The Effect of Using Concept Check Questions on Iranian Female EFL Learners' Grammar

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ABSTRACT

The present study examined the effect of concept check questions on Iranian female EFL learners' grammar. To achieve this end, 40 students were selected based on random sampling and were homogenized based on the results of OPT. The participants then were randomly assigned as the experimental and control groups. The grammar topics were taught using concept check questions in the experimental group and the control group received placebo in the form of traditional teaching without the use of concept check questions. In order to measure the participants' grammatical proficiency, IELTS-based grammar tests were administered as the pre-test and the post-test. The independent sample t-test was run in order to find out if there were any significant differences between the control and experimental groups in terms of their grammar knowledge at the beginning and at the end of the study. Moreover, paired t-tests were run to measure the students' possible progression within each groups. It was concluded that the use of the concept check questions was advantageous in enhancing EFL learners' grammar. This study has pedagogical implications for EFL teachers manipulate the use of concept check questions as an alternative strategy when traditional way of teaching grammar do not lead to the effective learning.

1. Introduction

Concept checking questions first appeared in Anderson's model (1982), known as the presentation practice production (PPP), which was promoted by CELTA trainers (Florkowska, 2016). They were also used much in the communicative approach especially in teaching grammar or vocabulary, mainly in the presentation stage of the PPP format (Nunan, 1987). The technique is based on eliciting whether the students have comprehended the taught subjects through proposing simple and understandable concept questions either in the form of display questions and referential questions (Long & Sato, 1983). This technique also offers a way of making students get across the meaning and understand the grammatical structures in a more effective and student-centered way (David, 2007; Workman, 2008 ; Florkowska, 2018). As one of privileged techniques, CCQs have gained much popularity among the insiders recently around the world (Florkowska, 2018).

2. Literature Review

According to Workman (2008), the concept check questions are designed to check the learners' comprehension of taught grammatical points, vocabularies or functional expressions (p. 8). They are employed instead of asking questions like, ''Do you understand?'' because they are more effective and useful. When teachers ask students ''Do you understand?'', most of the students answer yes, because they may think they have understood correctly but in reality they have not and maybe they do not like to say in front of other students that they have not understood, so concept check questions are efficient to be used by teachers in the classroom. As the CELTA course focuses more on communicative approach to teaching, the favored way to check whether
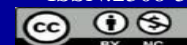
students have understood the new concepts or not is through involving and integrating them in the process itself. They are also a way of making students get across the meaning or the structures in a more effective and student-centered way (David, 2007; Workman, 2008; Florkowska, 2018). Concept check questions (CCQs) have become one of the fundamental parts of the CELTA training round the world (Florkowska, 2018). They are used to highlight the gist of the meaning of the target language taught during a lesson and verbally check students' understanding of new vocabulary, grammar points, communicative functions or even instructions presented in class. There are two main types of CCQs: display questions and referential questions (Long & Sato, 1983). Display questions are questions that the teacher knows the answer and require students to display their knowledge of comprehension, but referential questions are different because the answers are not known by the teacher at the time of asking (Wright, 2016). Questions are believed to be among the dynamic ways to obtain and develop knowledge. Questions are tools to examine new concepts, exchange information, pieces of knowledge and negotiate the meaning. They perform great part in communication (Chaudron, 1988) and are considered as one of the essential instruments to enhance the quality of education in general and language teaching in particular (Nuru, 1992 cited in Azerefegn, 2008). Furthermore, as Omari (2018) stated through asking questions students' progress from their informative feedback during classroom teaching and learning process can be traced back and can be checked.   Florkowska (2018), exposed that the concept check questions have positive effects on the process of learning as they help teachers figure out implicitly how much has been comprehended by the learners through meaningful conversation hold in between the teacher and students.

Based on Thanh's study (2016), using timelines as well as the concept check questions can increase students' interest and participation in the process of learning. As Karen (2012), stated, learners at lower proficiency levels, were able to familiarize themselves with the language in terms of grammar rules and vocabulary much better and get rid of misunderstandings and confusions which are underlying parts of learning a new language.

