

Adult L2 Learners Need a Reading Comprehension Test: Is it a C-Test or a Cloze Test?

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Abstract

Many language tests are used to measure language learners' abilities, two of these tests are the cloze test and the C-test. However, insufficient research has done on the usefulness of these tests as reading comprehension tests. Therefore, this study attempts to compare the efficiency of the cloze test with the efficiency of the C-test as reading comprehension tests. It will explore the main research question if there are any significant differences between the results of the testees on the cloze test and their results on the C-test as reading comprehension tests, in addition to their performance on both tests as advanced level and intermediate level learners. A C-test and a cloze test were administered to 80 international university students at Otto-von-Guericke University in Germany to answer these questions. The statistical analysis used in this study was the (t-test) to test the statistical significance of the differences between the two tests. Results revealed statistically significant differences between the scores of the testees in favour of their scores on the C-test. Furthermore, the results indicated that the cloze test correlated positively with the C-test. Contrary to the findings of previous research indicating that the cloze test is more efficient reading comprehension test than the C-test. It is suggested that this study can be expanded to wider population and to be used for testing the lexical knowledge of language learners.

Keywords: C-test, Cloze test, ESL/EFL testing, Language testing, Reading comprehension

1. Introduction

Language testing plays a central role of any educational programme. McNomara in Razi (2005) claims that language testing affects learners at some point in their lives as some important decisions are based on test results. Accordingly, instructors need to develop tests to evaluate students, to explore students' learning difficulties, to investigate students' progress, and to assess language learners' proficiency. Nevertheless, instructors encounter some difficulties in testing students' achievement. One of the difficulties is to decide on suitable testing methods depending on what skills should be assessed. As a result, this study is an appraisal study for the results of two specific tests concerned with reading skills.

1.1 Testing Reading Ability

Reading is a complicated and effective progression that requires readers to comprehend and link ideas in a text and make use of many mental processes to evaluate the information (Veeravagu *et al.* 2010). When language testers design a test of reading ability, they have to decide what they want to test and find a means of testing it. Some of the testing techniques that can assess reading skills according to Brown (2004) are written answer, short- answer, summary, ordering test, multiple-choice items, matching, gap filling test, Cloze Test, and C-Test. Moreover, Alderson (2000) added to these test techniques editing, ordering, information-transfer. In addition to testing techniques, language testers confront a demanding assignment in evaluating students' ability to understand text (Sattarpour & Ajideh, 2014). As a result, language testers have to be aware of students' ability to read text in English as a foreign or second language as the case of ESL/EFL reading comprehension tests, it is very frequent that items based on the tested reading passage will be included in the test (Lee, 2004). For these reasons, the choice of reading comprehension text and test techniques for reading comprehension have a noticeable effect on the test scores (Alderson, 2000; Atai & Soleimany, 2009; Hughes, 2003). Readability, considered in this study, is one of seven factors that language testers have to recognize in the choice of reading comprehension text (Day, 1994 cited in Sattarpour & Ajideh, 2014). In order to avoid testers' annoyance that cause mismatching or difficulties in answering questions, language testers according to Zamanian and Heidary (2012) make sure that reading text is readable and influences test takers as the purpose of the author. For this purpose, *readability formulas* were constructed in order to calculate the difficulty of a reading text (Sattarpour & Ajideh, 2014).

1.2 Fundamental Testing Techniques for Reading Comprehension

Testing reading comprehension involves testing reading ability of language learners. Thus, language testers have to decide what aspect of language they want to examine and find a means for testing the learners' ability in this aspect. As stated by Alderson (2000) there is no existence of the best method for measuring reading comprehension skill and there is not any particular testing technique fulfilling the entire objectives of reading comprehension test.

As abovementioned, different testing techniques have been used for testing reading comprehension but this study is concerned with testing techniques that are related to the purpose of the study. Two of the main methods of testing comprehension are the integrative

(cloze) tests and discrete-point (multiple-choice) test. Multiple-choice test is a widespread method for testing students' reading comprehension. On the other hand, its value and validity is open to debate considering its weakness that testees are capable of guessing the correct answer without being aware of full understanding the reading passage (Kobayash, 2002).

