The Effect of Game- based Feedback on Improving EFL Learners' Reading Comprehension and Raising Autonomy

By

Iman El-Nabawi Abdel Wahed Shaalan [1, 2]
Department of English, College of Science and Humanities[1]
Prince Sattam Bin Abdulaziz University
Al-Kharj, Kingdom of Saudi Arabia
College of Humanities, Al-Azhar University, Cairo, Egypt[2]

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Abstract:

As providing EFL students with corrective feedback (CF) for their errors, the type of feedback employed, the nature of students, and the teachers' central role in the educational context have been controversial issues among educationalists, the present study aimed at investigating the effect of new appealing method of corrective feedback, namely, game based corrective feedback (G-CF) on changing the teachers' role from providers of knowledge into facilitators, and learners' passive role from teacher- dependent to autonomous students who are able to reach the answer themselves and contribute towards improving their reading comprehension skills. The study sampled 60 university- female level students aging 17 to 19, studying English as a foreign language (EFL) at Prince Sattam bin Abdul Aziz University (SAU), Saudi Arabia. The participants were divided into two homogeneous groups, that is one experimental and one control group. The study investigated the effectiveness of G-CF on improving reading comprehension skills through pre-test, post-test. Results indicated that the students who were exposed to G- CF outperformed the students who were provided with traditional methods of correction feedback by the teacher. In addition, the study explored, through a checklist, students' rate of autonomy when receiving G- CF. Positive results supported the notion that self-autonomy is an important part of the educational and achievement cycle.

Key words: Corrective Feedback (CF), Game- based Corrective Feedback (G-CF), Reading Skills, Self- autonomy.

Introduction:

Achieving a sustainable engagement of students in the educational process is not an easy task. There are several reasons that may cause the obstruction of this process. Among them are the nature of students and the type of (CF) they receive for their errors that suits and motivates each nature. Students may feel embarrassed and depressed due to frequent correction of their errors which causes reluctance in oral interaction. (Keller, J. M., 1987).

Because feedback practices are an important pivot in the educational situation, there is an increasing interest in maximizing the efficacy of CF through using more innovative appealing methods of CF rather than the more traditional ones.(Evans, Hartshorn, McCollum & Wolfersberger, 2010). Contrary to more traditional CF methods, (G-CF) has been developed to provide immediate feedback, learning without risk, high motivation, enjoyment for learning and learning autonomy. (Van Eck, 2006)

Although effective reading skills are necessary to the success of university-level students, and are important to proceed with other skills, foreign language (FL) teachers face many challenges developing these skills. This may be due to many reasons among them are the nature of students and the type of CF that suits and motivates each nature. (Evans, Hartshorn,McCollum & Wolfersberger, 2010). More important than paying much attention to correcting students' errors is to find the type of corrective feedback that is effective for the students to monitor their own mistakes and become independent autonomous readers.

Statement of the problem:

It has been observed that EFL students at SAU face difficulties with reading comprehension skills especially that they did not develop reading strategies from an early age. Moreover, being exposed to traditional strategies of CF hindered their willingness to interact in a reading class, and created teacher-dependent students who cannot find out or correct their mistakes. To address this issue, the current study has been investigating whether certain innovative methods of CF, namely, games, would provide EFL students of SAU with CF that may help improve their reading comprehension and raise their autonomy.

Questions of the study:

The present research tackles the following questions:

1- Is game- based (G-CF) strategy vs. traditional CF effective in improving EFL learners' reading comprehension skills?
2- Is game- based G-CF) strategy effective in raising EFL students autonomy?

Significance of the study:

The present study attempted to compare traditional versus innovative methods of CF with the aim of improving EFL students' reading comprehension skills. It also probed the relationship between raising students' autonomy due to receiving such appealing method of CF and the extent to which it affects their pursuit of learning reading skills.

I. REVIEW OF LITERATURE

Feedback is generally defined as information provided to learners in response to their learning decisions (Shute 2008; Hattie and Timperley, 2007). The term corrective feedback (CF) is used to refer to responses to the errors in learners' productions (Bitchener ,Young & Cameron, 2005).

