
Investigating the Relationship between Iranian Language Learners' Test

Anxiety and Their Cloze Test Performance

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Abstract: Cloze test has been used in testing for many years to measure students' knowledge in English. It was suggested as an alternative to traditional reading comprehension tests. It's an indication of students' reading comprehension, language processing and internalized grammar knowledge in particular. Therefore, this kind of test may cause more anxiety in students and the anxiety might negatively impact the language learners' cloze test performance. This paper investigated the relationship between anxiety and cloze test. Twenty-one Iranian advanced students were given a cloze test and an anxiety questionnaire. Results of the Pearson product-moment correlation showed that there was a significant negative correlation between anxiety and cloze test, that is to say language learners with lower an anxiety level had a better performance in the cloze test and those with higher anxiety performance performed weaker in the closed test. The results had implications for language learners, language teachers, and test developers.

Key words: Cloze test, comprehension, holistic approach, language anxiety, test anxiety

1. Introduction

Cloze test has been used in measuring language learners' knowledge for many years. It is commonly used to assess both overall language proficiency and reading comprehension. [Eckes and Grotjahn \(2006\)](#) argued that cloze test is an efficient way to assess global and general language proficiency. Researchers have used cloze test for measuring general language proficiency in comparing it with various skills such as writing skills and vocabulary ([Chae & Shin, 2015](#)). Language learners require essential knowledge of grammar, vocabulary, and comprehension to have an acceptable performance in doing a cloze test. It means that language learners, they should use both an up-down and bottom-up approach. Sometimes, there are time limitations for answering a cloze test which might increase learners' anxiety in answering a cloze test. The present paper makes an attempt to investigate whether cloze test will cause a change in the amount of student's anxiety. If yes, what is the influence of this change on the performance of students?

The current study explored whether there was any relationship between anxiety and cloze test. If the answer is yes, student's anxiety will influence their performance on the cloze test. Of course, any kind of test makes students somehow anxious. As [Tavakoli and Amiryousefi \(2011\)](#) did a study on Iranian EFL learners and asserted that test takers often experience test anxiety and that factors such as lack of self-confidence and time limitation stimulated test anxiety.

We can say that a little amount of anxiety is necessary for every student to take a test and it will give them motivation, but at times their anxiety may increase to such a high level that negatively influence their test performance. It is especially true for those who are usually more anxious than others. Researchers consider test anxiety as a main reason for foreign language anxiety and also an obstacle that prevents L2 learners from having a good performance in tests ([Dalkilic, 2001](#); [Koralp, 2005](#)). Considering the importance of test anxiety and cloze test performance, the present study was carried out to find a justifiable answer to the following research question:

RQ1. Is there any statistically significant relationship between cloze test and anxiety of Iranian EFL learners?

2. Review of the Related Literature

2.1 Test Anxiety in Language Learning

Test anxiety is one of the most well-known constructs in modern psychology ([Zeidner, 1998](#)). Dusek (1980, as cited in [Cubukcu, 2007](#)) mentioned different types of personal characteristics that are related to test performance including gender, age, sex, etc.), but test anxiety has a greater significance among them and he defined it as “an unpleasant feeling or emotional state that has physiological and behavioral concomitants and that is experienced in formal testing or other evaluative situations” (p. 135). Generally, anxiety is divided into three types of *trait*, *state* and *situation specific* anxiety. Trait anxiety is a constant feeling of being anxious and is seen as a personality aspect. State anxiety is the fear experienced at a certain time in time in response to a specific situation. Finally, situation-specific anxiety is caused by the fear of a certain event or situation ([Ellis, 1994](#)). [Gardner \(1985\)](#) considered language anxiety as an influential factor in L2 achievement which is mostly related to classroom language learning ([Horwitz, Horwitz, & Cope, 1986](#)). Researchers have noted the significance of test anxiety in recognizing sources of language learners' anxiety causing poor test performance ([Bonaccio & Reeve, 2010](#); [Hembree, 1988](#)).

[Gardner \(1985\)](#) describes L2 anxiety as the apprehension learners when they need to use second language in a situation when the individual does not have full proficiency. Therefore, L2 anxiety is seen as a situation-specific anxiety. Sometimes, language learners' awareness of being evaluated and experiencing a competitive context in specific testing situations causes negative effects on their test performance. According to [Hsu \(2004\)](#), language learner who are highly test-anxious were “significantly more sensitive to environments in which competition was emphasized and teacher control was evident, than were most test-relaxed students” (p. 25). Tobias (1986, as cited in [Salari & Moinzade, 2015](#)) divided anxiety hindrance to three stages of input stage, processing stage, and output stage. According to Tobias (1986, as cited in [Salari & Moinzade, 2015](#)),