As Workman (2008, p.9) states, there are some rules for the design and use of concept questions that we need to keep in mind:
• Break down the concept of the item into a series of statements of meaning.
• Make sure the statements of meaning are expressed in simple language.
• Turn the statements into questions.
• The questions should be concise and simple.
• The language you use must be simpler than the language you are checking.
• The questions should not normally use the language you are checking.
• Sort the questions into a logical order.
• Write down the correct answers you expect the learners to give.
• The answers should be short and simple.
• If they answer incorrectly, state the correct answer and provide clarification.
• Concept questions need to cover every aspect of the meaning of the language item.
• The questions should not use the target language
• The questions should not use language which is overly complicated or long-winded, or more complicated than the target language.
• Concept questions should, where possible, require a sample yes or no, or a choice between two possibilities.

The following questions are some of the possible samples to illustrate concept check questions with respect to grammar:
Ex1. "Could you close the window, please?"
The concept questions are:
1. Is this an order or a request? (Request)
2. Am I being polite or impolite? (Polite)
Ex2. The train leaves at 7.00 on Monday.
1. Does this happen at the same time every Monday? Yes
2. What time does the train leave? At 7 on Monday

Long & Sato (1983) and Brock (1986) have investigated the role of questions in second language learning in the classroom. They have revealed that the teacher's questions (both display and referential questions) facilitate the process of learning. Brock asserted that referential questions increased the amount of learner output; consequently, use of referential questions by teachers created discourse which produced a flow of information from students to the teacher. Wright (2016) also found that referential questions in the interactive context of a communicative classroom may

be beneficial in promoting enhanced student output, negotiation, and comprehension. However, it is also believed that display questions which require short answers, are less likely to get learners to produce large amounts of speech. Van Leir (1988) likewise believed that classroom questions of any types had the potentiality of getting the learners to produce language.

3. Research Question and Hypothesis

The present study aimed to expand the scope of concept check questions literature by using the following question:

RQ: Do concept check questions have any statistically significant effect on female EFL learners' grammar?

The following null hypothesis was tested in this study:

H_0: Employing the concept check questions has no significant effect on Iranian female EFL learners' grammar.

4. Method:

The present study used control/experimental group design to see if there was any significant difference between the grammatical knowledge of these two groups after the treatment.

4.1 Participants

To accomplish the objectives of the study, 40 intermediate female EFL learners within the age range of 15-17 years old were selected randomly from at Shokouh institute, Astara, Iran. To ideally ensure the students' homogeneity in terms of their proficiency level, Oxford Placement Test (OPT) was administered and those whose scores fell between one standard deviation above and below the mean were selected. The participants were selected randomly and were assigned into one control (N=20) and one experimental group (N=20). The experimental group received the treatment while the control group did not receive any specific treatment as they were in the traditional teaching classroom.

4.2 Instruments

The following instruments were utilized in this study:

Oxford Placement Test (OPT): An Oxford Placement Test (version 2) was used in order to ensure the homogeneity of participants prior to the treatment. This test (OPT) included 60 multiple-choice questions the learners' general knowledge of vocabulary, grammar, reading, and writing. This test is used to make sure about students' homogeneity in terms of their proficiency level.

IELTS Grammar Pre-Test: After ensuring the homogeneity of participants in terms of

proficiency level, an IELTS grammar test was administered as the second pre-test to confirm their grammar knowledge, too. The test questions were chosen from the book of Cambridge Grammar for IELTS. The test included 20 multiple-choice questions and the allocated time for the test was 20 minutes. The IELTS grammar test consisted of questions about grammatical structures they were going to learn.

IELTS Grammar Post-Test: The second IELTS grammar test was administered as the post-test in order to examine the effect of the treatment. This text was also chosen from the book of Cambridge Grammar for IELTS. The test consisted of 20 multiple-choice questions about those grammatical rules they had been taught. The allocated time for this test was 20 minutes too.

