The Relationship Between Anxiety and Test-Taking C-Test and Cloze-Test

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ABSTRACT

Anxiety has an important role in teaching and learning. If teachers can recognize which kind of tests create high anxiety then they will be able to omit these kinds of tests. Then, the results of test can probably show the students’ knowledge more carefully. The subjects of the present study were sixty Iranian female junior university students. They were given three kinds of test: an anxiety test, a C-test and a Cloze-test. Descriptive statistics for subjects’ performance on the Cloze-test and C-test were used to compare the mean score of the subjects in both tests. Finally, the results of anxiety test and C-test were correlated and then the results of anxiety test and Cloze-test were also correlated. The anxious students feel more anxiety while taking C-test than Cloze-test.

Keywords: Anxiety, Cloze-Test and C-test

INTRODUCTION

Anxiety creates many potential problems for learning foreign languages, because it has negative effects on the acquisition, retention, and production of language (Robinson, 2009). One of the results of anxiety is that students forget lessons and assignments, and cannot concentrate on their lessons and understand them. These lead to memorizing or cheating and generally, they have no chance for success (Coşkun, 2013).

Psychologists believe that anxiety is a drive whose reason is not fully known. Anxiety is a general term for several disorders that cause nervousness, fear, apprehension, and worrying. It is a general phenomenon and does not lead to any special target. Anxiety is usually accompanied by danger expectations (Corsini, 1999). Generally speaking, anxiety is an unknown phenomenon. Anxiety is like a wave; at first, it springs up in an individual, then it will be intensified and it will gradually reach its peak and then it will decrease and finally disappear (Lefrancois, 1991,1995). People often experience a general state of worry or fear before confronting something challenging such as a test, examination, recital, or interview. These feelings are easily justified and considered normal. Anxiety is considered a problem when symptoms interfere with a person’s ability to sleep or otherwise function. Generally speaking, anxiety occurs when a reaction is out of proportion with what might be normally expected in a situation.

Anxiety has been defined “As apprehension, tension or uneasiness from anticipation of danger, the source of which is largely unknown or unrecognized primarily of intrasychic origin, in distinction fear, which is the emotional response to a consciously recognized and usually external threat or danger. Anxiety may be regarded as pathologic when it interferes with effectiveness in living, achievement of desired goals or satisfaction, or reasonable emotional comfort” (Edgerton, 1994, p. 17).
Spielberger (1983) and Faleye (2010) stated that anxiety is created when someone faces a problem, or an obstacle, so that they cannot satisfy their needs and if these are important and vital needs, anxiety will be more severe and lasting. In addition, if these obstacles reach to the level of constant frustration, the person will always be anxious.

It must be noted here that a small degree of anxiety is normal and even necessary to do things. This fact should be considered that anxiety is very beneficial at normal levels (Csizér & Piniel, 2013), the point is that less anxious students will be more successful than the more anxious students because the former group is more spontaneous, more creative and have better judgment, but the latter ones are very careful about their errors, consume more time solving a problem and check the problems several times and finally cannot recognize their thoughts creatively (Çubukçu, 2008). Anxious learners do not volunteer to answer questions or to participate in classroom activities. These students always complain that their class moves too quickly and they are left behind. It is natural because the anxious students require more time for learning. These factors affect not only on learning but also on test taking, they cannot perform well, they do not have enough time and they cannot remember the things, which they have learned before (Tsai, 2013). Anxious students use simple structures in their speaking, this problem will cause these students not to be able to communicate in the second language (Oxford, 1999).

Review of Literature

According to Horwitz (1986) there are four major theoretical approaches to anxiety, but none of them is thorough and perfect. They cannot fully explain the nature and origin of anxiety. However, they present some insights about anxiety, which are helpful in grasping a better view of it.

1. Biological Theory of Anxiety
2. Psychoanalytic Theory of Anxiety
   a. Freudian Theory
   b. Neo-Freudian Theory
3. Behavioral Theory of Anxiety

Here, it will be examined each of these theories separately.

1. **Biological Theory of Anxiety**
   It is obvious that there is a strong relationship between biological processes and anxiety. But, so far it has not recognized whether anxiety causes biological changes or biological changes produce anxiety (Horwitz, 1986).