1.3 What is a Cloze Test?

Wilson Taylor initiated 'cloze procedure' expression in 1953 (Brown, 2002), this expression appears as a corrupted spelling form of "close" (Ajideh & Mozaffarzadeh, 2012). As Oller (1979) indicated that this expression was originated from the gestalt psychology concept of 'closure', which means a skill to fill in the gaps in an interrupted or mutilated message (Culhane, 1970; Heaton, 1975; McMamey, 2006). In line with Lu (2006), the term closure defines a trend in which people have to finish a common, however, not completely a complete form.

The cloze test was first originated as a method of gauging native-speakers' ability of a reading test (Bormuth, 1967) but then it was proposed that cloze tests could be an effective tool for evaluating English second or foreign language learners' skills (Darnell, 1970; Brown, 1993; Jonz, 1976; Oller, 1972; Weir, 1990). The basis of the cloze test as declared by Harrison (1983, cited by Read 2000) and according to Farhady (1986) is that closures are generated at fixed intervals by deleting single words from a text, and testees need to fill in each gap with one appropriate word based on contextual clues as meaning and structure presented in the text. Different types of cloze tests were improved after Taylor's 'cloze procedure' was introduced which the important ones are traditional cloze and discourse cloze tests.

The traditional method for deleting words on cloze tests is consistent with a stable pattern of deleting for example every fifth, sixth or seventh word from a text and testees have to fill in the blanks with correct words (Oller, 1979). Generally, deleting words start from second sentence and stops at the last sentence of a text, so some context will be made available for testees. This random deletion gives all categories of words have an even possibility of being omitted. Oller (1979) and Harmer (2002) believe that random deletion presents a real sample of real-life language.

An alteration of cloze procedure is discourse cloze or rational cloze was admitted by Bachman in 1985 to assess certain language abilities in reading comprehension test as to assess syntactic elements as Lee (2008) denoted. This includes omitting specific categories of words from the text, for instance grammatical words, to comprise a progress of understanding the process of words in a text; these categories are deleted along with a linguistic principle (Lu, 2006).

Some researchers have found that reading comprehension skill can be measured by cloze tests. Reading is considered as an interactive practice that can be thought of as a main purpose for using cloze test as a reading comprehension test. Moreover, cloze test is intended to such a degree to demonstrate if testees are acquainted with the language and context of the text in a way that maintains the intended meaning of the author (Brown, 1978; Oller & Jonz,

1994; Sampson & Briggs; 1983). Likewise, cloze tests assess testees' ability to benefit from the text contextual clues to obtain meaning.

Cloze test is identified to be fairly difficult and problematic as reported by Klein- Braley and Raatz (1984). The method of exact word scoring is quick and simple, but it not easy to explain and sometimes it makes the test hard for testees, also it will affect the result. In addition, the traditional deletion of words does not essentially reflect the random sampling of the text. These flaws created a new modification of cloze test that is C-test (Baghaei, 2008).

1.4 What is a C-test?

Taking into account that the cloze test was criticized, Klein-Braley and Raatz in 1981 suggested an alternative test to cloze test without its flaws as indicated by Dörnyei and Katona (1992). The alternative test is the C-test that includes several short texts as five to six texts in which the rule of deleting words is called the rule of two (Ajideh & Mozaffarzadeh, 2012). This deleting method involves mutilating the second half of every second word starting from the second sentence in the text until the sentence before the last according to Klein-Braley and Raatz (1984) and Raatz and Klein-Braley (1985). The C-test is typified by this method of deletion (Khodadadi & Hashemi, 2011).

Although C-test is believed to be one type of cloze test, it is considered as superior to it for these reasons as indicated by Klein-Braley's (1997) study. Scoring C-test is easy and quick as probable answers can be reckoned sometimes correct in case they are acknowledged as alternative answers. Moreover, designing a C-test is an easy process because a number of texts are utilized in the process that produces shorter test with many more mutilated words than any cloze test. Another point is that a chance of attaining a high percentage of different word categories is possible as every second word is mutilated. Native speakers can obtain a full score on C-test, conversely, a zero score or close to zero can be obtained by a language learner does not fully comprehend the language. Dörnyei and Katona (1992) added another point to the previous ones, testees find C-test less irritating than cloze test. Finally, empirical results of C-test are reliable and valid for a language-testing tool as indicated by Klein-Braley and Raatz (1984).