At the input stage, anxiety causes distraction and lack of attentiveness, and students cannot get new materials. At the processing stage, anxiety causes interference with ordering and storage of data in memory. At the output stage, anxiety does not permit the satisfactory results on tests. (p. 205)

[Young \(1999\)](#) mentioned factors such as test validity, time limit, test format, test techniques, length, testing environment and clarity of test instructions to be influential in language learners' performance and reaction to language tests. In his study, Young indicated that language learners experience anxiety in case a test has a content that has not been covered in

the class. Also, language learners experience higher levels of anxiety if a test does not have face validity and they will finally have a negative perception of the instruction. Time limitation is another issue that increases test anxiety and reduces the likelihood of a successful test performance. According to [Ohata \(2005\)](#), learners feel pressure at times when they have to organize their ideas in a short amount of time. Another influential factor in increasing test anxiety is inappropriate test technique. According to [Young \(1991\)](#), language learners feel anxious if they have studied a long time for a test and then they face questions they have never had any experience about them. Young emphasizes that language learners experience anxiety with a specific test format. Finally, [Ohata \(2005\)](#) mentioned that most language learners were afraid of test-taking because of the negative consequences of getting a low score as a result of test-taking situations.

One point that has attracted little attention in the literature is the fear of negative evaluation and the findings of previous studies have also indicated a significant correlation between fear of negative evaluation and foreign language anxiety. [Horwitz et al. \(1986\)](#) asserted that fear of negative evaluation is mainly caused by the teacher as a fluent speaker and also the classmates. The fear of having a verbal error is one of the reasons that language learners do not take part in class activities ([Young, 1991](#)). Also, language learners have the fear of making pronunciation errors in language classes.

2.2 Cloze Test

The term cloze was first derived from closure concept in the Gestalt psychology, which considers the integrity of human consciousness as the most intrinsic aspect of psychology ([Stansfield & Hansen, 1983](#)) and it referred to filling the missing blanks through background knowledge. Tylor (1953, as cited in [Oller, 1973](#)) used the closure theory for testing readability in English native speakers. Later, researchers have used the cloze procedure for testing English non-native speakers ([Oller, 1973](#); [Oller & Inal, 1971](#); [Stubbs & Tucker, 1974](#)).

The idea of overall competence is based on the Unitary Competence hypothesis of [Oller \(1979\)](#). Earlier, time tests were used for measuring recognition or performance of specific grammatical features, vocabulary items or separate sounds. Oller believed that language proficiency can not be divided and that tests have different power and effectiveness to measure this one factor. He favored using one test to directly measure overall proficiency instead of using different tests and cloze test is one of the most well-known tests for this purpose. In a cloze test, examinees have to find out the main idea by reading the passage and “help realize inter-sentential or intra-sentential relationships (i.e., relationships between sentences or within a sentence) in order to reconstruct the meaning of the passage by filling in the blanks with appropriate words” ([Chae & Shin, 2015, p. 119](#)). Therefore, cloze tests are considered to be more communicative than discrete-point tests which focus on measuring independent factors including vocabulary, grammar, spelling and punctuation, pronunciation, and the language skills of reading, listening, writing and speaking, separately.

2.3 Related Studies

The result of the previous related studies which investigated the relationship between test anxiety and successful language learning showed that anxiety is an important variable in the leaning and testing process. For instance, [Aida \(1994\)](#) assessed the relationship between test language anxiety and language learning and found that language learning was influenced by factors such as test anxiety, speech anxiety, negative attitude toward the class and fear of failing. [Rotenberg \(2001\)](#) studied the effect of increased use of standardized testing methods on language learners' proficiency and found that anxiety performance negatively affected language proficiency. [Jalilian \(2009\)](#) examined the relationship between Iranian EFL learners' spatial intelligence and their cloze test performance and the results showed a significant positive correlation between the two variables. Also, [Cassady and Johnson \(2002\)](#) investigated the effect of test anxiety on 3 exam courses and the self-reports of students and the results indicated that students with higher anxiety levels had lower scores on each three courses. Meanwhile, [Zhang \(2003\)](#) assessed the relationship between foreign language reading anxiety and 3 reading tasks and found that language learners who had the lowest reading anxiety levels had the best comprehension rates when reading silently.

3. Methodology

For the purpose of this study, 40 participants were invited. They were senior language teaching students aged from 20 to 25. They were selected based on their availability among advanced students in Teacher Training University of Tehran. Out of 40 students, 21 students were considered homogenized members after running the Oxford placement test (OPT) based on one standard deviation above and one standard deviation below the mean. Participants were majoring in English from both genders who are studying English language and literature. They were chosen because their proficiency corresponded to the level of the instrument and the reliability and validity of the research. Based on the anxiety questionnaire, participants were divided into two groups of high anxiety and low anxiety levels. The correlation between the results of the cloze test and the anxiety questionnaire would determine whether there was any significant relationship between students' anxiety and cloze test performance.

