USING COMPUTER-MEDIATED CORRECTIVE FEEDBACK MODES IN DEVELOPING STUDENTS' WRITING PERFORMANCE

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Abstract

This study explored the effect of computer-mediated corrective feedback on the 10th grade EFL students' performance in the writing skill. Seventy-two 10th grade female students at Al Hammra secondary school for girls situated in Mafraq (Jordan) were selected as the study sample. They were randomly assigned into four groups, three experimental groups (18 in each) and one control group (18 students). The three experimental groups were taught using the computer-mediated corrective feedback modes including teachers' feedback (students who received feedback only from the teacher), students' feedback (students who provided and received feedback from their peers), and both (students who received and provided feedback from students and teacher). The control group was taught using computer-mediated communication. However, it neither provided nor received corrective feedback.

Findings of the study reveal that there were significant differences between the mean scores of the control group and the experimental groups due to the method of teaching in favor of the experimental groups which received corrective feedback. Furthermore, the findings revealed that there was a significant effect for the mean scores between teachers' feedback, students' feedback or both, in favor of both where students received corrective feedback from their peers and the teacher.

Keywords: corrective feedback, error correction, word processor

1. Introduction

Recently, there has been an orientation toward using computer programs in the teaching and learning process. Therefore, there is an expanding use of CALL programs in educational institutions. In other words, technological education was one of the most developed areas in the world. Computers which have entered the school life in the late 1950s in developed countries are increasingly developing throughout the world. Moreover, as computers become

more powerful, faster, easier to use, more convenient, and cheaper, they can also process and store much more data (Gündüz, 2005). Furthermore, there is an extremely fast development of computer-assisted tools such as proofing modes and tools, which enriches the role of computer in language learning and gives it more importance (Rahimpour, 2011).

The computer may give individual attention to the language learner. It acts as a tutor, assesses the learner's reply, records it, points out mistakes and gives explanations, guides the learner towards the correct answer, offers interactive learning, assess the learner's response, and repeats an activity without any of the errors arising from repetition by humans, handles a very large volume of interaction and deliver to the student feedback and accommodate different speeds of learning, and imposes limits on the time available for answering questions (for testing purposes) (AbuSeileek & AbuSeileek, 2012).

As the issue of computer-mediated corrective feedback is controversial (AbuSeileek and Abu-al-Sha'r, 2014), there is a need for conducting more studies in this area. Therefore, this study is based on introducing different modes of computer-mediated corrective feedback. It may help students benefit from corrective feedback to improve their writing performance through using the computer tool and the Microsoft Word 2010 techniques, draw EFL teachers' attention to provide their students with corrective feedback in the writing skill to improve their performance through the assistance of computer, and present a practical model for curricula designers in designing computer-mediated curricula, specifically the writing tasks. It aimed at finding the effect of computer-mediated corrective feedback on EFL students' performance in writing. It also explored the effect of the mode of providing feedback (teachers' feedback, students' feedback, or both) on students' performance in the writing skill. Moreover, it investigated the effect of computer-mediated corrective feedback on different writing aspects (spelling, punctuation, organization, content, grammar, and vocabulary).

More specifically, this study solicited to answer the following three research questions:

1) Are there any significant differences between the mean scores of the experimental and control groups due to the presence/absence of corrective feedback on EFL students' performance in writing?
2) Are there any significant differences between the mean scores of the experimental groups due to the mode of providing corrective feedback (teachers' feedback, students' feedback, and both) on students' performance in writing?
3) Which writing aspects (spelling, punctuation, organization, content, grammar, and vocabulary) are mainly developed by computer-mediated corrective feedback?

Furthermore, the revision of the related literature review revealed that there are very few studies in the Jordanian school context related to computer-mediated corrective feedback. Consequently, there is a need to investigate the effect of feedback on the students' writing performance through using the computer as a tool to provide corrective feedback for the students, a goal to be achieved in the present study.

2. Background to the study

2.1. Corrective feedback

Corrective feedback is about providing learner with data about his/her responses whether these responses positive or negative. In other words, it is the process of supplying the learner with knowledge about performance progressively to enhance the students' right responses and correct the wrong ones. According to Soori, Kafipour & Soury (2011), corrective feedback takes the form of responses to learner sentences containing an error. The responses can consist of (1) an indication that an error has been committed, (2) provision of the correct target language form, (3) metalinguistic information about the nature of the error, or (4) any combination of the above. In fact, CF occurs frequently in instructional settings, but much less frequently in naturalistic settings. Petchprasert (2012) confirmed that feedback should provide information specifically related to the learning process so as to assist learners in understanding what they are learning and what they have just learned. In conclusion, the term ‘corrective feedback’ is generally used for correcting errors of form not of content. However, in this study it refers to both feedback on linguistic forms and content.

Ellis (2009) demonstrated that the role of feedback has a place in most theories of second/foreign language (L2) learning and language pedagogy. In both behaviorist and cognitive theories of L2 learning, feedback is seen as contributing to language learning. In both structural and communicative approaches to language teaching, feedback is viewed as a means of fostering learner motivation and ensuring linguistic accuracy. Ellis points out that feedback can be either positive or negative. Positive feedback affirms that a learner’s response to an activity is correct. It may signal the accuracy of the content of a learner utterance or the linguistic correctness of the utterance. In the pedagogical theory, positive feedback is viewed as important because it provides affective support to the learner and fosters motivation to continue learning (Ellis, 2009).

In conclusion, the concept of corrective feedback is used to refer to supplying the students with information in the computer-based corrective form about their performance and

correcting their wrong responses. In this study, it is used to refer to providing corrective feedback about both content and form.

There are different types of corrective feedback. Lyster & Ranta (1997: 46) categorized them into the following seven types:

1. Explicit error correction: Explicit provision of the target like the teacher provides the correct form (e.g. *You should say writes*).
2. Clarification requests: An utterance indicating a problem in comprehension, accuracy, or both.
3. Recast: Implicit reformulation of all or part of the learner's utterance (e.g. *He always writes an essay,* and *He writes an essay every day*).
4. Metalinguistic feedback: Comments, information, or question but without reformulation of the error (e.g. *There is a mistake. It is present tense. Do you use the present tense*?)
5. Repetition: Repetition of the whole or part of the utterance containing the error, often accompanied by a change in intonation (e.g. *He writes an essay every day*).
6. Elicitation: A prompt for the learner to reformulate (e.g. *Try that again. How do we say that? Every day he …*
7. Translation: Target language translation of unsolicited use of the L1

This study focuses on a combination of corrective feedback types. They are presented by the teacher and students. They included explicit, recast, metalinguistic feedback, and repetition.

2.2. Corrective feedback and language learning

There are many studies which confirmed the importance of corrective feedback in language learning and assured its effectiveness in the language learning process. According to Vanderbeek (2007), feedback positively affects students' and teachers' attitude toward independent practice work resulting in improved quality of solutions produced by students. Hyland & Hyland (2006) confirmed that feedback has been seen as a key element of students' growing control over writing skill. They added that feedback is important in providing students with the linguistic choices as a way of assisting students in conveying through new knowledge and practices. Sheen, Wright & Moldawa (2009) assert that focused CF may enhance learning by helping learners to (1) notice their errors in their written work, (2) engage in hypotheses testing in a systematic way, and (3) monitor the accuracy of their writing by

tapping into their existing explicit grammatical knowledge. This draws students' and teachers' attention to the ways of improving the teaching and learning process.