1.5 Research Questions

The present study is limited to two types of reading comprehension tests that are the cloze test and the C-test .Therefore, it aims to compare the efficiency of the cloze test with the efficiency of the C-test as reading comprehension tests.

The following research questions will be answered through this study:

1. Are there any significant differences between the participants' results on the C-test and their results on the cloze test as reading comprehension tests?
2. Are there any significant differences between advanced level learners' results on the C-test and their results on the cloze test as reading comprehension tests?
3. Are there any significant differences between intermediate level learners' results on the

C-test and their results on the cloze test as reading comprehension tests?

1.6 Objectives of the Study

The significance of this study is connected to theoretical significance and practical significance. The results of C-test and cloze test as reading comprehension tests reveal the theoretical significance of the study. As for the practical significance, it is assumed beneficial for language instructors to help them to determine a technique of testing students' reading comprehension. Concerning language researchers, the findings of the study can be used as a reference for them to perform more studies related to the field of testing reading comprehension skills.

2. Method

2.1 Subjects

The subjects of this study were 80 International Bachelor degree students from Otto-von-Guericke University Magdeburg in Germany, studying Anglistics Cultural Studies. The majority of the students were German native speakers. They were chosen randomly from second, third, and fourth year students. First year students were not chosen because their courses were only introductory classes and they had not finished them.

Subjects accepted their participation in the study voluntarily in order to obtain a consistent and accurate English Language measurement of their English. The participants' age ranged between 18 and 25, and all were native speakers of different languages except English. Out of 80 students, 44 were male and 39 were female. The participants were tested in their university, while attending lectures in their departments, during the first term of 2014.

English language placement tests of the school determined the subjects' levels of English language. The subjects' levels of English were intermediate level (40 students) and advanced level (40 students). Students communicate in English in their classes, whereas they hardly use English outside their classes.

2.2 Instruments

Two types of tests, a C-test and a cloze test as reading comprehension tests, were conducted by the participants in their classes in order to evaluate their performance in reading comprehension. Firstly, several authentic texts dealing with different subjects were excerpted and studied. Finally, two texts were chosen from authentic sources (TOEFL). When the texts were selected, some aspects according to Day (1994) were considered as the aspect of readability, if the texts are culturally appropriate for the participants, and the layout of texts. Flesch Readability Formula was utilized for calculating the readability of the chosen texts resulting in 42.5 for the cloze test and for 42.3 for the C-test.

2.3 Preparation of the Tests

The cloze test was extracted from reliable and credible reading passages such as (TOFEL) by means of deleting every seventh word of every sentence. This deletion method was the systematic deletion procedure according to Klein-Braley (1997) wherein every *n*th word is

omitted, (where n refers to the number of deleted word that is normally between the fifth and tenth word of a sentence in the text). The deletion of words started and ended with an intact sentence as Oller and Jonz (1994) recommended. The number of 65 cloze items was produced with 42.5 as the difficulty level of cloze test text.

This cloze test was selected for a target population of adult L2 learners of English ranging from intermediate level learners to advanced level learners. For the chosen text, it was an academic article about Meteorite Impact and Dinosaur Extinction selected from the website (www.ets.org). The text, which contains 482 words, was judged comprehensible in content to a population of university students.

The C-test as cloze test was elicited from authentic sources (TOEFL) with 42.3 as the difficulty level of its text that is almost the same difficulty level of the text of the cloze test. This test was chosen for the same target population of adult L2 learners of English ranging from intermediate level learners to advanced level learners. As for the chosen text, it was an academic article about Smart Energy selected from the website (www.examenglish.com). The text, which contained 461 words, was judged accessible in content to a population of university students.

The deletion method employed in the C-test was the rule of two in consistent with Raatz and Klein-Braley (1981). This deleting method involved mutilating the second half of every second word starting from the second sentence in the test until the sentence before the last. The uncounted words were one letter word; additionally, the larger half of a word was mutilated if the word had an odd number. C-tests gauge testees' language proficiency as Klein-Braley and Raatz (1990) implied, and should have at least 100 items. The formed C-test in this study encompassed 210 items.