   Referring to Eysenck’s view (1997), Powell and Enright (1991) stated that “Individual differences in the experience of anxiety may occur as a result of the inheritance of a particular genetic make-up that predisposes the individual toward high or low emotional ability. This is defined as the tendency to react with greater or lesser intensity to a particular stimulus, which might cause distress. Eysenck (1991) also suggests that some individuals are also more likely toward forming strong conditioned responses; it means, certain personality characteristics are believed to have certain genetic components; therefore, they are more likely to experience anxiety in many occasions (Ibid).
Psychoanalytic Theory of Anxiety

This theory consists of two parts as the following:

a. Freudian theory

According to Freud’s opinions Powell and Enright (1991) believe that “There are three kinds of anxiety: Real anxiety, which is said or responded to real danger. Mood and neurotic anxiety, which cause psychological problems. The first experience of anxiety occurs as a result of birth. The infant is dispatched from the security of the womb into new and unfamiliar situation. This primary anxiety sets the pattern. Then for all other experiences of anxiety”. (p.35) The other kind of anxiety is moral anxiety, which is called fear of punishment. It is recognized as guilt or shame. The third one, neurotic anxiety is associated with socially unacceptable behavior.

b. Neo-Freudian theory

This theory was developed against Freud’s theory. Neo-Freudians rejected Freud’s idea. According to this theory; “primary anxiety did not occur at birth, but later. A child has not only physiological needs but also psychological. She needs protection and support and anxiety is aroused or potential frustration of these dependency needs” (Powell and Enright, 1991, p.36)

Behavioral Theory of Anxiety

Watson and Rayner (1993) worked on behavioral theory of anxiety and they believed that anxiety could be acquired by classical conditioning. They contend that some fears through a process become conditioned. Behaviorist theory believes learning takes place through stimulus and response. The behaviorists believe there is a strong connection between stimulus and response. If the response is desirable, it will be strengthened by positive reinforcement. This process is repeated several times and gradually the desired response will change into a habit. If the response is not desirable, it will be discouraged and it will be hindered before changing into a habit. Generally, reinforcement is a very important tool in learning, especially in the early stages (Ibid).

a. Cognitive-social learning theory

This theory is one branch of behavioral Theory of anxiety (Bandura, 1986, Horwitz, 1986). According to this theory, anxiety is learned through four mechanisms:

i. By classical conditioning: as mentioned before in behavioral theory of anxiety section.
ii. By vicarious experience: watching another person who suffers from anxiety.
iii. By symbolic instruction: which is associated with learning through education.
iv. By symbolic logic: in which someone might infer or induce some kinds of danger. This inference might be reasonable or unreasonable.

Cognitive Theory of Anxiety

Cognitive theorists believe that situations on matters, by themselves, do not produce anxiety. Rather, the individuals’ interpretation cause anxiety and this kind of anxiety is not related to the external world. Someone might misinterpret a real situation which would cause unreal anxiety (Rieg, et.al, 2007).

Relationship Between Anxiety and Second Language Learning

The main point is that anxiety is related to learning other languages. It is a fact that every aspect of a task has many small elements and this feeling whether we can tackle these elements properly or not, or generally this complex task, can create anxiety (Pourebrahim, et. al, 2010). Since second language learning
has many complex tasks, we cannot consider it an exception. Listening and speaking are considered as the main sources of creating anxiety. Spontaneous speech, unprepared communication, inability for understanding words, idioms or expressions and comprehension difficulty create high levels of anxiety, not only at anxious situation but also at normal situations (Tum, 2012).

Anxious students learn at a slow rate and they have more difficulty to recall the learned subjects. The anxious students study more than normal or relaxed students, but their performance does not reflect their efforts. Another way of compensation is over-studying. Some anxious students will be so anxious when they make errors in their test, and they try to compensate it by studying more. However, these additional efforts will not lead to get better scores (Chapell, et al, 2005).

According to Faleye (2010), students’ situation in one class may cause anxiety while in other classes may not lead to anxiety. The students are anxious because of their experiences; they know their teachers judge them. They do not like to be corrected in the presence of their peers. But it is proposed that low anxiety has a positive effect on performance, but beyond a certain level, it hinders learning. Some kinds of anxiety make learning more efficient and some kinds are regarded as hindrances to learning (Faleye, 2010).

Anxiety and Test-Taking

Anxious students feel that they learned the materials but their test performance did not reflect their learning. Horwitz (1988) states that while test taking, most students feel anxiety. They usually complain to counselors and teachers that they know the answers of the questions but they forget them because of high anxiety. It is more common with oral or speaking test “when many grammar points must be remembered and coordinated simultaneously” (p.28). Horwitz (1988) goes further and states that same problem will be occurred while selling test or syntax. The students remember correct answer after the test when the test anxiety will be completely disappeared. If the student realizes he or she is making preventable errors during the test, anxiety-and errors-may escalate.’(Ibid. P. 28)

Generally, anxiety does not permit students to examine more effective ways (Burns, 2004). They do not want to wait to find the best solutions. They prefer to become relieved of the anxious situations. They lose sight of broader circumstances and also they cannot see effective ways to their solution. The anxious students are worried not only about answering questions but also about the result of the test. For this reason, they cannot concentrate completely and perhaps this difference is one of the main factors for being successful or unsuccessful. Most students feel anxious on the test so excessively that they forget everything they learned before (Chinta, 2005).