Two instruments were used in this study. One was a timed cloze test and second was the Test Anxiety Scale (Sarason, 1975, as cited in Sarason, 1980). The items were put in a 5 point Likert scale from level 1: strongly disagree to level 5: strongly agree. The cloze test was appropriate for this research based on the students' level of proficiency. The anxiety questionnaire was also given to the students to show their level of anxiety.

The present study used the correlational design. First students answered the cloze test and then the questionnaire. There was a time limit for the cloze test but not for the questionnaire. Participants handed in the cloze test first and only then they could receive the anxiety questionnaire so that they would not aware of the goals of the research. Next, a correlation coefficient was run between the cloze test scores and the anxiety questionnaire scores. The Pearson product correlation formula was used for testing the correlation between the students' level of anxiety and cloze test performance.

4. Results and Discussion

The present study investigated if there was a significant relationship between the students' level of anxiety and cloze test performance. First, the result of the OPT used as the homogeneity test is shown below. In order to have homogenized participants in terms of their general English language proficiency, the OPT was administered. The descriptive statistics for the OPT test are displayed in following table.

Table 1

The Descriptive Statistics of the OPT Score

Statistics		
OPT Test		
N	Valid	40
	Missing	0
Mean		30.8452
Median		30.0000
Mode		30.00
Std. Deviation		9.28911
Variance		86.288
Minimum		7.00
Maximum		59.00

Out of 40 participants, 21 were considered as homogenous members based on one standard deviation above and below the mean (+/- SD). Next, the Pearson product-moment correlation was computed to assess the relationship between students' level of anxiety and cloze test performance. The result of the test is indicated below.

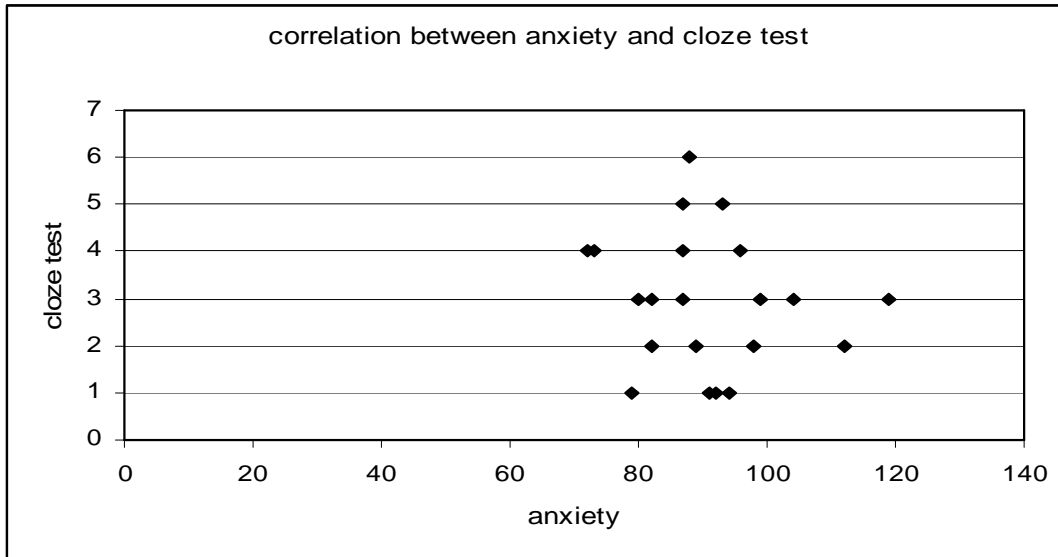


Figure 1. The correlation plot between students' cloze test scores and anxiety questionnaire scores

The cut-score for the cloze test was 3 and the anxiety questionnaire was 90. Putting the data in the Pearson product-moment correlation formula, there was a negative correlation between students' level of anxiety and their cloze test performance, $r = -0.070$. It meant that English students cloze test scores reduced by increasing their anxiety level.

Table 2

The Cloze Test Mean Score of Students with Low Anxiety Level

Students number	Anxiety test score	Cloze test score
2	89	2
4	72	4
5	80	3
6	82	2
8	87	3
9	87	4
13	73	4
15	79	1
16	88	6
18	87	5
21	82	3
Mean score	3.36	

Table 2 indicated students with a low anxiety level. The cut-score for the anxiety questionnaire was 90. Those students whose scores were from 60 to 90 were considered to have a low level of anxiety. Then, the mean of score of the group was calculated to compare their performance with the cloze test. The mean score of the low level anxiety students was 3.36.