Both tests, the cloze test and the C-test, were piloted among students studying Anglistics Cultural Studies in their classes; they were not involved in the study. In the piloting, the problems with the tests were avoided and the estimated time for completing the tests was identified.

2.4 Test Administration

The two tests were conducted with one-week intermission in the participants' classrooms in their own class time. The participants were instructed to read the entire texts before writing their answers. They were informed to write one word only in each blank for the cloze test and to fill the missing letters for the C-test. The participants were not permitted the usage of dictionaries or to ask for a meaning of any word appearing in the texts. In addition, they were notified not to guess if they had no idea about the answers.

Before proceeding on with the tests, participants were instructed in German to make sure that they understood the instructions of the two tests. While no time was allocated for completing each test, the participants required between 20 and 30 minutes to complete each test.

2.5 Test Scoring

In order to attain reliable scores, objective method had to be implied in the two tests, the

cloze test and the C-test. Consequently, the scoring process applied for both tests was exact word method, i.e. the participants' answers for both tests were scored for exact replacements. As stated by Klein-Braley (1981), the only scoring method for the C-test to be put to use is the exact word scoring.

As Dörnyei and Katona suggested “exact word scoring” (1992: 187) as it is challenging to explain tentatively, for that reason minor spelling mistakes would be accepted as correct as Dörnyei and Katona, (1992) found that accepting words with spelling errors did not have any significant difference on the students' results. These spelling mistakes would be tolerated if there were no change of meaning or grammatical category of the answer. The answer would be incorrect if these changes occurred.

The items of both tests, the cloze and the C-test, were scored as one mark for every item. This indicates that C-test is easy to score as indicated by several researcher such as Connelly (1997), Dörnyei, and Katona (1992), and Klein-Braley (1985).

3. Results and Discussion

3.1 Descriptive Analysis

Calculation out of a hundred was conducted to the scores of the cloze test; also, the scores of the C-test were calculated out of 100 in order to make the comparison of the results easy. Descriptive statistics for the scores from the participants' performances on both the cloze test and the C-test were obtained to find answers for the questions of this study, which are:

1. Are there any significant differences between the participants' results on the C-test and their results on the cloze test as reading comprehension tests?
2. Are there any significant differences between advanced level learners' results on the C-test and their results on the cloze test as reading comprehension tests?
3. Are there any significant differences between intermediate level learners' results on the C-test and their results on the cloze test as reading comprehension tests?

This was followed by calculating the degree of paired samples of correlation between these two sets of scoring using Pearson product correlation coefficient. In addition, a computed paired *t*-test was conducted to have a comparison between the results of participants on both tests.

To address the first research question, Table 1 displays the descriptive statistics of both tests carried out for the study. It is apparent that there was a statistically significant difference between the scores of participants on the cloze test ($M=47.36$, $SD= 20.52$) and their scores on the C- test ($M= 54.80$, $SD= 21.96$) according to the comparison for mean scores for the participants.

Table 1. Descriptive statistics comparison of mean scores for participants on cloze test and C-test

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Cloze Test	47.36	80	20.52	2.29
C-Test	54.80	80	21.96	2.45

With the purpose of assessing the relationship between the scores of the participants on the cloze test and their scores on the C-test, a computed Pearson product-moment correlation coefficient was used. There was a positive correlation between the two variables (cloze test and C-test), $r = 0.976$, $n = 80$, $p = 0.000$ as Table 2 below represents the paired samples correlations between the two tests.

Table 2. Paired samples correlations between cloze test and C-test

	N	Correlation	Sig.
Pair 1 Cloze Test & C-Test	80	.976	.000

The scores of the participants on the cloze test and their scores on the C- test were compared by utilizing a paired-samples *t*-test. Table 3 reveals the *t*-test results for both tests. The obtained *t*-value of (13.65), the degrees of freedom which are (79), and the statistical significance (2-tailed *p*-value) of the paired *t*-test which is (0.000), as the *p*-value is less than 0.05 (i.e., $p < .05$), it can be assumed a statistically significant difference existed between the two variables (the two tests). In other words, the difference between the scores of the participants is not equal to zero.

