-mail: In this step, the teacher underlines the errors and writes the symbols indicating the errors above or beside the them. Then, teacher re-sends the composition to each student to try to find out the types of errors based on these symbols.

Direct Feedback via E-mail: This is the last step in the suggested feedback model, the teacher provide students with direct feedback whether positive if there is no more errors or negative if errors are still found.

To the researcher's knowledge, no empirical study has investigated the effect of direct-indirect feedback on the writing accuracy of EFL students till now. Therefore, the present study aims to examine the impact of integrating indirect feedback with direct feedback on the writing accuracy of EFL students in the kindergarten department.

D. Corrective Feedback and Writing Accuracy

Accuracy is defined by Skehan (1996) as "how well the target language is produced in relation to its rules" (p.23). In its simple form, accuracy is defined by Foster and Skehan (1996) as the freedom of the written work from error. Wolfe-Quintero, Inagaki and Kim (1998) defined writing accuracy as being free from errors while using the language in written communication.

Many researchers (e.g., Ferris & Roberts, 2001; Hong, 2004; Ferris, 2006; Truscott & Hsu, 2008; Bitchener & Knoch, 2010; Saadi & Saadat, 2010; van Beunigen, de Jong, & Kuiken, 2012) are interested in whether corrective feedback in general has any effect on written accuracy. For example, the effects of corrective feedback in reducing the number of errors were evidenced in Ferris' (2006) study with 92 ESL students. He found a significant reduction in the number of errors from the first draft to the last draft. Also, Bitchener and Knoch (2010) emphasized the importance of written corrective feedback on improving language accuracy of advancedL2 learners. Moreover, Saadi and Saadat (2015) revealed that the effect of direct and indirect corrective feedback on writing accuracy was significant in favor of post tests.

Reviewing the literature, it is found that direct corrective feedback is only effective for certain types of errors (Sheen, Wright & Moldawa, 2009). For example, it is found in the previous research that direct corrective feedback is effective on structural and lexical errors (e.g., Leki, 1991; Ashwell, 2000). In the Chinese context, Chen and Li (2009) revealed that direct corrective feedback was significantly better than indirect correction on students' accuracy. Almasi and Tabrizi (2016) examined the effect of different types of written corrective feedback on the writing accuracy of Iranian

EFL learners. Results revealed that the direct feedback group significantly outperformed the other groups in their writing accuracy.

On the other hand, other studies found indirect corrective feedback more effective on writing accuracy. For example, Wang and Hu (2010) found support for indirect error correction in improving language accuracy compared with the absence of teacher feedback. Additionally, Khodareza and Delvand (2016) investigated whether the type of feedback (direct or indirect) given to 60 intermediate EFL learners on six types of errors (verb tense, noun ending, word choice, sentence structure, article and preposition) resulted in improved accuracy in narrative writing or not. The study found a significant effect for the indirect feedback on accuracy improvement because the indirect group outperformed the direct group on accuracy improvement for total errors.

III. METHODOLOGY

A. Design

This study employs the pretest-posttest quasi-experimental design. Employing this design, the researcher assigned two groups (control and experimental) selected from EFL students, kindergarten section at Suez Faculty of Education, Suez University, Egypt. The two groups were first pretested in writing accuracy to find out their initial levels in the dependent variables (writing accuracy). During the experiment, the experimental group was exposed to the direct-indirect electronic feedback. At the end of the experiment, both groups were posttested.

B. Participants

Forty eight EFL students, kindergarten section at Suez Faculty of Education participated in this study. Their ages ranged from 19-21 years old. The participants were chosen on purpose during the first semester of the 2016-2017 academic year. They were divided into two equivalent groups (control and experimental) depending on their scores in the pretests of writing accuracy, devised by the researcher. The experimental group received the direct-indirect feedback via e-mail. The participants learn English during the course of "English for non-major students" where they learn the four language skill with emphasis on some grammatical points.

C. Instrument

To accomplish the objectives of the study, the researcher designed a writing test to measure students' writing accuracy before and after participating in the study. The test included two questions. The first question consisted of two topics and students should choose one of them to write about. Each student should write an essay within a 30-minute time limit. The second question required each student to search and correct, also in 30 minutes, a writing sample that had 20 errors covering the five writing accuracy aspects highlighted during the study. Each writing accuracy aspect received four points, one point for each error, with a maximum question score of 20. Each student was required to underline the error and correct it.

The test re-test technique was used to measure the reliability of the test. The test was administered twice to a pilot study of ten kindergarten students within a two-week interval between the two tests. The reliability coefficient of the test was 0.81, which is statistically acceptable for the purposes of the study. Additionally, to assure the reliability of the scores, correlation test was performed between the scores given by the two raters to the same writing to check the inter-rater reliability. The average of the two scores was considered as the final score. The difference between the pre and posttest of each participant was considered as the amount of improvement.