4.3 Data Collection and Analysis Procedures

In order to achieve this goal, 40 students were selected randomly from Shokouh institute, Astara, Iran. This was carried out, first, through the administration of Oxford Placement Test (OPT) which included 60 multiple-choice questions. The test lasted for 30 minutes. Initially they were 48 students. On the basis of their pre-test 40 students whose scores ranged from 30 to 39 were selected. Then they were semi-randomly assigned to one experimental and one control group. After ensuring the homogeneity of participants' proficiency level, the second pre-test, IELTS grammar test, was administered to see how much they know about the grammar subjects they were supposed to learn. The test consisted of 20 multiple-choice questions and it lasted for 20 minutes. The scores ranged from 11-14. Then the two groups went under the treatment afterward. In group A, the control group, participants were taught with usual method of teaching grammar. The researcher wrote the formula on the board and wrote some sentences to explain the grammar. Then the text of the grammar book was read by teacher. At the end, students were asked to say if they had any problems or not and they were required to do the grammar exercises. The next session their homework was checked by the teacher. After checking their homework, the teacher reviewed the last session grammar again. Participants in group B were provided with a short story about their teacher according to a new grammar they were going to learn. The teacher wrote some sentences on the board. Students were asked to answer some display questions about those sentences. The

answers were yes/ no. Then the teacher asked some referential questions to check if students understood the grammar or not. At the end, like the first group they were required to do their grammar exercises. The next session their homework was checked by the teacher. After checking, for reviewing the last session grammar the teacher asked students some referential questions to check their understanding again. Finally, at the end of the treatment, post-test (IELTS grammar test) was administered to see how much they learned new grammar and to see if the scores of two groups differed or not.

In the present study, there was one dependent variable (i.e. learners' grammar) and one independent variable (i.e. asking concept check questions). After ensuring the normality distribution, the independent samples t-test was run in order to find out if there was any significant difference between the control and experimental groups in terms of their grammar knowledge at the beginning and at the end of the study. To measure the students' possible progression within the groups, two paired t-tests were also run. Furthermore, the reliability of the grammar test administered in the present study was estimated through a pilot study on 20 EFL students who were representative of the main group in terms of their overall foreign language proficiency.

5. Results:

In the analysis phase of the data, the grammar scores were summarized and the procedures of descriptive statistics (including frequencies, means, standard deviations, etc.) along with inferential statistics namely independent samples T-tests and paired t- tests were run. The parametric independent samples t-test was run in order to find out if there was any significant difference between the control and experimental groups in terms of their grammar knowledge at the beginning and at the end of the study. Moreover, to measure the students' possible progression within the groups, two paired t-tests were also run.

Table 1: Reliability statistics for the grammar tests (pre-test and post-test)

Cronbach's Alpha	N of Items	N of sample
Grammar tests Test (pre-test)	20	20
Grammar tests Test (post-test) .88	20	20

The estimated values of Cronbach's Alpha for the pre-test and post-test of grammar were (α $_{pre-test}$= .81; α $_{post-test}$= .88), respectively which were considered good

values according to the reliability standards suggested by Barker, Pistrang, and Elliott (1994).

Table 2: Group statistics for the pre-test of grammar

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pretest	Control	20	12.5000	1.14708	.25649
	Experimental	20	12.7500	1.06992	.23924

For the pretest of grammar administered at the beginning of the study, the mean scores for the control and experimental groups were (M $_{control}$= 12.50; M $_{experimental}$ =12.70), respectively. However, the standard deviation for the experimental group was slightly smaller than that of the control group (SD $_{control\ group}$ =1.14, SD $_{experimental\ group}$ =1.06). After working on concept check questions for the experimental group and practicing traditional methods for the control group, a posttest of grammar was administered to the both groups at the end of the study. The results of the descriptive statistics are given in Table 3.