According to Rink, (2010) and (Schmidt & Wrisberg, 2000), providing students with feedback about their performance is one of the effective ways that can influence the learning process. Corrective feedback provides students with a second chance to learn and is an implicit clue about how to adapt studying tactics. (Early, Northcraft, Lee & Lituchy, 1990)

Feedback can have multiple functions as it could be corrective; focusing on improving students' performance, motivational; providing learners with knowledge about the nature of the task in question, and building autonomous learners. (Lewthwaite & Wulf, 2010) (Pangrazi & Beighle, 2013)

Feedback interactions can be of different types; general or specific, congruent or incongruent, direct or indirect, coded and uncoded, oral or written…etc. The choice and the effectiveness of each type may vary according to students' nature, and the skill being taught. (Siedentop & Tannehill, 2001)

Corrective Feedback has remained a problematic issue. Some researchers (Semke, 1984; Sheppared, 1992; Truscott, 2007; Kepner, 1991) completely disagree with error correction and consider it harmful for the learning process. They argue that CF could be damaging specifically if students felt criticized. However, some others (Ferris, 2006,2010; Lee, 2004; Rahimi, 2015) believed that making errors is a necessary and natural process of language learning. Therefore, error correction is useful and students should not be left uncorrected for better learning (Hendrickson, 1978). However, explicit correction (Cohen & Cavalcanti, 1990) has proved ineffective as students are left passive, incapable of learning how to recognize or correct errors on their own. Fregeau (1999),(Van Lier, 1988 & Chaudron, 1988) considered that teachers had too much control of students' self-correction which in turn hampered their autonomous ability, and this is especially found in traditional classes where CFs, to some extent, are biased.

Using games in educational contexts for learning purposes has been around for long time, (Bergeron, 2006), (Michael and Chen, 2006). It has been used as an assistant tool for improving students in language acquisition, training, learning skills, and supplying feedback. When used for learning, the role played by the teacher changes as the provider of knowledge and students become the center of attention and they are the ones who portray and define the game environment. In providing corrective feedback, games (G-CF) has been developed to provide immediate feedback, learning without risk, high motivation, enjoyment for learning and learning autonomy. (Van Eck, 2006).

According to (Laurillard, 2002, p. 126), using games as a teaching strategy will provide students with what he called "intrinsic" and "extrinsic" feedback. Intrinsic feedback is that sort of internal satisfaction that students get while they are working with the learning task assigned to them through the use of games. Extrinsic feedback is that sort of external response, via games, that students receive over their work after they accomplish it. As feedback is a pivotal assessment tool in the learning process, G-CF can provide this role in a way that gets students involved and engaged in their learning process without fearing the sense of being criticized or the over- mastery role of the teacher (Knowles, 1990). This is because learners like to find immediate response to their work and at the same time, they get experience when dealing with their work problems independently (Knowles, 1990), (Knowles, Holton & Swanson, 2005).

The effect of using games as a teaching strategy would maximize the learning outcomes of the students as the experience would deepen over time through the so- called intrinsic and extrinsic feedback. This implies a different role of the teacher as a 'container of knowledge' who holds the true- false answer to a more facilitator who helps students develop their experiences and an organizer of games with the curriculum and learning objectives (Hafting, Ree-Lindstad & Vold, 2006). This method also changes the role of students from being mere receivers of feedback to be actively engaged in providing the feedback to their work through real funny experiences that they go through themselves without fearing the sense of being teacher or peer corrected (Schön, 1987).

According to (Fitzgerald, 1997), games are considered a very helpful instructional method as it would provide the students with activities that would make them active participants in the learning process. It minimizes students' feeling of boredom at the classroom due to traditional instructional methods, and due to overt corrective feedback, maximizes their knowledge acquisition and learning skills. Moreover, it provides immediate feedback in a highly motivated and enjoyable environment. There are many types of educational games that could be used in the classroom such as board games, flash card games, puzzle games, role- playing games, video games….etc.

In a study conducted by (Teerawat et al, 2017), a game- based learning module was designed to train pharmacy students practice their medical history skill, communication skill, and patient- counseling skill. The module included four phases where the first phase was responsible for providing medical questions between the pharmacist and the patient concerning its case. The second phase was concerned with diagnosing patients' symptoms; the third one was about providing medical advice to the patient. The fourth phase dedicated itself to provide pharmacist students with CF about their performance in the previous phases where they could get CF directly from the game and can replay the game to improve their medical performance. Results of the study indicated that designing a game- based module in which colors, animated characters, and immediate CF helped create a clam autonomous educational environment for the pharmacists' students.

Oral corrective feedback could be harmful if students felt criticized. The interruptive nature of correcting students' reading pronunciation and/ or grammatical errors is especially stressful for students. Students who are always busy with the idea of "sounding right" will tend to focus on decoding the text only. In doing this, they will miss the opportunity to construct meaning, interact, learn, and be autonomous learners. (Razfar, 2010) .However, if reading activities are embedded in educational appealing framework, namely, games, students' anxiety level will decrease and their ability to pay attention, comprehend text, and develop an autonomous sense of coming at their errors and correcting them themselves would increase. (Elias, Bruene-Butler & Blum 1997),(Dresser, 2013) &(Goleman, 2006).