D. Measuring Writing Accuracy

Analyzing writing accuracy is based on counting the number of errors in a written text (Wolf-Quintero et al., 1998). Many researchers (e.g. Sharma, 1980; Homburg, 1984; Hirano, 1991; Henry, 1996; Wolfe-Quintero et al., 1998) agreed that there were two main approaches for analyzing writing accuracy. The first approach is to find out whether clauses, sentences or T-units are error-free. Here, the accuracy is measured by "counting the number of error-free T-units per T-unit (EFT/T) or the number of error-free clauses per clause (EFC/C)" (Wolfe-Quintero et al., 1998:35). The second approach was developed by Homburg (1984). This approach deals with the number of errors in a text. Errors can be categorized into two types (syntactic or lexical), or three different levels (normal, serious and grave). As indicated by Polio (1997), this approach is based on counting errors in T-units and then classifying them into types which is a more detailed approach.

To find out if students' improvement could be attributed to the feedback provided to them during the quasi-experimental study, the error counting method can be applied in several ways. For example, Fischer (1984) counted the number of errors (grammar and vocabulary) per clause. Zhang (1987) counted the number of errors per 100 words to calculate linguistic accuracy. Carlisle (1989) counted the number of errors per T-unit to calculate frequency. To analyze the effect of two types of feedback on students' writing, Kepner (1991) counted all grammatical, vocabulary and syntactic errors at sentence level. In the present study, following Fischer (1984)'s with a minor adaptation, accuracy was also calculated by counting the number of errors committed in the following writing aspects: Subject-verb agreement, punctuation, spelling, articles, conjunctions)

E. Procedures

The procedures of the study followed the following four successive stages:

A. Pre-Testing the Participants: The participants were pretested on writing accuracy using the writing test developed by the researcher. The purpose was to determine students' level of writing accuracy in order to insure the equivalence of the two groups (control and experimental) in the dependent variables (writing accuracy). Depending on their scores in the pretest, participants were divided into two groups: the control group (23 students) and the experimental group (25 students).

B. Setting the Scene: Before starting, the researcher made sure that all the participants had e-mail accounts and they knew how to send and receive e-mails. Then, orientation session was given to the participants about how to write expository and narrative paragraphs (the most commonly used genres) using MS-word and how to send their paragraphs via e-mail. To the experimental group only, the researcher gave an additional session about how to understand the symbols of the coded and the encoded indirect feedback. They agreed on specific symbols to be used during the process of feedback. Also, the researcher explained to them the steps of the suggested feedback process that will be followed during the term.

C. Manipulation: The experiment lasted for ten weeks, each week the researcher assigned a topic to all of the participants who were supposed to write it by means of their PCs, laptops, tablets, cell phones, etc. and send their written paragraphs to the researcher via email within three days. They were asked to write their paragraphs by Microsoft Word software so that the researcher could put her comment on each intended error. As for the experimental group's assignments, the direct-indirect e-feedback process followed three phases:

Encoded Indirect Corrective E-Feedback: In this phase, the researcher underlined or circled the errors and she did not write any symbols above or beside the error indicating its kind. She only makes the place of the error clear to students. Then, she sent them the assignments. The aim of this step was to make students detect the errors and try to correct them. The participants should be able to decide what kind of error is causing the problem (whether pronunciation, morphology, syntax, or semantics). The participants should try to decide the kind of errors and correct them. They might use dictionaries, search the web, a book, ---etc. Finally, they resend their paragraphs to the researcher.

Coded Indirect Corrective E-Feedback: In this step, the researcher underlined the errors or mistakes for the students and wrote the symbol indicating the error above or beside the targeted error. Then, she re-sent the composition to each student to think what the error was as this symbol helped the student to think more specifically.

Direct Corrective E-Feedback: This is the last stage in the feedback process. This type of feedback may be positive or negative. If the participants succeeded to correct all the mistakes in their writing, so the researcher sent positive feedback in the form of encouraging words. If there were still errors, she directly corrected them and re-sent the draft to the participants to write their final draft.

However, for the control group, no corrective feedback was given to their written paragraphs.

D. Post Testing: After finishing the ten sessions, the post test was administered to all of the participants.

IV. RESULTS AND DISCUSSION

To investigate the first hypothesis of the study which stated that "There would be no statistically significant difference in the control group mean scores on the pre and posttest of writing ", the paired samples t-test was used. The results of the paired samples t-test was shown in the following table.

TABLE 1
PAIRED SAMPLES T-TEST FOR THE DIFFERENCE IN THE MEAN SCORES OF THE CONTROL GROUP ON THE PRE AND POSTTEST OF WRITING ACCURACY

Test	M	SD	N	DF	t-value	Sig.
Pre	18.84	2.9935	23	22	**2.558**	0.132
Post	21.24	2.5304	23			

As shown in Table 2, the paired samples t-test revealed insignificant difference (t = 2.558, p > 0.05). Consequently, the first hypothesis is completely accepted. Here, though there was a difference between the mean scores of the pre and post test in favor of the post test, yet, this difference is insignificant. This result may be due to the fact that with the absence of feedback the control group was prevented from knowing their mistakes and as a result their writing accuracy was not improved. If they are not provided with suitable feedback, Brookhart (2008) stated that students become unmotivated, and they do not recognize which factors of their writing need improvements. Additionally, Lee (2008) argues that learners may have inaccurate impression about their writing.