AbuSeileek (2012) confirmed that corrective feedback is one of the major tools used for enhancing English language learning and teaching through helping students to correct their errors. Petchprasert (2012) claimed that corrective feedback is an essential part of language learning and teaching that influences students' learning and achievement. He added that the corrective feedback helps both the teachers and their students meet the instructional goals in learning and teaching. Evans, Hartshorn, &Tuioti (2010) suggested that written corrective feedback is commonly practiced in L2 pedagogy by experience.

In conclusion, corrective feedback is regarded as a very effective tool in language teaching and learning. Teachers should pay more attention to this tool in order to achieve their goals in teaching. It is one of the major goals of this study to investigate the effect of computer-mediated corrective feedback on EFL students' performance in writing.

2.3. Modes of corrective feedback

Some researchers revealed that teacher and student feedback is helpful to enhance language learning. According to Pan (2010), teacher and student error feedback may facilitate students' language learning. Rabiee (2010) assured that the collaborative feedback model (teacher and students' feedback) had a significant effect on students' writing. According to Marboyeh (2011), teacher written corrective feedback and peer written corrective feedback had a significant effect on the writing performance of the subjects. Jodaie, Farrokhi, & Zoghi (2011) reported that there are some important differences as well as similarities between teachers' and students' perceptions of written corrective feedback on grammatical errors. Other researchers confirmed that peer feedback is more effective. AbuSeileek and Abu-al-sha'r (2013) demonstrated that the students who used corpora and electronic dictionary could improve their writing performance.

On other hand, Adams, Nuevo & Egi (2011) assured that there was limited evidence for the effectiveness of feedback in learner-learner interactions in promoting learning and for a role of modified output in supporting explicit knowledge. However, other researchers confirmed that teacher's feedback is a very effective tool to enhance the self-correction ability, for instance, Alghazo, Abdelrahman & Qbeitah (2009) claimed that the students who received feedback did better than those who did not receive it. Furthermore, Rabiee (2010) confirmed that students benefited from teacher's feedback more than peers' feedback. As Srichanyachon (2012 : 7) points it out,

> no matter what method is used, it is important for teachers in ESL and EFL settings to give students a crystal clear explanation. Also, teachers should include comments of praise and encouragement in their written feedback because positive feedback can boost student motivation to improve their writing skills.

Moreover, some researchers suggest that corrective feedback or error correction is not helpful in developing learners' linguistic performance. Krashen (1982) points out that error correction is not of use for language acquisition. He adds that teacher corrections will not produce results that will live up to the expectations of many instructors. In conclusion, there is no conformity about the general effectiveness of modes of feedback in language learning process.

2.4. Writing aspects and types of errors

According to Tarawneh (2011), writing in a foreign or second language is a courageous experience especially for students whose native language is not of the same origin as the target language. Arabic-speaking students learning English are a good example here. These students are faced with the school curriculum that includes the four main skills of the English language. Among these skills, they find the writing skill the most difficult one and face many problems while composing simple short paragraphs. Students generally face many problems to be acquainted with the writing skill because it is like the container of the three other skills, namely listening, speaking, and reading. Tarawneh (2011) also argued that the problems students face while writing could be as a result of the lack of knowledge of how to write words, phrases and sentences. They also may face a lot of native language interference or lack motivation. She added that the problem springs from the teachers themselves being second language learners of English, who face similar conditions toward writing as students do. Therefore, some teachers only focus on errors and ignore the strategies of how to compose simple short paragraphs as a result of the lack of knowledge of the second language.

Some researchers (AbuSeileek, 2012; Jdetawy, 2011; Tarawneh, 2011; Verhoef & Tomic, 1996) confirm that the writing skill is a cognitive process, which is the most difficult skill to teach or to learn so that teachers, learners, and curricula designers should give writing more attention. They should focus on the useful methods and strategies to teach and learn writing. The present study focuses on computer-mediated corrective feedback including a word processor, which may be a useful program while teaching writing. On the other hand, there are many problems that both students and teachers face while using computers in teaching and learning English language skills, specifically the writing skill.

As the main aim of teaching writing is to enable students to "write English to communicate information and ideas clearly and correctly for specific purposes and audiences in various simple authentic contexts" (Ministry of Education, 2006: 54), more focus should be placed on the writing skill. Despite the fact that teachers use corrective feedback in the English language classrooms in Jordanian schools, an observable weakness is still marked in students' English language skills, specifically the writing skill. This may be due to the traditional teaching method of providing corrective feedback (written or oral corrective feedback) that students receive only by the teacher. Difficulties that are faced by EFL Jordanian learners in different writing aspects, including spelling, punctuation, organization, content and grammar, could be as a result of the techniques that are used by the teacher himself when he provides corrective feedback, such as using the red pen which may affect students negatively. Therefore, the computer may be useful in enhancing students' writing through providing corrective feedback.

Writing aspects are the features of the writing skill, including content, structural organization (text level), structural organization (sentence level), grammatical accuracy, punctuation, lexicon, and spelling (AbuSeileek, 2012). There are different types of writing error. Burt (1975) classified them into two types, (1) global errors that significantly hinder communication and that affect sentence organization such as missing words, wrong word order, wrong or misplaced sentence connectors, and (2) local errors which affect single elements in a sentence but do not usually hinder communication significantly (errors in noun and verb inflections, articles, and auxiliaries). Beuningen (2010: 11) claimed that focused corrective feedback "targets a (number of) specific linguistic feature(s) only" while unfocused corrective feedback "involves correction of all errors in a learner's text, irrespective of their error category." Touchie (1986) mentioned two types of errors: performance errors and competence errors. The student makes performance errors when they are tired or hurried. Ordinarily, this type of error can be overcome with little effort by the learner. However, competence errors are more serious than performance errors since competence errors reflect insufficient learning. Cherrington (2000) pointed out that learner errors are not just mistakes due to interference or transfer from the first language but evidence of underlying universal learner strategies. Errors were to be seen as patterned, and the task was to collect error data and identify the main types. The results drawn from the data could provide feedback for language learning theory and teaching.

According to Touchie (1986), the entire language components were involved in the language learning errors (morphological, lexical, and syntactic). An example of a

morphological error is the production of errors as *womans*, *sheeps*, and *furnitures.* A lexical error involves inappropriate direct translation from the learner's native language or the use of wrong lexical items in the second language. Finally, examples of syntactic errors are errors in word order, subject-verb agreement, and the use of the presumptive pronoun in English relative clauses produced by Arab ESL learners as illustrated in: *The boy that I saw him is called Ali*. Al-Khasawneh (2010) claimed that EFL students faced problems in relation to vocabulary register, organization of ideas, grammar, spelling, and referencing. However, the present study focuses on exploring the effect of computer-mediated corrective feedback modes on different global and local writing aspects, including spelling, punctuation, organization, content, grammar, and vocabulary.