In educational gaming, the teacher may divide each reading task into simple games, in which each simple min- game focuses on fostering acquisition of a simple reading skill. Due to the interactive goal- directed nature of games that provide students with activities guided by rules to encourage their active participation in learning the skill and acquiring the knowledge, students paly and strive to overcome knowledge challenges represented in the form of games. (Van Eck, 2006)

Question answer, fill in the blanks, lexical items guess, grammar correction, text comprehension, predicting the main idea, summarizing the text….etc., are all types of games that can be presented to the students in the form of game- based tasks supported by opportunities for repetition till acquisition. This will encourage students to play and re-paly till they acquire the skill in question. While doing this, games provide students with immediate feedback that allows them to monitor their learning progress. This feedback is important for developing an independent tendency towards self- correction, which fosters autonomy, self- confidence, self- satisfaction, character growth, enjoyment and total involvement in playing the game till they master the skill. (Dempsey, Haynes, Lucassen & Casey, 2002) & (Wouters, Nimwegen, Oostendrop & Spek, 2013).

As traditional CF has been criticized for its debilitative nature, (Truscott, 2007) more recent trends of innovative teaching/ learning strategies have emerged that encourage autonomous learning. The concept of autonomous learning has gained great reputation nowadays that it has been described, (Wenden,1998) as one of the most powerful learning/ teaching processes. Efficiency of autonomous learning can be traced to the nature of autonomy, maximizing it among learners, and the type of approaches employed to foster autonomy in learners. (Benson, 2001).

As teachers began to consider CF as a boring tedious task, they began to resort to more recent methods of CF that encourage students to reconsider their performance and think of correcting errors as their responsibilities and, therefore, think of it as an effective tool for their progress. Though it is yet a controversial issue which type of CF is more effective to develop students' reading ability and foster their autonomy in learning; however, it is at least agreed that, (Benson, 2001), it is important to help students become more autonomous in their learning which is achieved through training them and developing the skills they require for autonomy. "An autonomous learner is responsible for making decisions, implementing them and assessing the outcome."(p. 11). To make any type of CF an effective tool in the reading classroom, teachers have to resort to feedback methods that encourage students. Adaptation or even abandonment of CF methods should be according to the students' need. Whether to correct or not, to correct at the spot or to delay the correction should be determined according to what the teacher perceives for the students' performance progress. It has been even argued that, (Hedge,2000), teachers are sometimes advised to take on some responsibility for correction but leave it up to the students to make the actual correction since giving students the opportunities of self-correct foster autonomy in learning.

Reading is very important for all societies and cultures. It is a necessary pivot for success in schools and in life in general, if deprived from it, societies collapse and no technological or educational advancement can be traced. Therefore, communities, supported by schools, have been exerting great efforts to teach their children and students how to read (Przchodzin-Havin, Marchand-Martella, & Martella, 2005). To excel in other fields of knowledge, such as math, science, social, writing….etc., students should acquire not just some English grammar rules and vocabulary items, but they should raise to the standard of fluently reading materials with comprehension (Crawford, 2003),

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(Echevarria, Vogt & Short, 2010). Reading Comprehension is "the ability to actively engage in constructing knowledge from text by applying background knowledge and experiences, knowledge of vocabulary and language structure, and other reading strategies" (Good & Kaminski, 2002).

Reading training and instruction should enable young children and students to transfer from the stage of learning to read, in their early stages, to reading to learn (Biancarosa &Snow, 2004). This latter stage is the one that constitutes lifelong learning to students, through which, they should be able to improve their literacy skills, recognize and read complex words in and out of contexts accurately, develop their vocabulary knowledge, and make inferences of literal and figurative meaning (Ehri, 2002) & (Echevarria, Vogt & Short, 2010).

Although reading comprehension is considered one of the critical skills that students should learn at their early stages, however, no much attention is paid to probe the most effective methods and strategies to improve reading comprehension. The problem extends more to finding ways of engaging students in lesson activities, providing them with feedback about their performance, and creating an atmosphere of self-autonomy for students to assess their knowledge. (Mastropieri & Scrugg, 1997) & (Crowe, 2005) compared the effects of two oral reading feedback strategies; a traditional decoding- based and a meaning- based feedback (termed communicative reading strategy) to improve reading comprehension among elementary school children with low reading ability. The intervention assisted readers to use and integrate, at the same time, low level skills, e.g., word recognition, with higher linguistic levels; e.g. phonemic awareness, sentence structure, and word formation rules. Results showed that both forms of feedback performed better effects than no- reading feedback strategies in both word recognition and comprehension tasks.