Table 3: Group Statistics for the post-test of grammar

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Posttest	Control	20	12.7000	.97872	.21885
	Experimental	20	16.4500	1.39454	.31183

The mean score for the experimental group (M $_{experimental\ group}$= 16.45) was 3.75 points greater than that of the control group (M $_{control\ group}$= 12.70). Therefore, the two groups varied some points around their average. In addition, the degree of the variation of the scores for the experimental group (SD $_{experimental\ group}$ = 1.39) was higher than that for the control group (SD $_{control\ group}$= .97).

Table 4: Test of normality for the pre and posttest of grammar

	Groups	Shapiro-Wilk		
		Statistic	df	Sig.
Pretest	Control	.909	20	.062
	Experimental	.868	20	.011
Posttest	Control	.879	20	.017
	Experimental	.925	20	.123

The values of (*p*) for the pretest of grammar for the control group equaled (*p*=.062), for the pretest scores of the experimental group came to (*p* = .011), for the posttest scores of the control group came to (*p* = .017), and for the posttest scores of the experimental group amounted to (*p* = .123). Given the aforementioned (*p*) values for the Shapiro-Wilks test and using (α = .01), it was concluded that the grammar scores were normally distributed. Therefore,

the assumption of normality had been met for these samples.

Table 5: Paired samples statistics for the control and experimental groups

Groups			Mean	N	Std. Deviation	Std. Error Mean
Control	Pair 1	Pretest	12.5000	20	1.14708	.25649
		Posttest	12.7000	20	.97872	.21885
Experimental	Pair 1	Pretest	12.7500	20	1.06992	.23924
		Posttest	16.4500	20	1.39454	.31183

As it was shown in Table 5, the mean score for the experimental group improved from (M $_{Pretest}$= 12.75) in pre- test to (M $_{Posttest}$= 16.45) in post- test; that of the control group progressed from (M $_{Pretest}$= 12.50) in pre- test to (M $_{Posttest}$= 17.1012.70) in post- test.

Table 6: Independent samples t- tests for the pre-test of grammar

		Levene's Test for Equality of Variances		t- test for equality of means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
									Lower	Upper
Pretest	Equal variances assumed	.07	.784	-.71	38	.48	-.25		-.96	.46
	Equal variances not assumed			-.71	37.817	.48	-.25		-.96	.46

The results of independent samples t-test revealed that there were no significant differences between the two groups with respect to their grammar knowledge before introducing the treatment (t $_{pretest\ of\ grammar}$ =.71, p= .48 >.05).

Table 7: Independent samples t-tests for the post-test of grammar

		Levene's Test for Equality of Variances		t- test for equality of means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
									Lower	Upper
Posttest	Equal variances assumed	3.95	.054	-9.84	38	.00	-3.75		-4.52	-2.97
	Equal variances not assumed			-9.84	34.06	.00	-3.75		-4.52	-2.97

Based on Table 7, there were statistically significant differences between the mean scores of the two groups on posttest of grammar (p< .05). It was found that the two groups were not at the same level of proficiency in terms of their grammar at the end of the study (t $_{posttest\ of\ grammar}$ = 9.84, p= .000 <.05).

Table 8: Paired samples t-test for the grammar test

Groups		Paired Differences				t	df	Sig. (2-tailed)
		Mean	SD	95% Confidence Interval of the Difference				
				Lower	Upper			
Cont.	Pretest - Posttest	-.20	.52	-.44	.04	-1.71	19	.104
Ex.	Pretest - Posttest	-3.70	1.12	-4.22	-3.17	-14.66	19	.000

As it was shown in Table 8, both groups had progressed in the post-test of grammar. Based on the results of paired samples T-tests, this improvement was statistically significant simply for the

experimental group (p< .05). However, the students' within group improvements were not statistically significant for the control group (P≥ .05). In other words, the experimental group who received instruction on the use of concept checking questions made a noticeably higher progress as compared to the control group in the post-test of grammar.