2.5. Computer-mediated corrective feedback

As Rezaee & Ahmadzadeh (2012:346) demonstrate, “computers have become an inseparable part of everybody's life. By far, their roles in education, especially in language learning and teaching, have expanded so drastically that no language instruction can ignore them in its curriculum.” Computer-mediated corrective feedback is a vital tool to improve language learning. There are many researchers who assured the importance of CMC in language learning. Computer-mediated instruction plays a significant role in foreign language education. The incorporation of computer technology into the classroom has also been accompanied by an increasing number of students who experience anxiety when interacting with computers (Matsumura & Hann, 2004). Recently, there is a very common trend toward developing collaborative language learning activities using CMC. Language teachers orient to use CMC to foster communicative competence among their students.

According to Sotilo (2005), error correction episodes are available in an instant messaging context, in which more indirect corrective feedback that focuses primarily on grammatical and lexical errors is provided to L2 learners. Furthermore, simple moves characterize these error correction episodes, and there is evidence about successful learner uptake. Furthermore, Salomon, Kozminsky & Asaf (2003) assured that collaborative-based writing tools, both synchronous and asynchronous, when embedded in meaningful learning environments, provide another dimension of knowledge construction. In these environments, writing becomes an important mediation channel together with additional supporting “mind tools”, such as outliners. These mind tools can produce not just sequential essays but hypertexts that provide additional means of constructing and presenting knowledge.

Loewen & Erlam (2006) claimed that while most of the research that has focused on interaction has taken place in the language classroom, there is increasing recognition of the importance of the computer in providing opportunities for learner interaction such as synchronous communication in online chat rooms. They reported that the effectiveness of CMC on promoting interaction is encouraging, suggesting it may indeed be superior to the face-to-face interaction in a language classroom in terms of the opportunities it affords.

The major goal of CMC is to help learners to be involved in interactive language learning activities. Abrams (2003) assured that the learners who were exposed to CMC produced more language than their counterparts in the classroom. As CMC provides learners with an opportunity to communicate with one another, they provide one another with corrective feedback at the level of lexis, grammar or spelling, and increase their linguistic input and output (AbuSeileek &Rabab'ah, 2013). According to AbuSeileek (2012), computer-mediated corrective feedback methods and techniques may support students when receiving corrective feedback in a manner that may aid them more in the development of their writing performance.

The major goal of the present study is to investigate the effect of providing corrective feedback via using Microsoft Word 2010 word processor. The word processor may be helpful when providing correction by putting the mouse pointer on the problematic words, choosing from New Comment, suggesting corrective feedback about it. Therefore, the word processor may be helpful for learners in giving corrective feedback based on providing the target-like reformulation directly (AbuSeileek, 2012).

2.6. Presence/absence of corrective feedback in CMC environments

Some studies investigated the effect of computer-mediated corrective feedback types in English as a foreign language (EFL) intact class over time. For example, AbuSeileek (2014) conducted a study on 64 English majors who were assigned randomly into three treatment conditions that gave and received computer-mediated corrective feedback while writing (track changes, word processor, and track changes and word processor), and one control group that neither gave nor received writing corrective feedback. Students sat a pre-test (week 1), immediate post-test (week 8) and delayed post-test (week 12) in writing. The results show that there was a significant effect of the computer-mediated corrective feedback. Moreover, in another study comparing the effect of using computer-mediated corrective feedback and no feedback on EFL learners' performance in writing, AbuSeileek (2013) reported that students

who received computer-mediated corrective feedback while writing achieved better results in their overall test scores than students in the control condition who did not receive feedback.

Other studies focused on the mode of synchronicity. Hosseini (2013) explored the effectiveness of asynchronous computer-mediated corrective feedback - explicit and implicit, on increasing the correct use of prepositions. The findings supported the current view on feedback through technology and suggested a need for further investigation into computer-mediated corrective feedback. On the other hand, Hashemnezhad & Mohammadnejad (2012) investigated the effect of the types of feedback (direct vs. indirect) given to EFL students during a 16-week study. The study found that corrective feedback often facilitates the student's ability to identify the existence of an error. Furthermore, the results also revealed that error feedback on form delivered as direct feedback is more beneficial than indirect feedback especially for proficient learners. In other studies focused on implicit and explicit feedback, Razagifard & Razzaghifard (2011) investigated the impact of two types of corrective feedback in computer-mediated communicative context on the development of learners' second language (L2) knowledge: (1) implicit feedback in the form of recast, and (2) explicit feedback in the form of metalinguistic feedback. The results showed that the experimental groups who received computer-mediated corrective feedback outperformed the control group which did not receive any feedback.

Finally, some studies focused on error reformulation. For instance, Sauro (2009) investigated the impact of two types of computer-mediated corrective feedback on the development of adult learners' L2 knowledge: (1) corrective feedback that reformulates the error in the form of recasts, and (2) corrective feedback that supplied the learner with metalinguistic information about the nature of the error. The results revealed that the experimental groups which received computer-mediated corrective feedback outperformed the control group which did not receive any feedback. On the other hand, Matsumura & Hann (2004) examined the effects of computer anxiety on students' choice of feedback methods and academic performance in English as foreign language writing. The results of multiple regression analysis revealed that the students who received online corrective feedback outperformed the students who received face-to-face feedback.

2.7. Modes of corrective feedback in CMC

Some studies compared the effect of providing computer-mediated corrective feedback by peers and the no feedback condition. AbuSeileek (2013) examined the effect of using peer computer-mediated corrective feedback on EFL learners' performance in writing. The results

revealed that students who received computer-mediated corrective feedback from their peers outperformed the students who did not received corrective feedback. However, in another study which investigated the effect of online peer feedback through blogs on EFL students' writing performance and their perceptions Ciftci & Kocoglu (2012) reported that the students who received peer feedback showed higher performance in revised drafts than those who did not receive corrective feedback. Lin and Yang (2011) applied wiki technology and peer review to an English as a foreign language writing class. The results indicated that learning from others' work and receiving feedback may allow students to enhance their spelling, grammar, style and quality of expression remarkably within a relatively short time. Moreover, Motallebzadeh & Amirabadi (2011) investigated the effect of e-collaboration and e-tutoring on students' writing proficiency. The results revealed that there were statistically significant differences between e-partnering and e-tutoring groups ($p < 0.05$). The findings also showed that through both e-partnering and e-tutoring writing proficiency was enhanced and learners in the e-partnering group outperformed these in the e-tutoring group. Finally, studies show that students who received summative feedback showed a larger decrease in their self-efficacy than those who received formative feedback, and self-referenced feedback was more beneficial to students' self-efficacy than norm-referenced feedback.