Table 3
The Cloze Test Mean Score of Students with High Anxiety Level

Students number	Anxiety test score	Cloze test score
1	92	1
3	119	3
7	91	1
10	94	1
11	99	3
12	93	5
14	112	2
17	98	2
19	96	4
20	104	3
Mean score	2.5	

Tables 3 showed the scores of students with a high anxiety level. The cut-score for the anxiety questionnaire was 90. Those students whose scores were from 90 to 120 were considered to have a high level of anxiety. Also, the mean of score of the groups was calculated to compare their performance with the cloze test. The mean score of the high level anxiety students was 2.5. Comparing the results of Table 2 and Table 3, it was shown that low level anxiety students had a better performance on the cloze test. The two variables will be correlated for their possible relationship.

Table 4
The Result of the Normality Test for the Cloze Test and Test Anxiety

	Shapiro-Wilk		
	Statistic	df	Sig.
Cloze_test	.934	21	.165
Test_Anxiety	.960	21	.511

Table 4 above shows the result of the normality test. As it can be seen, the two sets of data are normally distributed.

Therefore, the parametric Pearson Product-Moment Correlation test was used.

Table 5
The Result of the Pearson Product-Moment Correlation Test for the Cloze Test and Test Anxiety

Cloze_test	Pearson Correlation	Cloze_test	Test_Anxiety
		1	-.251
	Sig. (2-tailed)		.514
	N	21	21

Table 5 above shows the result of the Pearson correlation test. According to the rule of the triple division suggested by Hamidi (2015), there was a low, negative relationship between cloze test performance and test anxiety, $r = -.25$, $p > .05$. As the result of the study suggested, the null hypothesis was rejected. Actually, cloze test requires more simultaneous top-down and bottom-up processing since the test is shorter and provides fewer clues in a time limit. In practice, a reader continually shifts from one focus to another, now adopting a top-down approach to predict probable meaning, then moving to the bot-

tom-up approach to check whether that is really what the writer says. So, a cloze test seems to be more difficult to do in comparison with other tests, especially for students with a high anxiety level so that as the amount of anxiety of students increases, they have a weaker performance on the cloze test. In a cloze test because students use a holistic approach in a limited time, they may need to be more careful in choosing the correct choice which may cause them to be anxious. This may especially have an effect on the performance of those students who are usually anxious in taking tests. So, when they encounter a cloze test, their level of anxiety may increase.

The results of our study were in line with [Birjandi and Alemi \(2010\)](#) who investigated the effect of test anxiety on Iranian EFL learners' test performance and found that there was a significant negative correlation between general test anxiety with test performance and this was due to the functioning of general test anxiety at the higher-order affective level. In addition, [Cassady and Johnson \(2002\)](#) investigated the effect of test anxiety on 3 exam courses and the self-reports of students and the results indicated that students with higher anxiety levels had lower scores on each three courses. Equally, [Hou \(2009\)](#) found that there was a significant negative correlation between foreign language reading anxiety and reading proficiency which is in line with the findings of our study. Similar results were found by [Azimi \(2016\)](#) who investigated the relationship between anxiety and test taking C-test and cloze test and the results indicated that students who were anxious experienced more levels of anxiety when taking cloze test and C-test. However, the findings of our study were not in line with the first part of the study of [Birjandi and Alemi \(2010\)](#) who found that L2 learners had a low test anxiety and there was no significant negative correlation between most of its components and test performance. Also, our findings were not consistent with [Chen \(2007\)](#) who found that there was no significant relationship between test anxiety and reading proficiency.

5. Conclusion

The results of this study can be useful for test developers, teachers and students. As the hypothesis was rejected, we conclude that cloze test performance in students with various amounts of anxiety is different. Cloze test causes anxiety and if students have a high anxiety level himself, he will face more difficulty in having an acceptable test performance. Teachers and test developers can have these points in mind in making and using standard cloze tests not to put students in a difficult situation in terms of the anxiety aspect. Another issue which is also important is the time limit. Students should have enough time to deal with the cloze test so that their anxiety may not influence their performance too much.

The findings of the study suggest that language teachers should teach learning and test taking strategies more effectively to reduce students' test anxiety. Teachers should not let test anxiety to increase to high levels in students since reducing it in high levels will be more difficult. It is more efficient to control and maintain students' anxiety in low levels so that they are more motivated to master higher language proficiency levels. Also, high levels of anxiety not only negatively impact students' test taking performance but also impedes other aspects of language learning. This issue should be given more attention regarding doing cloze tests as cloze tests cover different aspects of language including grammar, vocabulary knowledge, and reading comprehension.

This study only explores the relationship between anxiety and cloze test. For better results, other testing measures such as vocabulary, reading, etc. can be used along with a cloze test and compare their results to see which kind of them creates more anxiety in students. Students at lower proficiency levels can be used in future studies to assess the relationship between test anxiety and cloze test performance to get better results.

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