 Table 3. Paired samples *t*-test results on cloze test and C-test

	Paired Differences				t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower			

Pair 1								
Cloze Test -	7.44	4.87	.544	8.52	6.35	13.65	79	.000
C-Test								

In order to answer the second question of the study, a paired sample *t*-test was computed to reveal any significant differences between advanced level learners' results on the C-test and their results on the cloze test. The result of the descriptive statistics is displayed in Table 4 and the outcomes of the paired sample *t*-test are shown in Table 5.

The results of the descriptive statistics are shown in Table 4 below. The mean of the advanced level participants' scores on the C- test ($M=68.00$, $SD= 13.99$) is significantly higher than the mean of their scores ($M=53.80$, $SD=18.41$) on the cloze test. Thus, their performance on the C-test is better than their performance on the cloze test.

Table 4. Paired sample statistics comparison of mean scores for advanced participants on cloze test and C-test

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Cloze Test	53.80	40	18.42	2.91
C-Test	68.00	40	13.99	2.21

With the aim of measuring the relationship between the scores of advanced level participants on the cloze test and their scores on the C- test, a Pearson product-moment correlation coefficient was administered. It seems a positive correlation between the two variables $r = 0.899$, $n = 40$, $p = 0.000$ was presented as Table 5 below represents the paired samples correlations between the two variables.

Table 5. Paired samples correlations between the scores of advanced level participants on the cloze test and their scores on the C-test

	N	Correlation	Sig.
Pair 1 Cloze Test & C-Test	40	.899	.000

The *t*-test results for the scores of advanced level participants on the cloze test and their scores on the C-test are shown in Table 6. The obtained *t*-value of (10.63), the degrees of freedom which are (39), and the statistical significance (2-tailed *p*-value) of the paired *t*-test which is (0.000), as the *p*-value ($p=0.000 < 0.05$). Accordingly, there was a statistically significant difference in the advanced level participants' performance on the two variables

(both tests).

Table 6. Paired samples *t*-test results for advanced level participants on cloze test and C-test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Cloze Test – C-Test	14.20	8.45	1.34	16.90	11.50	10.63	39	.000

To solve the last question of the study, a paired sample *t*-test was conducted to find any significant differences between the scores of intermediate level participants on the C-test and their scores on the cloze test. A glance at Table 7 below describes the outcomes of the descriptive statistics. The mean of the scores of intermediate level participants on the C-test ($M=48.28$, $SD=18.04$) is significantly higher than the mean of their scores ($M=38.13$, $SD=21.34$) on the cloze test. Accordingly, their performance on the C-test is better than their performance on the cloze test.

Table 7. Descriptive statistics comparison of mean scores for intermediate level participants on the cloze test and the C-test

	Mean	N	Std. Deviation	Std. Error Mean
Cloze Test	38.13	40	21.34	3.37
Pair 1 C-Test	48.28	40	18.04	2.85

With the intention of evaluating the relationship between the scores of intermediate level participants on the cloze test and their scores on the C-test, a Pearson product-moment correlation coefficient was run. There appears to be a positive correlation between the two variables $r = 0.907$, $n = 40$, $p = 0.000$ as Table 8 demonstrates the paired samples correlations between the two variables.

Table 8. Paired samples correlations between the scores of intermediate participants on the cloze test and their scores on the C-test

	N	Correlation	Sig.
Pair 1 Cloze Test & C-Test	40	.907	.000

Table 9 indicates the *t*-test results for the scores of intermediate participants on the cloze test and their scores on the C-test. The obtained *t*-value of (7.07), the degrees of freedom which are (39), and the statistical significance (2-tailed *p*-value) of the paired *t*-test which is (0.000), as the *p*-value ($p=0.000 < 0.05$). Based on the results illustrated in Table 8, it can be inferred that there was a significant statistical difference in their performance on the two variables (the cloze test and the C-test).

Table 9. Paired samples *t*-test results for intermediate level participants in cloze test and C-Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Cloze Test – C-Test	10.15	9.08	1.44	13.05	7.25	7.07	39	.000

3.2 Interpretation

The present study aims at comparing the efficiency of the cloze test with the efficiency of the C-test as reading comprehension tests for undergraduate students. Additionally, it aims to find out if there are any significant differences between the results of the participants on the cloze test and their results on the C-test as reading comprehension tests, in addition to their performance on both tests as advanced level and intermediate level learners.