To test the second hypothesis of the study which stated that *"There would be no statistically significant difference in the experimental group mean scores on the pre and the posttest of writing accuracy"*, paired samples t- test was also used. It revealed a significant difference (t = 23.252, p<0.05), in favor of the posttest as depicted in the following table:

TABLE 2
PAIRED SAMPLES T-TEST FOR THE DIFFERENCE IN THE MEAN SCORES OF THE EXPERIMENTAL GROUP ON THE PRE AND POSTTEST OF WRITING ACCURACY

Testst	M	SD		DF	t-value	Sig.
Pree	21.60	2.96	25	24	23.252	0.000*
Post	36.62	2.19	25			

This finding can be attributed to different explanations. Firstly, combining the direct and indirect corrective feedback strategies helped students benefit from the two types at the same time and overcome the challenges of each type separately. The direct-indirect e-feedback process helped the participants recognize their errors which they are struggling with, encourage them to modify their interlanguage system in line with the feedback provided. This explanation finds theoretical basis in Schmidt's (1990, 1994) noticing hypothesis which states that only items which are noticed by the learners will be acquired. Therefore, the process of feedback becomes a part of the language learning process because students become able to diagnose their mistakes and correct them. Also, the direct-indirect e-feedback draws learners' attention to the areas they have difficulty with while freeing their minds to process language content. This explanation goes with Sweller (1988)'s cognitive load theory which states that working memory should have as less load as possible in order to optimize learning which occurs in humans and expedite the alternation in long-term memory ideally. Additional explanation might be related to the non-threatening atmosphere of e-mail through which the feedback process is provided. Undoubtedly, overemphasis on error correction may lead students to perform writing tasks in a stressed condition, while an electronic communications channel (i.e., e-mail) tends to provide a relaxed environment. Providing participants with positive feedback might be another possible explanation for the previous finding. Ellis (2009) assures that positive feedback is necessary to learners because it provides affective support to them, fosters motivation, and encourages them to continue learning. A final explanation may be related to the several feedback phases the participants were subjected to. The participants experienced three kinds of feedback, and after each kind they have to modify their paragraphs and re-send their modified drafts. Trying to detect errors and writing their drafts more than one time might have improved their writing accuracy. These findings are in line with several studies that have found error correction helps improve language accuracy (Ferris & Roberts, 2001; Hong, 2004; Ferris, 2006; Truscott & Hsu, 2008; Ellis, Sheen, Takashima & Murakami, 2008; van Beunigen, de Jong, & Kuiken, 2012). These findings are also in agreement with what is reported by AbuSeileek (2013) and Hossaini (2013), namely that learners who received electronic feedback performed significantly better than those who did not receive corrective feedback in terms of writing.

In an attempt to determine whether any change in writing accuracy from pre to posttest was greater for one group rather than the other, the researcher used independent samples t-test between the two groups, employing a gain score in writing accuracy for each of the participants in the study.

TABLE 3
INDEPENDENT SAMPLES t-TEST FOR THE DIFFERENCE IN THE MEAN GAIN SCORES OF THE CONTROL AND EXPERIMENTAL GROUPS ON THE PRE AND POSTTEST OF WRITING ACCURACY

Group	N	M. Gain Score	S D	DF	t-value	Sig.
Controll	23	0.913	1.2216	46	22.73	0.000*
Experimentalntal	25n	16.840	3.484			

As shown in Table 4, a statistically significant difference existed between the mean gain score of the control group and that of the experimental group in writing performance (t = 22.73, p < 0.05) in favor of the experimental group. This result could be attributed to the beneficial effects of the direct-indirect electronic feedback in the discussion of the second result above and can also be attributed to the problems of the absence of feedback mentioned in the discussion of the first result.

V. RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The following recommendations have been formulated: 1) University EFL/EL teachers should reconsider their methods of teaching writing. 2) University teachers should combine direct with indirect corrective feedback in teaching writing. 3) Students should be given enough opportunities to use modern technology in their learning; i.e. e-mails, weblogs, wikis… etc. 4) Contact between the university teacher and his/her students should not be limited to only lectures, but it should extend to online contact. Also, the following areas are suggested for future research: 1) A study of the effect of direct- indirect oral feedback on improving speaking proficiency and reducing speaking anxiety of EFL students. 2) A comparative study of teacher corrective feedback and peer corrective feedback on EFL writing performance. 3) An investigation of the attitudes of students and teachers toward the use of electronic feedback.

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