2.8. Writing aspects in CMC

Some studies focused on examining the effect of computer-mediated corrective feedback types in EFL on error type. In AbuSeileek's (2014) study, for example, students received and provided computer-mediated corrective feedback while writing on measures of the 11 major writing aspects including 1) capitalization, 2) fragments and run-ons, 3) misused words, 4) negation, 5) noun phrases, 6) possessives and plurals, 7) punctuation, 8) questions, 9) relative clauses, 10) subject–verb agreement, and 11) verb phrases. The findings of this study affirmed that students who had received computer-mediated corrective feedback while writing on measures of these major writing aspects performed significantly better than those who did not receive corrective feedback. Furthermore, providing corrective feedback while writing enhances students' ability to find out errors, correct them, and develop their writing performance related to 11 major writing error types.

Moreover, another study examined writing aspects of content, structural organization (text level), structural organization (sentence level), grammatical accuracy, lexical appropriateness, punctuation, and spelling. AbuSeileek (2013) found that there was a significant effect for all writing aspects except two (lexical appropriateness and spelling) on

the post-test. This finding may be attributed to the nature of errors related to these writing aspects that students had to find and correct. Most probably, these error types are not focused. That is, students learn to use certain lexical items, but this does not ensure that they learn to use other items because they are different and have different lexical usages. Similarly, spelling errors are generally unfocused (untreatable). Participants might learn the spelling of a number of words. However, this does not necessarily show that they learn the spelling of other new words like learning focused (treatable) grammatical aspects such as the definite or indefinite article. The findings indicated that there was actually improvement in all students' mean scores on the writing post-test in lexical appropriateness and spelling. However, this does not show an established level of significant effect among the three groups for these writing aspects. Other studies (Bitchener, East, & Cartner, 2010) investigated the effectiveness of providing advanced learners with feedback on their frequent error categories. The findings revealed that the CF helped learners reduce their error rate in using singular/plural nouns over time, subject-verb agreements over time, and totally (combination of singular/plural noun and subject-verb usage) over time.

3. The study

Most of the related research focused on investigating the effectiveness of providing corrective feedback about grammatical aspects which is one of the writing aspects. Studies also focused on investigating the effect of computer-mediated corrective feedback types. None of these studies focused on investigating the effect of modes of computer-mediated corrective feedback (teacher's feedback, student's feedback, or both) on EFL students' writing performance in the CMC environment. Thus, the present study is an attempt to investigate the effect of computer-mediated corrective feedback on the learners' writing performance. It also investigates which mode (teachers' feedback, students' feedback, both, and no feedback) is the most effective in providing computer-mediated corrective feedback. Moreover, it explores the effect of computer-mediated corrective feedback on different writing aspects (spelling, punctuation, organization, content, grammar, and vocabulary).

3.1. Participants and design of the study

The participants of this study consisted of 72 10th grade (16 years old) female students in their second semester of the scholastic year 2012/2013 at Al Hammra Secondary School for Girls, Mafraq, Jordan. Al Hammra Secondary School for Girls was intentionally selected for logistic purposes (e.g., it has enough number of sections to conduct this study, there were

computer laboratories, and it is near to the researcher's residence). The tenth grade was selected as a sample of the study because they are suitable for the study. On the one hand, participants do not need to be distributed into educational branches. On the other hand, they are familiar with using computers. However, the participants in this study were assigned randomly into four groups, with three experimental ones which received teachers' feedback. In this case, the teacher provided corrective feedback for the students, drew the students' attention to their errors, and clarified these errors. Students provided and received corrective feedback from their peers' feedback. In this case, the teacher's role was to be a supervisor on the students' work, since students received and provided corrective feedback from both the teacher and students. Students who neither received nor provided corrective feedback formed one control group. Participants of the experimental groups were exposed to the computer-mediated written corrective feedback for ten weeks. The control group was exposed to computer-mediated instruction; however, it neither received nor provided feedback for teaching English writing. All participants studied the same instructional material which is based on the second semester of the tenth grade textbook, and they were taught by the same teacher.

In this study, the quasi-experimental design was used. A pre-test was given before the application of the treatment to the four groups to make sure they were equivalent. The same test was administered as a post-test after applying the treatment to see whether providing corrective feedback through computer had any influence on the experimental groups, and which method of instruction had more influence on the subjects.

The study had one independent and one dependent variable. The independent variable of the study was computer-mediated corrective feedback on four levels: students' corrective feedback, teachers' corrective feedback, both, and no feedback. The dependent variable of the study was students' performance in the total mean scores and every writing aspect on the post-test, including spelling, punctuation, organization, content, grammar, and vocabulary.

In order to achieve the objectives of the study, a pre-test was administered to the participants in this study to make sure that there were no significant differences in the writing performance test between the experimental and control groups. After conducting the experiment, a writing performance post-test was conducted. Table 1 shows the results of ANOVA, means, and standard deviation of students' performance on the pre-test in the writing skill.

Table 1. Results of one-way ANOVA of students' pre-test scores by computer-mediated corrective feedback modes.

Group	N	*Mean	Std. Deviation	F	Sig
Teachers' feedback	18	10.00	4.63	.43	.73**
Students' feedback	18	10.06	4.53		
Both	18	9.17	2.38		
No feedback	18	8.89	3.27		
Total	72	9.53	3.77		

* Out of 36

` ** The results are significant at the p. ≤ .05 level.

The findings revealed that students' mean scores of the writing skill were almost equivalent on the pre-test before applying the experiment. The table above also shows that there were no statistically significant differences between the modes of computer-mediated corrective feedback (teachers' feedback, students' feedback, both, and no feedback) on the pre-test, suggesting that groups in different treatment conditions were equivalent in the writing performance before the experiment. To find out whether the experimental groups were equivalent in the total error feedback they received, Table 2 shows the total errors, mean errors, and standard deviation of computer-mediated corrective feedback modes.

Table 2. Results of one-way ANOVA of total errors and mean errors by computer-mediated corrective feedback modes.

Modes	No	Total Error	Mean Error	Std. Deviation	F	Sig.
Teachers' Feedback	18	428	23.78	3.06	.25	.78*
Students' Feedback	18	425	23.61	3.4		
Both	18	437	24.28	2.16		
Total	54	1290	23.89	2.88		

* The results are significant at the p. ≤ .05 level.

The findings revealed that mean error scores in the writing skill were almost equivalent after applying the experiment. The table above also shows that there were no statistically significant differences between the total mean error of modes of computer-mediated corrective feedback (teachers' feedback, students' feedback, and both) during the treatment,

suggesting that groups in different treatment conditions were equivalent in the total errors they received feedback about the writing skill after applying the experiment.

To show the number of computer-mediated corrective feedback comments students in the experimental groups received about each writing aspect, total errors and mean errors for the writing aspects were calculated (Table 3).

Table 3. Results of one-way ANOVA of total errors and mean errors by the six writing aspects.

Writing Aspects	No	Total Errors	Mean Errors	Std. Deviation	F	Sig.
Spelling	54	216	4.09	1.06	.25	.78*
Punctuation	54	220	4.04	0.97		
Organization	54	214	3.96	1.09		
Content	54	212	3.93	1.18		
Grammar	54	215	3.91	1.2		
Vocabulary	54	213	3.96	1.02		
Total	54	1290	23.89	2.88		

* The results are significant at the p. ≤ .05 level.