The sources used to collect the data of the present study came from the undergraduate students studying Anglistics Cultural Studies at Otto-von-Guericke University Magdeburg in Germany. Both the cloze test and the C-test were administered to test their reading comprehension skill.

Based on the research hypotheses, three statistical analyses were applied to prove or reject them. Descriptive statistics for the scores of the participants on the cloze test and the C-test were the first statistical analysis. The results were revealed in Table 1, Table 4 and Table 7.A

Pearson Product Moment Correlation was applied as a second statistical analysis. It was used to find the correlation coefficient between the results of the Cloze Test (independent variable) and the results of the C-test (dependent variable). Table 2, Table 5, and Table 8 demonstrated a positive correlation between these two variables. The final analysis was a paired sample *t*-test conducted for comparing the participants' scores in both tests. It was found that the *p*-value was less than 0.05 (i.e., $p < .05$).

Consequently, the first hypothesis is accepted which states that there is a significant difference between the scores of the participants on the cloze test and their scores on the C-test as reading comprehension tests. Likewise, the second and the third hypotheses claiming that there are significant differences between the results of the advanced level and intermediate level learners on the cloze test and their results on the C-test as reading comprehension tests. It can be concluded that a positive and significant correlation occurred between the participants' reading comprehension scores on the cloze test and the C-test. The result of the analyses shows a significance difference between the results of the advanced level participants' reading comprehension scores on the cloze test and their scores on the C-test. The same deduction applies to the analyses of the intermediate level participants' reading comprehension scores.

Generally, it can be presumed that the cloze test as reading comprehension test is more difficult than the C- test as a reading comprehension test. The participants' mean scores of the cloze test (47.36) was lower than their mean scores (54.80) on the C-test. Besides, the mean scores of both the advanced level and intermediate level participants on the C-test (68) and (48.28) were higher than their scores on the cloze test (53.80) and (38.13).

According to the analysis using Pearson product-moment correlation coefficient to gauge the relationship between the reading comprehension scores of participants on the cloze test and their scores on the C-test, a positive correlation between the two variables occurred ($r = 0.976$) at $p = 0.000$ level of significance. In general, a strong and positive correlation existed between the cloze test and the C-test as reading comprehension tests. Increases in the reading comprehension scores of participants on the cloze test correlated with increases in their reading comprehension scores on the C-test and vice versa.

Furthermore, there was a positive correlation between the reading comprehension scores of advanced level participants on the cloze test and their reading comprehension scores on the C- test, ($r = 0.899$) at $p = 0.000$ level of significance. Moreover, there was a positive correlation between the reading comprehension scores of intermediate level participants on the cloze test and their reading comprehension scores on the C-test ($r = 0.907$) at $p = 0.000$ level of significance. A significant and positive correlation presented between the cloze test and the C- test as reading comprehension tests used for the advanced level and intermediate level participants, implies any rise in their scores on the cloze test was correlated with a rise in their reading comprehension scores on the C-test and vice versa.

The last analysis using the *t*-test to compare the scores of the participants reading comprehension on the cloze test and their scores on the C- test reveals a significant difference between these two variables, $t(79) = 13.65$, $p < .05$. These results suggest the possibility of

different difficulty level for each type of testing techniques.

The *t*-test results for the scores of advanced level participants $t(39) = (10.63)$, $p < 0.05$ and intermediate level participants $t(39) = (7.07)$, $p < 0.05$ reading comprehension on the cloze test and their scores on the C-test indicate a statistically significant difference occurred in their scores on the two variables. It is obvious that the cloze test may have different difficulty level from the C-test. It can be deduced that each test may have different difficulty level.

3.3 Discussion

The present study investigated the efficiency of the cloze test and the efficiency of the C-test as reading comprehension tests. Other attempts were made to expose which test, cloze test or C-test is more efficient as reading comprehension test for intermediate level learners and advanced level learners. A number of findings came into light because of the data analysis; these findings are discussed below.