Parks-Stamm, et al, (2010) pointed out that test anxiety is concerned with many things. The first and the most important part are related to the lack of preparation. This point can easily be removed. If someone is well prepared, but he still fears, he is suffering from test-taking.

Cassady and Johnson (2002) argued that few people are not suffering from anxiety. He believed that students become anxious because they should respond in the test even if they are not inclined to. Also they know that there performance in the test reflect their abilities in the second language.

Eum and Rice (2011) stated that test anxious students often put unrealistic demands on themselves and expect to do things perfectly. Thus test performance is a failure for them. Students who are test-anxious in foreign language class probably experience considerable difficulty, when tests and quizzes are frequent and they do not consider this fact that even the brightest and most prepared students often make errors.

One aspect of anxiety is worrying about frequent testing and it is not clear yet that it is related to type of test or it can be generalized to every test, because of normal test anxiety. It is generally known that the global test creates less anxiety than specific test (Lindsay, 2010). According to Zeidner (2007), one of the most important reasons for test anxiety is fear of negative evaluation. Another important factor, which
creates anxiety, is the emotional problems of students. Sometimes, the students’ high anxiety relates to inappropriate family atmosphere, quarrels and... sometimes teachers create anxiety involuntarily and indirectly (Ibid). Teachers always compare the students to each other and admire the diligent students. Teachers ignore the anxious students’ abilities and encourage their disabilities and weaknesses. Zeidner (2007) pointed out that fear of failing creates high anxiety, because the anxious students know if they cannot obtain the top score, they must hear taunt and contempt. It is one of the most important factors, which create high anxiety, even though they completely dominate the material test, they cannot perform well (Zeidner, 2007).

**Cloze-Test and C-Test**

It must be mentioned here that Clece-Murcia (1991) referring to Cohen’s statement, pointed out that “the origins of the Cloze-test date back farther than many would think-to 1897, in fact” (p.41).

Cloze-test for the first time was introduced by Taylor in 1953 (cited in Culhane, 1970. The main idea of it is that if someone can understand all the message, it is easy to guess a single removed word. If this word is common and simple, guessing will be easy. This notion is a basis for creating Cloze-test. The word Cloze is taken from the concept of closer which is used in Gestalt psychology. It pinpoints to this fact that individuals can fill the gaps of incomplete units.

In a Cloze-test, words are deleted from a selective passage at regular intervals (usually between every fifth and every tenth words). This is periodic or fixed-ration deletion, but we can use of random deletion. The length of removed words must be at the same length.

To construct a Cloze-test, firstly choose a long passage in which you can produce at least fifty blanks. The kind of selective test depends on the purpose of the test. Second, every nth word must be deleted and put a blank with the same length, until you have 50 blanks. The first and the last sentences must be intact.

Every nth word means if every fifth word has been deleted in first paragraph, we must delete fifth word in other paragraph. Then, the reader must read the whole passage and guess the deleted words. This process is comprehension first and then production.

There are two ways to score Cloze-test:

- The testee must guess the exact word.
- The testee can write appropriate word which is acceptable in the text.

Cloze-test has been used to to measure the readability of the written materials, and then it was applied to first language reading comprehension (Heaton, 1975). Generally speaking, it was used as a teaching device; the teachers used them to improve the students’ reading silks. The students must read more carefully, use the contextual clues, and they were actively involved with the reading passage. The Cloze-test has been used to measure English language proficiency (Aitken, 1977; Brown, 1993; Caulfield & Smith, 1981; Chavanachat, 1986; Fotos, 1991; Oller & Conrad, 1971; Stubbs & Tucker, 1974).