The findings revealed that the mean error scores of writing aspects were almost equivalent after applying the experiment. To find out whether these differences were significant, the ANOVA analysis was implemented as stated in Table 3. It also shows that there were no statistically significant differences between the total errors of the six writing aspects during the experiment, suggesting that students in different treatment conditions received almost equal number of corrective feedback comments related to their errors about the six writing aspects in after applying the experiment.

3.2. The instrument of the study and materials used

The researcher designed a performance test to measure students' performance in the writing skill before and after participating in the study. It consisted of two questions, with eighteen grades allocated to each of them. The first question consisted of two parts, and students should choose one of them. In the first part, each student was required to write a composition in a 30-minute time limit. It was about how the student spends her day, in the morning, at noon, and in the evening. The second part was about writing a short story about a problem that happened with her and how she solved it. These two parts were designed to measure the

students' ability in writing a composition including the ability to generate, organize, and develop ideas. The second question focused on recognition of writing aspects. They included spelling, punctuation, organization, content, grammar, and vocabulary. The marking scale by AbuSeileek (2012) was used in this study, modified to suit the present purposes (see Table 4).

Table 4. Marking scale for the first question.

Writing Aspects	Grade *
Spelling	1-3
Punctuation	1-3
Organization	1-3
Content	1-3
Grammar	1-3
Vocabulary	1-3
Total	1-18

* Grades: 1= low; 2= medium; 3 = high

The table below contains the operational definitions introduced by AbuSeileek (2013: 6-7) and Vyatkina (2011: 73) related to each of the six writing aspects, with examples, feedback, and reformulation of the error.

Table 5. Writing aspects on which corrective feedback is provided.

No.	Writing Aspect	Definition	Example	Feedback	Reformulation
1	Spelling	It is related to using wrong spelling of words.	*You hav to do your homework.*	Wrong spelling of "have".	*You have to do your homework.*
2	Content	It includes irrelevance content, illogical information, and redundancy.	*She should write a letter to the company and she should give her apology.*	Redundancy	*She should write a letter to the company and give her apology.*
3	Vocabulary	It refers to using inappropriate use of vocabulary.	*Fatty food is important for growing our bodies.*	Use the wrong meaning.	*Healthy food is important for growing our bodies.*

4	Organization	Ideas follow each other in a logical order to make sense to the reader. Errors include the wrong use of transitions, and connection between ideas.	*Although Ahmad studied hard, but he pass the exam.*	Wrong use of connection.	*Ahmad pass the exam, because he studied hard.*
5	Grammar	It includes incorrect form or word order.	*They was at home yesterday.*	Subject-verb agreement.	*They were at home yesterday.*
6	Punctuation	It refers to the wrong use of punctuation marks.	*He had a cup of tea and a piece of meat and rice on the lunch.*	Use a comma after accounting things.	*He had a cup of tea, a piece of meat, and rice on the lunch.*

The test was given to four TEFL professors, an English language supervisor, and two English language teachers who teach the 10th grade class to evaluate it in relation to clarity of instructions, difficulty level and suitability of content. The test was modified according to their comments such as adding a question about correcting writing errors and clarifying the instructions of the test. The test-retest technique was used to determine the reliability of the test. The test was given to 16 students who were not included in the sample of the study within a two-week period between the test and re-test. The reliability coefficient of the test was found to be 0.89, which is statistically acceptable. Students' papers were assessed by two raters. The inter-rater reliability between them was 0.89, which is statistically acceptable for the purpose of this study.

The material that was used in the study was based on the second semester of the 10th grade textbook. The 12 writing lessons were distributed in four modules in the Student's Book and Activity Book of Action Pack IIX. They were about different issues, and each unit of the instructional material included different writing genres: a magazine article, an advertisement, an opinion composition, an informal letter, notes and messages, and a story. The researcher used Microsoft Word 2010 for editing texts based on one technique, comment. From the Review menu, the student / the teacher chose the New Comment option and then she provided corrective feedback about the problematic form (see Figure 1 and 2).

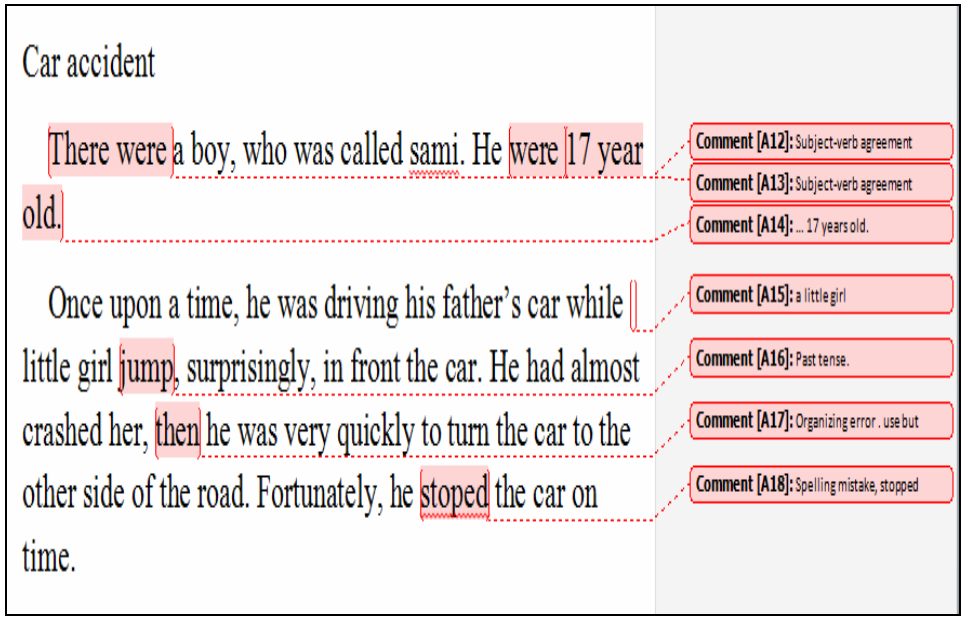

Figure 1. Sample comments (unedited example)

3.3. Procedure

Before the experiment, the teacher took the students to the computer laboratory. Then she explained the nature of the study and its goals to the students in all groups. They were given a chance to ask questions about the course/techniques and methods to be used in learning/teaching the writing skill. The students had to write a composition about specific topics that are related to the writing tasks. The teacher familiarized the participants in all groups with the target writing aspects. One instructional treatment was included in the present study, namely, New Comment. Each student in the experimental groups used a computer. The program was installed on the computers.

Students were first instructed about error categories. The table below contains the types of corrective feedback students received in each group, operational definitions, and examples. The definitions proposed by Lyster & Ranta (1997: 46) and AbuSeileek (2013: 3) were adopted.

Table 6. Types of corrective feedback students received in each group.

No.	Corrective Feedback Types	Definition	Example	Responses for the feedback
1	Explicit	Providing the correct form directly	S: *he write a letter for his friend.*	Error is identified and reformulated.