In another study, (Pany & McCoy, 1988) compared two types of corrective feedback; namely; total and meaning change feedback to no-feedback condition. They aimed at raising oral reading comprehension among school children with reading disabilities through using story retelling and story related questions. Total feedback was given to all oral reading comprehension errors, but meaning change feedback was given only when an oral reading error changed the meaning. Results of the study showed greater improvement in oral reading comprehension due to both total and meaning change feedback, in contrast to no- feedback condition. Moreover, the study revealed no significant difference between the two types of feedback.

A study conducted by (Shany & Biemiller, 1995) compared two types of reading comprehension based feedback; namely; a word supply and a tape- assisted feedback to a no- feedback condition with the aim of raising reading rate, accuracy and comprehension among children with low reading ability. In the word supply feedback, children were reading with their teacher who was providing them with any word during oral reading if they asked for help. In the tape- assisted feedback, children read aloud after listening to tape- recorded stories. Results showed significant progress in the use of both word supply and taped- recorded feedback in comparison to no- feedback condition. Moreover, results showed no difference between the two types of feedback.

Today's vast use of games has extended to include not only healthcare and military but also education. There are many types of games; most of them are computerized, targeting reading strategies and comprehension. However, some of these games are not appealing to students due to their serious nature that depends on providing the information to the students ignoring the fun dimension of the nature of games. In the educational field, and in the domain of improving reading and comprehension skills of students, games are used to help students reach the information themselves through fun creating an atmosphere of self- autonomy and motivation among students (Susi et al., 2007; Ritterfeld et al, 2009; Westera et al., 2008; Farrington, 2011; Bokyeong et al., 2008 & Dempsey at al., 2009).

Another study was conducted by (Irina, Andrioaie, Mihai & Stefan, 2016) to investigate the effect of providing students with educational knowledge; namely enhancing their reading comprehension skills, through a funny game to promote their self- autonomy and motivation. The game consisted of three phases; introduction to the students about the game; explanation to the students on how to use the reading strategies provided in the game; and a practice part about the reading strategies learned accompanied by feedback about their answers to help them improve their performance about reading strategies in the future. Students were asked to play the game and provide feedback about their experience. Most students have voted for the entertainment, motivation, self- autonomy and easiness of improving comprehension skills through the use of games.

II. METHODOLOGY

Method

A. Participants

This study was conducted with 60 University- level students (females only) studying English as a foreign language at Prince Sattam bin Abdul Aziz university, Saudi Arabia. All participants were in level two which means that they all had the basic knowledge of reading comprehension skills. The participants were almost of the same age ranging from 17 to 19. The intended participants were divided into two homogeneous groups, that is one experimental and one control group, each group consists of thirty female students.

B. Design

The current study used an experimental design of pre-test, post-test, that intended to investigate the effects of innovative procedures of corrective feedback; namely games, G-CF, on the level of reading comprehension of predicting the meaning of key vocabularies in a reading text, getting the main idea of the text, and summarizing the reading passage. The pre- test was administered on both groups before the start of the treatment. The experimental group was provided with reading comprehension passages aided with G-CF. The control group, on the other hand, was provided with reading comprehension passages supported by traditional CF given by the teacher. A post- test was applied to both groups at the end of the treatment. Moreover, a checklist of autonomy was designed and applied to both groups before and after the experiment to measure the degree of the students' autonomy. To decide content and face validity of the checklist, items of the checklist were verified by a panel of EFL professors who approved and validated it. To verify internal consistency of the checklist, it was piloted on 40 non-participating students during the first week of the term. The checklist

included 14 items all of which are answered on a five-point Likert Scale, ranging from 1 (strongly disagree) to 5 (strongly agree). An Alpha Cronbach's correlation coefficient of 0.88 was calculated. Moreover, an internal consistency reliability check was computed and it was found that the alpha coefficient for the autonomy checklist was 0.90.

C. Instrumentation

For the purpose of this study, a Standardized Test of English Proficiency (STEP) of TEFL was used to guarantee the equivalence and homogeneity of the two groups. The purpose of the test was to measure reading comprehension background level of both groups of the study. Moreover, a checklist prepared by the researcher was used to check whether students had reached a degree of autonomy in favor of the experiment, or not.