It must be mentioned here that Cloze-tests are different form simple blank-filing testes. In Cloze-tests, deleted words are selected subjectively, namely, of structural comprehension ability. But, there was a controversial argument about Cloze -test. It was believed that traditional fixed-word-deletion could only measure reading ability at the word or the sentence level not at discourse level. There was no production and generally it was not clear that Cloze-tests could measure language proficiency or not. For these reasons another form of Cloze-test has been proposed by Klein-Braley (1981), which is called C-test or first letter Cloze. In this method, the second half of every second word is deleted. Like Cloze-tests, the first and the last sentences must be intact, but there is a difference here; a C-test consists of a number of different texts. Using many topics in one test, we can measure different language elements and also evaluate writing ability with reading ability. In other words, there is comprehension and production at the same time in C-test but there is a problem here; by deleting half of the word, students may not understand the whole text but can guess
the deleted words. According to Raatz (1985) cited in Klein-Braley (1997), C-test is based on the following criteria:

1. The C-Test should be much shorter and should have at least 100 items.
2. The deletion rates and starting points of deletion should be fixed.
3. Only exact word scoring method should be employed.
4. There should be a number of different texts.
5. The words affected by the deletion should be a representative sample of the text.
6. Adult educated native speakers should make perfect scores on the test.
7. The test should have high reliability and validity (p. 136).

Nonetheless it is not clear so far that test anxiety would hinder the learners’ performance more on C-tests or Cloze-tests.

METHODOLOGY

Subjects and instruments
This study conducted to compare learners’ performance on C-test and Cloze-test and find out which kind of these two tests create more anxiety. To achieve the object, one university in Mashhad, Iran was selected, randomly and then, 60 Iranian female Junior students were chosen randomly among three classes with the total estimated average number of students 150 (both sex); since females are more anxious than males (Kendler, et. al, 1992, Aida, 1994, Shear, 1997, Pigott, 2003, Buss, 2011, Chaplin, et. al., 2013, Caballo, et. al. 2014), subject must be of the same sex. All the subjects were studying Bachelor degree in English Translation. First of all, the researcher must determine anxious students, for doing this, they were given an anxiety test. For this research, Hamilton test was selected as a standard anxiety test. After this procedure, C-test and Cloze-test were given, simultaneously. Both tests must be similar together as much as possible. Proficiency and difficulty level and numbers of item should be the same, both tests must have the same length.

The researcher selected Mashhad as the study site because she was completely familiar with the teaching context in this city, since she has been teaching there for more than 15 years as an English teacher. All of the selected participants were learning in Mashhad; however, they might have originally come from other parts of Iran.

Procedures
All subjects were given Cloze-test with 30 blanks, at first, they were asked to read the whole passage quickly, because of this belief that students do better if they have a general idea about it (Culhane, 1970; Heaton, 1975). One minute was given to respond to each item of the test. After 40 minutes, when all participants completed the Cloze-test, an anxiety test with unlimited time was given. Based on the results of anxiety test, the anxious students were identified, but the results were not announced. It was only recorded for analysis. It must be mentioned here that the students with a score more that 100 points were considered anxious students. Two weeks later, the same passage was given to the same students while it was changed into C-test. It must be mentioned here the purpose of doing these two tests, Cloze-test and C-test, is to measure reading comprehension ability in the present study. The test was constructed out of the passages extracted from authentic source. To control the observer effect, the tests were administered by the subjects' own teacher and in their own class time. The used scoring methods for Cloze test was guessing the appropriate word method and for C-test was guessing the exact word method.

Analysis
Descriptive statistics for subjects’ performance on the Cloze-test and C-test were used to compare the mean score of the subjects in both tests. And then, Coefficient correlation formula was taken to determine whether there is any relationship between two variables; between C-test and anxiety test, and Cloze-test and anxiety test. It must be mentioned here that treatment was not necessary in this research.
Cloze-test and C-test have been chosen for this paper because Cloze tests have been widely used for measuring reading comprehension since their introducing to the testing world by Taylor in 1953. But in 1982, Klein-Braley criticized cloze procedure mostly for their deletion and scoring problems. They introduced their newly developed testing procedure, C-test, which was an evolved form of cloze tests without their deficiencies (Klein-Braley, 1982 cited in Baghaei, 2008). After that, the effectiveness of C-test and Cloze test became the main interest of the scientists in the field of language testing. The other reason for choosing these two kinds of tests for the present paper is that they are easy to construct and to score (Connelly, 1997; Raatz & Klein-Braley, 1985), and highly reliable and valid (Connelly, 1997; Dornyei & Katona, 1992; Klein-Braley, 1997; Weiss, 1983) and finally, they are economical (Weir, 1990, 1993).

After scoring, for the ease of comparison all the scores were calculated out of 100. Descriptive statistics for both Cloze test and C-test are represented in Table 1.

Table 1 Descriptive statistics for subjects' performance on the Cloze-test and C-test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloze-Test</td>
<td>60</td>
<td>42.10</td>
<td>84.21</td>
<td>65.72</td>
<td>10.82</td>
</tr>
<tr>
<td>C-Test</td>
<td>60</td>
<td>28.57</td>
<td>76.78</td>
<td>49.83</td>
<td>12.20</td>
</tr>
</tbody>
</table>

As table 1 presents, the mean score of the subjects in cloze test (65.72) is higher than the mean score of them in the C-test (49.83).