			T: *you should say: he writes a letter for his friend.*	
2	Recast	Reorganizing of all or part of the students' utterances	S: *until now I haven't finished my work.* T: *I haven't finished my work, yet.*	Repetition of the error with correct form
3	Metalinguistic feedback	Comments, information, or question but without reformulation of the error	S: *you have to apologize to her.* T: *this is an advice, what do you think …*	Identification of the error without reformulation
4	Repetition	Repetition of all or part of the utterance containing the error.	S: *she help her mum always.* T: *she helps her mum every day.*	Repetition of the error with reformulation

In the first treatment the teacher provided the students with corrective feedback. In this case, students received corrective feedback from the teacher. At the end of each unit, the students had to write a composition on the computers, and they saved them in a folder on the desktop of the computers. Then the teacher collected these drafts on a USB device. In the next period, she showed the drafts on the data show with corrective feedback and explained errors to the students. After that, the drafts were brought back to the students with corrective feedback.

In the second treatment, students provided their peers with corrective feedback about the errors. In this case, students provided and received corrective feedback from their peers. From the Review menu, the students used the option New Comment, which allowed the learner to write their comments. The teacher divided students into peer groups. Each student wrote her assignment, then they exchanged their places to provide corrective feedback about peers' errors. After that, drafts were brought back to the students.

In the third treatment, both the teacher and students provided corrective feedback: students first received and provided corrective feedback from their peers. Then the teacher provided them with corrective feedback about their errors. In this group, there was a combination between the first and second groups instructional treatment procedures.

The fourth treatment was the control group which got computer-mediated instruction,

however, no corrective feedback was provided. All the writing tasks which included providing the corrective feedback were conducted in the computer laboratory using Microsoft Word 2010 under the supervision of the researcher.

3.4. Results and findings

Statistical Package for Social Sciences (SPSS) software was used to conduct the required statistical analysis to accomplish the objectives of the study. The means, standard deviations along the one-way ANOVA and the Scheffe test were conducted to find the differences that may arise as a result of the applied treatments in the study which included method (computer-mediated corrective feedback vs. computer-mediated instruction with no feedback) and modes (teacher corrective feedback, student corrective feedback, both, or no feedback) on the writing aspects (spelling, punctuation, organization, content, grammar, and vocabulary) post-test.

The first question focused on whether the presence/absence of corrective feedback affects EFL students' performance in writing. To answer the question, descriptive statistics related to the method of teaching on EFL students' writing skill were calculated as shown in Table 7.

Table 7. Results of one-way ANOVA on the post–test for method.

Group	N	Mean	Std. Deviation	F	Sig.
Experimental	54	21.31	4.18	26.12	.00*
Control	18	16.06	2.10		

* The results are significant at p. ≤ .05.

It is obvious that the mean scores of the experimental group on the post-test were higher than those of the control group. The difference in this finding may be attributed to the method of teaching, suggesting that students in the computer-mediated corrective feedback groups significantly outperformed their peers who neither received nor provided computer-mediated corrective feedback. This also suggests that students who received and provided computer-mediated corrective feedback got the highest significant mean scores, and their performance was the best in computer-mediated corrective feedback.

The second question was concerned with whether the mode of providing corrective feedback (teacher feedback, student feedback, and both) affects students' performance in writing. To answer this question, descriptive statistics related to the computer-mediated

corrective feedback modes (teachers' feedback, students' feedback , and both) on writing skill were calculated as shown in Table 8.

Table 8. Means and Standard Deviations of students' performance on post-test for computer-mediated corrective feedback modes.

Mode	N	Mean	Std. Deviation	F.	Sig
Teachers' feedback	18	20.16	4.23	6.64	.00*
Students' feedback	18	19.44	4.71		
Both	18	23.89	1.78		
Total	54	21.31	4.18		

* The results are significant at p. ≤ .05.

As evidenced by the findings in Table 8, the group that received corrective feedback delivered by both teacher and students received significantly higher mean scores on the post-test than other groups that were provided with corrective feedback either by the teacher or students alone. Whenever ANOVA is used to examine the differences among more than 2 groups, the post-hoc procedure is used to compare differences between all pairs of means. The Scheffe test was used to conduct this comparison, thus, the Scheffe post-hoc comparison showed that means were significantly different (with p. ≤ .05), as shown in Table 9.

Table 9. Results of Scheffe Test for the computer-mediated corrective feedback modes.

Modes	Modes	Mean Difference (I-J)	Std. Error	Sig
Teachers' feedback	Students' feedback	1.17	1.27	.66
	Both	-3.28*	1.27	.04
Students' feedback	Both	-4.44*	1.27	.00

* The mean difference is significant at the .05 level

As shown in Table 9, there were significant differences between teacher feedback and both teacher and student feedback in favor of the latter, with the value of significances for equality of means for the two modes being .04, which is less than 0.05. Moreover, the Scheffe

test revealed significant differences between the mean scores of students' feedback and teacher+student feedback in favor of the latter mode of feedback. This suggests that the combination of teachers' feedback and students' feedback improved the students' writing skill more than one of those modes alone.

The third question focused on which writing aspect (spelling, punctuation, organization, content, grammar, and vocabulary) is mainly developed by computer-mediated corrective feedback. In order to examine the effect of computer-mediated corrective feedback on students' performance in the six writing aspects, descriptive statistics related to the six writing aspects were calculated as shown in Table 10.

Table 10. One-way ANOVA of students' post-test scores by writing aspects.

Writing Aspects	**N**	**Mean**	**Std. Deviation**	**F**	**Sig.**
Spelling	18	4.33	1.09	13.15	.00*
Punctuation	18	4.83	.92		
Organization	18	3.44	1.04		
Content	18	2.67	.59		
Grammar	18	4.22	.94		
Vocabulary	18	4.39	.85		
Total	108	3.98	1.15		

* The results are significant at p. ≤ .05 level.

Table 10 reveals that there were statistically significant differences between the mean scores of the writing aspects of the experimental groups. This indicates that computer-mediated corrective feedback developed the six writing aspects differently. The Scheffe test was used in post-hoc procedure to compare differences between all pairs of means (Table 11).

Table 11. Results of the Scheffe Test for the writing aspects.

Writing Aspects	**Writing Aspects**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Spelling	Content	1.67(*)	.307	.00
	Vocabulary	-.06	.307	1.00
	Organization	.89	.307	.15
	Grammar	.11	.307	1.00
	Punctuation	-.50	.307	.75
Punctuation	Content	2.17(*)	.307	.00

	Vocabulary	.44	.307	.83
	Organization	1.39(*)	.307	.00
	Grammar	.61	.307	.57
Organization	Content	.78	.307	.28
	Vocabulary	-.94	.307	.10
	Grammar	-.78	.307	.28
Content	Vocabulary	-1.72(*)	.307	.00
	Grammar	-1.56(*)	.307	.00
Grammar	Vocabulary	-.17	.307	1.00

* The mean difference is significant at the .05 level.