D. Procedure

Before the experiment had been started, the (STEP) test was administered to obtain the students' level of reading comprehension. Two groups were determined, i.e. one experimental group and one control group. Based on the test and also for having homogenous groups, 60 out of 100 students were randomly chosen. All subjects had studied Inside Reading Book, level one; a four-skill British English course which means that they had almost the same background of reading comprehension knowledge. Subjects in the control group received regular reading classes that followed the traditional method of CF where a direct feedback on their reading comprehension errors was given by the teacher, or, for the best cases, by fellow students. Subjects in the experimental group received reading classes aided by G-CF, where the teacher had just explained at the beginning of the experiment the technicality and rules of the game. After the end of the intervention, a post- test was applied to both groups, and an autonomy checklist was also administered after the experiment to both groups.

The teacher explained to the students that the game included four phases, each one leads to the second and they had to be followed in the set order. The first phase of the game was called the "Guess- What" G-CF phase where students were asked to predict and explain the meaning of the key vocabularies in the reading text that may hinder understanding of the text. If students failed to elicit the meaning, they were presented with three cards; the first card provided them with a number of synonyms of the difficult vocabulary. If students failed to predict the meaning through the given synonyms, they move to the second card that provided them with a number of antonyms to the word. Again, if students failed to get the meaning through the second card, they move to the third card that contained full explanation to the meaning of the word supported by an example. If students failed to recognize the meaning of the word, students were asked in this case to look up their dictionaries themselves. If students gave a correct response either after the first or second or third cards, they would receive a positive feedback on the correct card that urges them to proceed to the second phase.

The G- CF designed in the second phase was called "Think with me" where students were asked to come out with the main idea of the reading text. Like the first phase, students read out their answer, then they draw the first card, if the answer was not correct, they had to read the second card given to them in this phase. The card contained a possible main idea about the text and the students should decide whether it is correct or not. If students failed to decide, they move to the third card, then to the fourth, till they had four possible ideas about the text, and they were to choose among them. If students failed to decide, they were asked to re-read the text to elicit the main idea of the text. If students were able to reach the main idea, either from the first time or with the help of the cards, they receive a positive response to move ahead to the third phase.

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The third phase of G- CF is called "the Ladder and the Serpent" where students were asked to summarize the reading text according to their understanding. After reading aloud their summary, students drew the first card to check their answer. The first card included just a small part of the summary of the text to help students try to complete the task themselves. If the first card did not work, and students were not able to come up with a full summary of the text, they seek help of the second card. Again, if they failed they try with the third and fourth cards, or they go back to the previous phase where the fourth cards of the third phase would remind them with the main idea of the text that they could make use of to make a summary of the text. If successfully done, students were given a positive feedback to move to the fourth and last phase of the game.

The last phase represented the climax of the reading comprehension game. It is called the "Visa card" game where students were exposed to a number of questions about the reading comprehension text in the form of true and false questions, fill in the blanks with the suitable vocabulary, say what happens if, what is your opinion about…etc. Students read out their answers and check the answer on the back of the card. If the answer was wrong, students were given extra questions on the second card, then on the third card, and finally on the fourth card. If all the questions are wrongly answered, this means that students had not grasped the reading text well and need to re-read it. If students answered the questions correctly, they get a positive feedback that admits their capability to move to the next reading comprehension text.

The role of the teacher in this game is just a facilitator of students' engagement in the game scenario to reach the information themselves which would foster their interest in the learning process and would help raise their autonomy, minimize their embarrassment and frustration if given CF in front of their peers.

After one full semester of treatment, a post- test was administered to the students to detect the extent of the students' post- treatment improvement of reading comprehension. Also, a post checklist was run to check the students' rate autonomy due to the experiment.

III. FINDINGS

Reliability Estimation of the STEP

The reliability of the Standardized Test of English Proficiency (STEP) of TEFL, as displayed in table 1 below, was computed through Cronbach's Alpha reliability formula that shows .889 as an acceptable index.
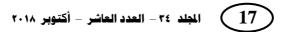
TABLE 1.

RELIABILITY INDEX OF THE STEP SCORES

Test	Cronbach's Alpha	N of Items
STEP	.889	21

Homogeneity Measures

Prior to any decision on the statistical approach, the data was checked in terms of homogeneity and normality assumptions. The descriptive statistics for the two groups are displayed in the following tables 2 and 3. According to table 2, the values of skewness and kurtosis are within the range of ±.96. Then, the data enjoyed normal distribution which is allowed to follow parametric approach and run t-tests.

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TABLE 2.

THE DESCRIPTIVE STATISTICS OF THE STEP SCORES BY CONTROL AND EXPERIMENTAL GROUPS

STEP	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	statistic	Std. Error
Homogenous test control	21	60.7143	4.61674	-.687	.501	-.537	.972
Homogenous test experimental	21	60.6190	4.59865	-.752	.501	-.071	.972
Valid N (listwise)	21						

Table 3 shows the results of the independent t-test and the Leven's test for equality of variances.

TABLE 3.