Table 2 SPSS output to test the relationship between anxiety and Cloze-Test & anxiety and C-test

<table>
<thead>
<tr>
<th></th>
<th>Anxiety</th>
<th>Cloze-Test</th>
<th>C-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>-.723**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Cloze-Test</td>
<td>Pearson Correlation</td>
<td>-.723**</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>C-Test</td>
<td>Pearson Correlation</td>
<td>-.474**</td>
<td>.752**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

The SPSS results show a clear relationship between anxiety and C-test.
DISCUSSION AND CONCLUSION

One conclusion of this research is that students who experience high anxiety in the second language class, they will feel more anxiety in the test-taking and while comparing Cloze-test and C-test, the students feel more anxiety while taking C-test. Cloze-Test seems to test general knowledge of English comparing with C-Test. Birjandi and Alemi (2010) pointed out that students feel less anxiety while doing a test in general English. Moreover, Cloze-Tests are more similar to some academic tests while C-Tests are more about guessing. Dordi Nejad et. al. (2011) stated that there is a negative relationship between test anxiety and academic performance. Dedeyn (2011) suggested that there is negative relationship between anxiety and language performance evaluation. It can be concluded that Cloze is easier to take than the C-test, because the higher number of deletions in the C-test makes the process of comprehension difficult, and if C-test is assumed to be reading comprehension test, more time will be needed. The other reason refers back to his fact that there is more than one word which begins with the same letters.

Implications

We investigate the negative effects of high anxiety so far. By referring too much valid research could approximately show its outcomes. But how can we overcome this negative feeling? Or if it is impossible, how can we decrease it? Most psychologists believe that there are many ways to remove anxiety which are very easy theoretically and almost impossible practically. The consultants can play a major role in reducing the anxiety which has been created by the kind of the test. First of all, the root of anxiety (here, C-test) must be specified. By clarifying the problem, a plan can be constructed to overcome anxiety; try to change individuals’ attitudes about their personal feeling and help them to concentrate on the tasks rather than on feelings of fear, for example.

Another technique for removing anxiety is that teachers help students gain learning strategies and they can also change instructional method and evaluation. The main step for removing anxiety includes some efforts to deal with the situation.

There is an important point here that a person can overcome his anxiety at low level. As anxiety grows, overcoming will be more difficult and finally at the very high level, it will create panic and serious problems. For this reason, it is better the anxious students discuss their problem with an educational counselor, directly. The responsibility of consultants is an attempt to change self-related cognition. Anxious students can concentrate on the positive parts of their abilities. They must consider their abilities and try to encourage them and step by step, they must change their attitudes.

It should be noted here when an issue creates anxiety, the anxiety can travel from that issue to another issue or even to other issues; in this case, the anxiety will get worse and many types of anxiety will be mixed to each other. Based on the findings of the present study, consultants must consider the fact that the type of test taking which creates anxiety, can lead to create the other kind of anxiety.

One of the best solution for decreasing the feel of anxiety is social support; the consultants can make some groups of students who have the most similar characteristics and introduce some new anxious students to these groups.

The other support which anxious students can be received is informational and emotional support which lead to decreasing academic stress and anxiety. This important job can be done by educational consultants and teachers.

The findings of the present study is important to the teachers and consultants showing them the causes of anxiety and also give the some possible ways to decrease it; however, we should do research to discover ways of preventing test-anxiety from developing in the first place. Up to now, researchers have had
difficulty in showing the role of anxiety in second language learning. Questions remain about the manner anxiety influences language learning.

LIMITATIONS AND SUGGESTION FOR FURTHER STUDIES

No research is absolutely complete and consequently no researcher can claim that the results of her/his study can be applied in all possible cases. Additional research is obviously needed. This study is not, however, an exception. There are other alternatives related to this research, which are worthy of further investigation. This study focused on two kinds of tests and Participants were selected from Mashhad, the hometown of the researcher. Hence, the results of this study cannot be generalized to all students in Iran or worldwide. On the other hand, the participants of this study were all females. Therefore, according to Nazari (2007), the underlying principles can be generalized to the theory, not to a population. That is to say, the issue will be put forward and the related general theme not by “enumerative induction” but “analytical induction” (Mitchell, 2000). Considering the limitations of this study, further researches can be conducted such as:

1- The effect of age on the test-taking
2- Just one kind of tests can be chosen
3- The place of the research can be tested, i.e., will this research with the same topic have the same results?

REFERENCES