As shown in Table 11, there were significant differences between *spelling* and *punctuation* in favor of the latter. Moreover, the Scheffe test revealed significant differences between the mean scores of *punctuation* and *content* in favor of *punctuation*. Furthermore, there were significant differences between the mean scores of *content* and *organization*, in favor of *content.* Additionally, the Scheffe test revealed significant differences between the mean scores of *vocabulary* and *punctuation*, in favor of *punctuation*. Moreover, there were significant differences between the mean scores of *organization* and *grammar,* in favor of *grammar*. In addition, there were significant differences between the mean scores of *grammar* and *punctuation*, in favor of *punctuation*. Furthermore, there were significant differences between the mean scores of *grammar* and *vocabulary,* in favor of *grammar.* This suggests that students developed the aspect of *punctuation* to a greater extent than the remaining five writing aspects. However, *content* was the least improved aspect by computer-mediated corrective feedback.

3.5. Discussion

The first question investigated if there are any significant differences between the mean scores of the experimental and control groups due to the presence/absence of computer-mediated corrective feedback on EFL students' performance in writing. According to the findings of this study, computer-mediated corrective feedback is found to offer a great opportunity while teaching the writing skill. Students achieved better results on the writing performance test in a CMC environment in comparison to the group which received no feedback.

The ANOVA results revealed that there were significant differences between the mean score for both the experimental groups and control group in favor of the experimental groups. The differences between the experimental and control groups may be attributed to the fact that

each group was subjected to a different method of teaching; the experimental group was subjected to the computer-mediated corrective feedback while the control group to computer-mediated communication with no feedback. Students in the experimental group seemed to have improved their writing through computer-mediated corrective feedback more than the control group. Therefore, computer-mediated corrective feedback may be regarded as an effective tool in facilitating the learning process and increasing students' performance in writing. This finding is in line with that of Hashemnezhad and Mohammadnejad (2012), who reported that corrective feedback often facilitates the student's ability to identify the existence of an error.

The findings of this study affirm that students who received corrective feedback significantly outperformed those who did not receive corrective feedback. Providing corrective feedback may enhance students' writing performance. These findings are in line with the suggestion that written corrective feedback does lead to improved accuracy in subsequent pieces of writing (Ellis, Sheen, Takashima & Murakami, 2008). These findings are also in agreement with what is reported by AbuSeileek (2012) and Hossaini (2012), namely that learners who received computer-mediated corrective feedback performed significantly better than those who did not receive corrective feedback in terms of writing performance. Hyland & Hyland (2006) confirmed that feedback has been seen as a key element of students' growing control over writing skill. The result of this study also corroborates the claim of Sheen, Wright and Moldawa (2009) that corrective feedback may enhance learning by helping learners to notice their errors in their written work. The results show that learners who received corrective feedback can develop their performance in writing skill.

The second question posited whether there were any significant differences between the mean scores of the experimental groups due to the mode of providing corrective feedback (teachers' feedback, students' feedback, and both) on students' performance in writing. The findings of the study revealed that the most effective mode in developing students' writing skill was teacher+student feedback with a mean score of 23.89 (Table 5). The ANOVA post-test revealed that there are significant differences between the mean scores of the students in the experimental groups according to the mode of providing corrective feedback via computer in favor of the 'both' mode (teachers' feedback and students' feedback). This may be attributed to the fact that students in the 'both' group received corrective feedback from two sources, their peers and the teacher.

These findings agree with Rabiee (2010) that the collaborative feedback model (teacher and students' feedback) had a significant effect on students' writing. Also the claim of

Marboyeh (2011) that teacher written corrective feedback and peer written corrective feedback had a significant effect on the writing performance was confirmed in the current study.

The third question sought to determine which writing aspect (spelling, punctuation, organization, content, grammar, and vocabulary) is mainly developed by computer-mediated corrective feedback. Students in the teacher+student feedback group significantly outperformed participants in other conditions in most writing aspects related to punctuation, grammar, and vocabulary on the writing post-test. This may be due to the fact that punctuation is easier to master than the remaining six writing aspects. Some studies lend support to this finding. For example, Vyatkina (2011) and AbuSeileek (2012) found that most respondents provide feedback to intermediate-level learners on certain writing aspects, including spelling, punctuation, organization, content, grammar, and vocabulary. Teacher+student feedback might give students an opportunity for finding their errors and correcting them while writing. In such conditions, students are provided with information about their errors from more than one resource which are peers and teacher. This finding is in line with the study of AbuSeileek (2013), who reported that the students who had received computer-mediated corrective feedback while writing on measures of 11 major writing aspects (capitalization, noun phrases, misused words, punctuation, questions, relative clauses, subject–verb agreement, fragments and run-ons, verb phrases, negation, and possessives and plurals) performed significantly better than those who did not receive corrective feedback while writing on measures of the 11 major writing errors.

4. Conclusions and recommendations

Computer-mediated corrective feedback activities could be highly supportive to the learning of the writing skill. The educational environments in which computer-mediated corrective feedback are implemented are highly motivating for learning to write in English. Computer-mediated corrective feedback modes, and, specifically teacher+student feedback, helps develop students' writing by combining the characteristics of the two modes of providing corrective feedback. Providing computer-mediated corrective feedback modes via a word processor could help to improve writing aspects, including spelling, content, grammar, punctuation, organization, and vocabulary.

It is advisable to use computer-mediated corrective feedback in the English language curricula. A computer-mediated corrective feedback program that is related to the writing skill of Action Pack XI. Computer-mediated corrective feedback can be utilized for different

scholastic levels and stages to improve writing proficiency. However, attention should be paid to the integration of computer-mediated corrective feedback modes into learning and teaching environments. Computer-mediated corrective feedback should be used as active tools in the educational process of language learning and teaching.

At the same time, more research is needed in the area of teaching writing via computer-mediated corrective feedback, including using different techniques, methods, and software packages. Researchers may conduct similar studies for other classes, bigger samples, different computer-mediated corrective feedback modes and techniques, and about different writing aspects.

References

Abrams, Z. I. (2003). The effects of synchronous and asynchronous CMC on oral performance in German. *The Modern Language Journal*, *87*(2), 157-167.

Abualsha'r, A., & Abuseileek, A . (2013). Using concordancing and word processing to improve EFL graduate students' written English. *The JALT CALL Journal*, *9*(1), 59–77.

AbuSeileek, A. (2013). Using peer computer-mediated corrective feedback to support EFL learners' writing. *Journal of Computer Assisted Learning*, *29*(4), 319–333.

AbuSeileek, A. (2006) The use of word processor for teaching writing to EFL learners in King Saud University. *Journal of King Saud University*, *19*(2) 1-15.

AbuSeileek, A. & Abu Sa'aleek, A. (2012). Computer assisted language learning: merits and demerits. *Language in India Strength for Today and Bright Hope for Tomorrow*, *12*(4), 23-36.

AbuSeileek, A, & Abualsha'r, A. (2014). Using peer computer-mediated corrective feedback to support EFL learners' writing. *Language Learning & Technology*, *18*(1), 76-95.

AbuSeileek, A., & Rabab'ah, G. (2013). Discourse functions and vocabulary use in English language learners' synchronous computer-mediated communication. *Teaching English with Technology*, *13*(1), 42-61.