THE LEVENE'S AND INDEPENDENT T-TEST OF THE STEP SCORES BY CONTROL AND EXPERIMENTAL GROUPS USED AS THE HOMOGENEITY TEST

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F.	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Homogeneity test	Equal variances assumed	.077	.783	.067	40	.947	.09524	1.42197
	Equal variances not assumed			.067	39.999	.947	.09524	1.42197

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The mean scores for the control and experimental groups were 60.71 and 60.61, respectively. To run a t-test required observation of two assumptions of normality of the scores and homogeneity of variances. Tables 2 and 3 illustrate that the groups enjoyed normal standards as the ratios of skewness statistic over standard error was within the range of plus and minus 1.96.

Moreover, the groups proved to be homogenous as well. As shown in Table 3, the Levene F of .077 had a probability of .783. Given the fact that the probability associated with the Levene F is higher than the significance level of .05, it then could be claimed that that variances are homogeneous. Furthermore, since the probability of t (.067) had the sig (.947) that is higher than the significance level of .05, it could be concluded that the two groups were homogeneous regarding their language proficiency. Therefore, no statistically significant difference is seen between the mean scores of the participants on the STEP, signifying that they were homogenous in terms of their general English language proficiency before the treatment.

To ensure the homogeneity of the two groups on reading comprehension level, both groups received a pre-test before instruction began so that the researcher could have a clear picture of their reading comprehension knowledge. Table 1 presents the obtained results.

TABLE1.

RESULT OF PRE-TEST FOR CONTROL AND EXPERIMENTAL GROUPS

Groups	Number of students	Mean	Std. Deviation
Control group	30	13.3667	4.25468
Experimental group	30	13.3333	3.34595

The obtained mean scores from pre-test showed that both groups were approximately homogenous in their reading comprehension background. Also, analysis of variance of the data from the two groups didn't show any significant difference (p>0.05).

After the treatments, a posttest was administered in order to investigate the effects of G-CF on the students' progress in reading comprehension skills. Mean scores for control and experimental groups were respectively 18.03, 19.93. The following table presents the results of this test.

TABLE2.

RESULT OF POST-TEST FOR BOTH GROUPS

Groups	Number of students	Mean	Std. Deviation
Control group	30	18.0323	4.15920
Experimental group	30	19.9333	4.71924

As Table 2 shows, the treatment resulted in a change in both groups' scores. The post-test showed improvement in the mean score of both groups, so the two methods of corrective feedback increased the level of reading comprehension among students. But the G-CF was most effective in this stage when scores of both groups are compared (p<0.0001). Based on Post Hoc test (Scheffe), the observed difference between the control group and the experimental group was significant (p<0.0001). The mean scores showed G- CF group outperformed the traditional CF, but both groups showed increase in their scores in comparison with their mean scores in pre-test. Similarly, the current 5 point Likert scale of corrective feedback autonomy checklist (CFAC) was used as a pre-measure and as a post-measure.

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TABLE 3.

INDEPENDENT-SAMPLES T-TEST RESULTS OF THE DIFFERENCES IN THE MEAN SCORES BETWEEN THE CONTROL GROUP AND

THE EXPERIMENTAL GROUP IN THE PRE- APPLICATIO AND POST APPLICATION OF CFAC

Groups	No. of students	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Control- pre-experiment	30	30.30	3.89			
Control- post-experiment	30	33.30	4.77			
Experimental- pre- experiment	30	30.30	3.89			
Experimental- post- experiment	30	86.70	4.77	43.34	58	0.01

The results of post application of CFAC showed that students of the experimental group were highly motivated compared to their counterparts of the control group. An independent-sample t-test was used to compare the mean scores of the experimental group and the control group on the post application of CFAC. The results, displayed in Table 3, showed a statistically significant difference in the mean scores of the experimental group (M =86.70, SD =4.77) and the control group (M =33.30, SD = 4.77); t (58) = 43.34, p = 0.01 in favor of the experimental group. The results indicated a positive effect of the G- CF method on raising students' autonomy.

Based on the findings, both groups were almost of the same reading comprehension level in the pre- test. However, in the post- test, as table (2) indicates, the experimental group had significantly higher performance average than the control group. Therefore, it can be argued that the G-CF method used to improve students' reading comprehension is more likely to positively affect students' performance in reading comprehension. One possible reason for the greater effect of the G- CF might be attributed to the feeling of confidence and self- dependence as students were no more embarrassed or frustrated as when corrected by the traditional methods, and also to the level of involvement and autonomy given to the students in the process of practicing and learning

through the new technique of the study. Moreover, according to results of CFAC as shown in table (3), and unlike traditional methods of CF, students were urged to work independently, find their own mistakes without the help of the teacher, and enjoy the learning process through the use of games to reach the answer of their questions. This process tends to make them interested in the reading comprehension process, depend on themselves to reach their goals which foster their s autonomy, and also, as it is known that anything done through playing tends to stick in the mind for longer periods. Therefore, it is recommended by the researcher that teachers of English as a foreign language (TEFLs) get familiar with and employ this G- CF strategy with EFL learners in reading comprehension classes when giving them CF for their errors.