The results showed that the use of concept checking questions had been beneficial in enhancing EFL learners' English grammar for the experimental group and thus the research null hypothesis was rejected suggesting that the use of concept checking questions had statistically significant impact on Iranian intermediate EFL learners' grammar.

6. Discussion:

The purpose of the present study was to examine the effect of concept check questions on Iranian female EFL learners' grammar. The results of the statistical analysis showed that the participants in two groups had a similar performance on the pretest. However, they showed different behavior on the posttest. In the experimental group, the participants' grammar improved significantly after a three-month teaching grammar through concept check questions. In fact, the study showed that using concept check questions for teaching grammar could bring about more improvement in EFL learners' grammar. The result of current study is in line with the findings in the literature. It is consistent with Thanh's (2016) findings that concept check questions can increase students' interest and participation in learning grammar. Although he found that timelines could have important roles in learning grammar too. The present study focused only on the effectiveness of concept check questions in teaching grammar.

According to Florkowska (2018), concept check questions have positive effects on learning, therefore her study is consistent with the findings of the present research. The results are also in line with those of Wright (2016) who confirmed that asking questions expand learning opportunities and new teachers should be aware of these opportunities. The results are consistent with those of Scrivener (2011), who found that CCQs are among the effective tools to expand and check students' understanding. The results are supported by (Mercer & Dawes, 2008) who stated that it is essential to ask CCQs at the pre-intermediate level of English since to check
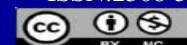
their comprehension of the tenses they should have learnt in the course "and they need concept checking of" (p. 37).

As the present study pretends, using concept check questions in the classroom has significant effect on EFL learners' grammar and encourage students to be active in the classroom, so CCQs can increase the classroom interaction and according to Brock (1986), an increase in the amount of classroom interaction will help language learners learn the target language easily. Long & Sato (1983) and Brock (1986) revealed that teacher's questions (especially display and referential questions) facilitate learning, thus their findings are consistent with the results of the present research which indicates that using CCQs can improve students' grammar. Since the participants in the Control group were taught traditionally and did not have any significant improvement in grammar. It is logical to assert that traditional ways of teaching grammar are not beneficial. In other words, the lack of statistically significant improvement in the control group on the posttest recommends using some new techniques for grammar teaching. The improvement in the experimental group showed that this technique could be teaching grammar through concept check questions. Since participants in the control group performed poorly compared with the experimental group on the posttest, it can be concluded that improvement on the posttest was not because of normal classroom teaching. If this was true, the participants in the control group should have had similar improvement on their posttest. This result affirmed that the learners' improvement in grammar on the posttest is because of teaching grammar through concept check questions. Moreover, the only difference between these groups was the treatment. Consequently, it is logical to argue that the treatment itself was the only reason for improvement in the experimental group. The findings of current study support the effectiveness of teaching grammar through concept check questions. Moreover, based on Thanh's (2016) finding, this technique can increase EFL learners' interest and participation in learning grammar too.

7. Conclusion:

The present research studied the effectiveness of concept check questions on EFL learners' grammar. Pre-test, and post-test were conducted for the study. After three-month treatment for both control and experimental groups, the results of their post-tests were significantly different and it was concluded that traditional method of grammar teaching did not improve control group's grammar significantly, but teaching through concept check questions improved experimental group's grammar significantly. The findings showed the significant difference between the control and the experimental group in terms of their grammar knowledge at the end of the treatment. In conclusion, the use of concept check questions had been beneficial in enhancing EFL learners' English grammar for the experimental group and thus the research null hypothesis was rejected suggesting that the use of concept check questions had statistically significant impact on Iranian intermediate EFL learners' grammar. Therefore, it can be helpful for teachers to use concept check questions when teaching grammar. By using this technique teachers can encourage students to take part in learning process and also, it can increase the amount of interaction in the classroom.

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