Adams, R., Nuevo, A., &Egi, T. (2011). Explicit and implicit feedback, modified output, and SAL: Does explicit and implicit feedback promote learning and learner- learner interactions? *The Modern Language Learnin*g, 95 (supplementary issue), 42-63.

Alghazo, K., BaniAbdelrahman, M., &Abu Qbeitah, A. (2009). The effect of teachers' error feedback on AlHussein Bin Talal university students' self-correction ability. *European Journal of Social Sciences, 12*(1), 142-156.

Al-Khasawneh, F. (2010).Writing for academic purposes: problems faced by Arab postgraduate students of the College of Business. *ESP World*, *9*(2), 1-23.

Beuningen, C. (2010). Corrective feedback in l2 writing: Theoretical perspectives, empirical insight, and future directions. *International Journal of English Studies, 10(2)*, 1-27.

Bitchener, J., East., M. & Cartner, H. (2010). *The Effectiveness of Providing Second Language (L2) Writers with On-Line Written Corrective Feedback.* Wellington, NZ: AkoAotearoa.

Burt, M. (1975).Error analysis in the adult EFL classroom. *TESOL Quarterly*, *9*(1), 53-63.

Chan, J., & Lam, S. (2010). Effects of different evaluative feedback on students' self-efficacy in learning. *Annual Conference of the Australian Psychological Society, 38*, 37–58.

Cherrington, R. (2000). Error analysis. In Byram, M. (ed.). *Routledge Encyclopedia of Language Teaching and Learning* (pp. 198-199). London; New York: Routledge.

Ciftci, H., & Kocoglu, Z. (2012). Effects of peer e-feedback on Turkish EFL students' writing performance. *Journal of Educational Computing Research, 46*(1), 61-84.

Ellis, R. (2009). Corrective feedback and teacher development. *L2 Journal*, 1, 3-18.

Ellis, R. Sheen, Y. Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System*, 36, 353-371.

Evans, N., Hartshorn, K., & Tuioti, E, (2010). Written corrective feedback: practitioners' perspectives. *International Journal of English Studies, 10*(2), 47-77.

Gündüz, N. (2005).Computer assisted language learning. *Journal of Language and Linguistic Studies***,** *1*(2), 191-214.

Hashemnezhad, H., & Mohammadnejad, S. (2012). A case for direct and indirect feedback: The other side of coin. *English Language Teaching, 5*(3), 230-239.

Hosseini, S. (2013). The impact of asynchronous computer-mediated corrective feedback on increasing Iranian EFL learners' correct use of present tenses. *International Journal on New Trends in Education and Their Implications, 4(*1), 138-153.

Hyland, K. & Hyland, F. (2006). *Feedback in Second Language Writing: Context and Issues*. Cambridge: Cambridge University Press.

Jdetawy L. (2011). Problems encountered by Arab EFL learners. *Language in India*, 11, 19-27.

Jodaie, M.,Farrokhi, F., & Zoghi, M. (2011). A comparative study of EFL teachers' and intermediate high school students' perceptions of written corrective feedback on grammatical errors. *English Language Teaching, 4*(4), 36-48.

Krashen, S. (1982). *Principles and Practice in Second Language Acquisition*. London: Pergamon Press Inc.

Lin, W., & Yang, Sh. (2011). Exploring students' perceptions of integrating wiki technology and peer feedback into English writing courses. *English Teaching: Practice and Critique*, *10*(2), 88-103.

Loewen, S., & Erlam, R. (2006). Corrective feedback in the chatroom: an experimental study. *Computer Assisted Language Learning*, *19*(1), 1-14.

Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: negotiation of form in communicative classrooms. *Studies in Second Language Acquisition*, 19, 37-66.

Marboyeh, A. (2011). The impact of teacher feedback and peer feedback on the writing performance of EFL students with different learning styles. *International Online Language Conference (IOLC), 2*, 445-452.

Matsumura, S., & Hann, G. (2004). Computer anxiety and students' preferred feedback methods in EFL writing. *The Modern Language Journal, 88*, 403-415.

Ministry of Education, (2006)*.General Guidelines and General and Specific Outcomes for the English Language*. Amman: Ministry of Education.

Motallebzadeh, K., & Amirabadi, S. (2011). Online international feedback in second language writing: Through peer and tutor? *MJAL*, 3(2), 156-174.

Pan, Y. (2010). The effect of teacher error feedback on the accuracy of EFL student writing. *TEFLIN Journal*, *21*(1), 57-77.

Petchprasert, A. (2012). Feedback in second language teaching and learning. *US-China Foreign Language*, *10*(4), 1112-1120.

Rabiee, M. (2010). Facilitating learning to gather in Iranian context: Three collaborative oral feedback models in EFL writing classes. *Sino-US English Teaching, 7*(3), 10-22

Rahimpour, M. (2011). Computer assisted language learning (CALL). *International Journal of Instructional Technology & Distance Learning***,** *8*(1), 3-9.

Razagifard, P., & Razzaghifard, V. (2011).Corrective feedback in a computer-mediated communicative context and the development of second language grammar. *Teaching English with Technology, 11*(2), 1-17.

Rezaee, A., & Ahmadzadeh, S. (2012). Integrating computer mediated with face-to-face communication and EFL learners' vocabulary improvement. *Journal of Language Teaching and Research, 3*(3), 346-352.

Salomon, G., Kosminsky, E., & Asaf, M. (2003). Computers and writing. In Nunes, T., & Bryant, P. (Eds.) *Handbook of Children's Literacy* (pp. 409-442). London: Kluwer.

Sauro, S. (2009).Computer-mediated corrective feedback and the development of L2 grammar. *Language Learning & Technology, 13*(1), 96-120.

Sheen, Y., Wright, D., & Moldawa, A. (2009). Differential effects of focused and unfocused written correction on the accurate use of grammatical forms by adult ESL learners. *System 37*(4), 556-569.

Soori, A., Kafipour, R., & Soury, M. (2011). Effectiveness of different types of direct corrective feedback on correct use of English articles among the Iranian EFL students. *European Journal of Social Sciences, 26*(4), 494-501.

Sotilo, S. (2005). Corrective feedback via instant messenger learning activities in NS-NNS and NNS-NNS dyads. *CALICO Journal, 22*(3), 467-496.

Srichanyachon, N. (2012). Teacher written feedback for L2 learners' writing development. *Silpakorn University Journal of Social Sciences, Humanities and Arts, 12(1),* 7-17.

Tarawneh, R. (2011). The reasons behind writing problems for Jordanian secondary students 2010-2011. *Language in India, 11*, 92-112.

Touchie, H. (1986). Second language learning errors their types, causes, and treatment. *JALT Journal, 8*(1), 75-80.

Vanderbeek, G. (2007). Improving the effectiveness of independent practice with corrective feedback. Retrieved from http://scimath.unl.edu/MIM/files/research/VanderbeekG.pdf

Verhoef, R., & Tomic, W. (1996). Computer-aided acquisition of writing skill. *Curriculum and Teaching, 11* (1), 3-21.

Vyatkina, N. (2011). Writing instruction and policies for written corrective feedback in the basic language sequence. *L2 Journal*, 3, 63-92.