IV. DISCUSSIONS AND CONCLUSION

This study aimed at detecting the effect of G- CF versus traditional methods of CF on EFL students' reading comprehension. In fact, the study purported to answer the following questions:

1. Is games- based CF strategy vs. traditional CF effective in improving EFL students' reading comprehension skills?
2. Is games- based CF strategy effective in raising EFL students' autonomy?

No doubt that reading comprehension is a difficult skill to teach and learn, especially when it is dealt with as a FL. That's why; much attention had always been paid to the practices and methodologies that facilitate this process. Corrective feedback, with it different types, is one such practice which plays a very important role in promoting FL learners reading ability.(e.g. Rink, 2010; Schmidt & Wrisberg, 2000; Early, et al., 1990; Siedentop & Tannehill, 2001; Ferris, 2006,2010; Lee, 2004; Rahimi, 2015). This comes in contrary to many studies that argue that correcting students' errors is harmful for the learning process. They argue that CF could be damaging specifically if students felt criticized. (e.g. Semke,1984; Sheppared, 1992; Truscott, 2007; Kepner, 1991).

However, others (e.g. Cohen & Cavalcanti, 1990; Fregeau 1999; Van Lier, 1988 & Chaudron 1988) argued that explicit types of CF have proved ineffective as students are left passive, incapable of learning how to recognize or correct errors on their own. Moreover, they considered that teachers had too much control of students' self-corrections which in turn hampered their autonomous ability, and this is especially found in traditional classes where CFs, to some extent, are biased. Therefore, teachers should adopt types of CF that encourage students, motivate them, raise their sense of responsibility and autonomy, and lesson their boredom and dependency. That's why, the investigator used G- CF as an interesting method that does not leave students uncorrected but at the same time encourages them to reach the correct answer themselves to avoid embarrassment of public correction.

Researchers concerned with raising FL learners' reading comprehension have been always eager to look for types of CF that enhance learners autonomy in the field of learning reading to make it an interesting task rather than a boring one. (e.g. Lewthwaite & Wulf, 2010; Pangrazi & Beighle, 2013).

As to the first research question, the result revealed that there actually is a significant difference between pretest and posttest of students who received G- CF. Results showed that the experimental group who employed the G- CF strategy performed better than the control group who received traditional CF methods in the post-test with reference to their reading comprehension level based on gained scores. The post-test revealed progress in the mean score of the experimental group as shown in (table 2). So, it can be concluded that G- CF was effective in developing learners' reading comprehension. This finding is consistent with a large body of literature on the efficacy of using games as a teaching strategy to maximize learning outcomes of the students, e.g. (Laurillard 2002; Van Eck 2006; Knowles 1990, Knowles et al.2005; Hafting et al. 2006, Vold 2011; Schön 1987; Fitzgerald, 1997).

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As to the second research question, the result revealed that the rate of EFL students' autonomy was also higher for the experimental group in comparison to the control group. The difference between G- CF group and traditional CF group was significant because the obtained value is lower than the acceptable value as indicated in (table 3). This result also comes in line with a corpus of studies, (e.g. Benson, 2001; Hedge 2000; Susi et al., 2007; Ritterfeld et al, 2009; Westera et al., 2008; Farrington, 2011; Bokyeong et al., 2008 & Dempsey at al., 2009; Irina, T., Andrioaie, I., Mihai, D., Stefan, T., 2016) that indicated that providing CF through an interesting method helped create a clam autonomous educational environment for FL students.

Pedagogically speaking, the results of this study encourage us to suggest that the use of G- CF strategy is likely to improve EFL students' reading comprehension skills. It is also more successful in making students get involved in the teaching process which caused fostering their autonomy and independency. In contrast to a traditional environment where students are teacher- dependent waiting for direct orientation by the teacher, innovative G- CF method invokes learning in an interesting gaming environment that allows the students to find out their errors and correct them themselves.