It can be infer from the findings of the study that the C-test is a better reading comprehension test than the cloze test. These findings are the contrary to several studies such as Bachman (1985), Greene (2001), Jonz and Oller (1994), and Sasaki (2000) concluding that cloze test is a valid reading comprehension test. Moreover, these findings are the opposite of the results that were found by Ajideh and Mozaffarzadeh (2012) indicating that cloze test as a reading comprehension test is more efficient test than C-test as a reading comprehension test. In other words, the answer of the first question of the study was in favour of the C-test.

It is apparent that the scores of the participants on the cloze test as a reading comprehension test differ significantly from their scores on the C-test as a reading comprehension test by inspecting the cross assessments of the participants' scores on both tests. The participants attained better scores on the C-test compared with their scores on the cloze test. The obtained findings answered the second and third questions of the study. It can be deduced from the participants' results that the C-test seems to tap the participants' vocabulary knowledge more successfully than the cloze test. The C-test became easier for the participants because the option of completing mutilated words is made available in the text, so this choice helped them to overcome the limitation of their vocabulary. They can choose the lexes that are more recognizable or well known for them as they must have enough lexical knowledge to understand the text. They have to be able to recognize the lexes in the text and interpret their meaning (Lems *et al.*, 2010). In the same trace, when participants are unable to apprehend the general perspective of the text, they can refer to their lexical knowledge in order to complete suitable connectors for the text as they are provided with half of the mutilated words according to Cohen *et al.* (1984). Whereas, the cloze test lacks this option so participants will be able to write the missing lexes in the test. Furthermore, despite the participants being familiar with the perspective of the text, they would be perplexed which words should be chosen.

This kind of presumption leads to another effect influencing the results of the participants on the C-Test that were better than their results on the cloze test. According to Alderson (2000), the cause of this effect is various types of questions; in addition, different types of questions

might differ in their difficulty as indicated by Pearson and Johnson (1978). The C-test type question is easier than the cloze test type question as the C-test provide the participants with the option of half the word in each mutilation. Whereas, the cloze test type question lacks this option, which causes a kind of difficulty for the participants to find the correct missing word.

Taking into consideration that the participants were anticipated to be skillful in reading comprehension texts as L2 adult learners for whom the texts had been intended, they were supposed to understand the texts without difficulty. It was expected that cloze test and C-test could measure reading comprehension tests appropriately; participants were expected to fill in correctly all the gaps without encountering any difficulty (Saeedi *et al.*, 2011). The findings of the study show that the participants were not skilled enough in comprehending the text or their scores on the cloze test did not reveal their comprehension properly, i.e. cloze test cannot be considered a proper reading comprehension test.

3.4 Conclusion

Several points can be concluded according to the results of this study and discussion. First, it can be concluded that the C-test is a more efficient reading comprehension test than the cloze test as indicated by the results of the participants on the C-test being higher than their results on the cloze test. It seems that the C-test as a reading comprehension test is easier than the cloze test as a reading comprehension test. This concluding point is relevant to what was concluded by Anggraeni (2010). This study and Anggraeni's examined measures of reading comprehension, they differ in the tools of testing; multiple-choice test and cloze test were used in Anggraeni's study, whereas, the cloze test and the C- test were used in this study.

Second, increases in the scores of participants on the C-test as a reading comprehension test correlated with increases in their scores on the cloze test as a reading comprehension test and vice versa. In general, participants' scores on the C-test as a reading comprehension test correlated positively with their scores on the cloze test as a reading comprehension test. This was revealed by the *probability value (p)* that is lower than 0.05 ($0.00 < 0.005$).

Finally, cloze test may have different difficulty level from C-test. Overall, there was a significantly statistical difference in the participants' performance on the C-test as a reading comprehension test and their performance on the cloze test as a reading comprehension test as verified by the (p) value that is lower than 0.05 ($p < .05$).

3.5 Recommendations

Some suggestions are recommended for future research. First, the positive correlation between the participants' reading comprehension results on the C-test and their results on the cloze test signifies a kind of effect of both tests on each other. It indicates that in case students are trained to the cloze test ability, their ability to do C-test will be better, and vice versa. Second, this research can be expanded to wider population as undergraduate and postgraduate students majoring in different subjects. Third, language instructors can modify the way of presenting the choices of the answer according to their learners' condition. Finally, similar research can be conducted on a wider scale as applying it in testing the lexical knowledge of language learners.

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