V. PEDAGOGICAL IMPLICATIONS OF THE STUDY

The purpose of this study was to examine the effect of G- CF on students' reading comprehension skills. The results showed that the traditional methods of CF can be replaced by innovative methods that appeal to the students'interests to improve both their academic skills as well as their personal capabilities. G- CF method would enable students to become self- dependent and would help retain the acquired knowledge in their long- term memory. However, traditional methods of CF do not likely result in long-term learning since students are teacher- dependent as they do not foster personal traits of the students.

Benefits of innovative methods of CF; namely, G- CF cannot be ignored since it encourages EFL students to identify their errors and correct them themselves which improve their sense of responsibility and autonomous for their learning. Therefore, teachers of EFL should start to differentiate between traditional and innovative methods of CF, make use of the benefits of these methods that help foster students' academic as well as personal skills.

VI. LIMITATION OF THE STUDY

Like any other research, the present study was not without any limitation. The main limitation of this study among others was its scope as it did not refer to or compare any other CF strategies to the present G-CF strategy. Another limitation of the study was that it only investigated the impact of G- CF method on improving EFL students' reading comprehension skills. Therefore, findings of the study could not be generalized to the use of these G- CF techniques in other language skills such as writing, listening and speaking.

VII. SUGGESTIONS FOR FURTHER RESEARCH

The following are some suggestions for further studies:

1- The present study explored the impact of G- CF on improving EFL students' reading comprehension skills. Further research studies may examine the effect of the G- CF technique on other language skills.

2- The participants of this study included only university level female students. Future research studies can be applied to students of different levels, of both sexes.

3- The present study had a significant positive effect on enhancing EFL students' autonomy, self- dependence and responsibility for their learning. Subsequent research may measure the impact of such innovative G- CF on increasing students' motivation for learning and other physiological aspects.

Appendix A: Pre- Post Implementation Checklist about students' sense of autonomy during a reading comprehension class.

Name:

Date:

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Please mark one of the following choices where N stands for (never) , R (rarely), S (sometimes), O (often), and A (always).

No.	Items	Never (N)	Rarely (R)	Sometimes (S)	Often (O)	Always (A)
1-	Can you make predictions about the meaning of difficult vocabularies without the help of the teacher?					
2-	Can you understand the main idea in a reading text without the help of the teacher?					
3-	Can you summarize a reading text without the help of the teacher?					
4-	Can you answer questions based on a reading text without the help of the teacher?					
5-	When you face difficulties in your reading comprehension, do you seek your teachers' help?					
6-	Do you think that selecting reading comprehension texts by yourself would encourage and motivate you to read?					
7-	Do you prefer to take the responsibility of your own learning?					
8-	Do you consider learner engagement in a reading comprehension class important?					
9-	Do you feel happy when working on your own?					
10-	Do you prefer to decide your own standards, techniques, and procedures in a reading comprehension task?					
11-	Do you prefer to literally follow the directions provided by the teacher and work accordingly?					
12-	Do you think that the teaching and learning environment in your reading class hinder your self- dependency?					
13-	Can you individually employ effective strategies to improve your reading comprehension?					
14-	Is it easy for you to handle independently your mistakes and correct them?					

Appendix B: Sample of G- CF reading comprehension text

Sessions	Steps for G- CF	Reading topic
February 7th to 8th Session 1:	Introducing the advantages of the G- CF method to the students. Persuading students about the benefits of improving their reading comprehension skills through using games to get feedback about their performance. Moreover, students were informed of the positive impact that this strategy would increase their autonomy, self-dependence, decision making and responsibility for their learning. Steps of the game were explained fully and explicitly to the students that they would be exposed to two sessions of three hours twice a week consecutively. Each reading topic would integrate the four-game- phases of the "Guess-What" , "Think with me", "the Ladder and the Serpent" and the " Visa card" G- CF. The game was taught to the students explicitly using a teacher model in order for them to absorb the phases of the game and put them into practice.	Going underground: Students were asked to predict the meaning of the key vocabularies in the reading topic "Going underground". According to the first phase of the game, students were presented with three cards; the first card provided them with a number of synonyms of the difficult vocabularies, then antonyms, then explanation and more examples to illustrate the meaning of vocabularies. If done, they move to the second phase where there were asked to predict the main idea of the reading topic. According to the different steps of the game, students should test their ability of meaning prediction through drawing the game cards one by one. If done, they receive a positive feedback to move to the third phase of the game, where they were asked to summarize the reading text according to their understanding. If failed, students were asked to go back to the previous phase which means that they have not absorbed the text fully to summarize it. However, if they have done with this phase, they move to the last phase of the game where they were asked a number of questions about the reading comprehension topic. If they failed, they were given extra different questions till they are able to answer the questions which means they have grasped the topic. If students answered the questions correctly, they get a positive feedback that admits their capability to move to the next reading comprehension text.

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