

## **THE RELATIONSHIP BETWEEN LEVEL OF AMBIGUITY TOLERANCE AND CLOZE TEST PERFORMANCE OF IRANIAN EFL LEARNERS**

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### **Abstract**

The present study explores levels of ambiguity tolerance among 38 third-year high school students in EFL classrooms and its relationship with cloze test performance. Ambiguity tolerance can be defined as a “person’s ability to function rationally in a situation in which interpretation of all stimuli is not clear” (Chapelle and Roberts 1986). It may be suggested that ambiguity tolerance might have an effect on performance on cloze tests in which the test taker is to choose from a number of responses and there may be several alternative correct interpretations. Students’ ambiguity tolerance level was surveyed and analyzed using the Second Language Tolerance of Ambiguity Scale (SLTAS) (Ely 1995), and their performance was measured through a standardized English cloze test administered by the researchers. The results of the Pearson Product correlation coefficient showed that respondents with higher levels of ambiguity tolerance were likely to achieve higher scores on the cloze test, and those with lower levels of ambiguity tolerance tended to obtain lower scores on the cloze test. Furthermore, some pedagogical implications for both learners and instructors are proposed.

**Keywords:** ambiguity tolerance (AT), language learning, cloze test, SLTAS, third-year high-school students

### **1. Introduction**

In EFL/ESL contexts, the concept of student-centered instruction has led educators down a path of discovery where teachers and instructors are viewed as scientists who set out to discover who their students are and how they can best learn. In the second language classroom, there are many learner variables that instructors should be aware of because of the impact they will have on the success of their students. Furthermore, these learner variables can help determine the approach and methods that instructors will use. Among them, the influential variable is tolerance of ambiguity. While ambiguity may be present in learning any subject, there is a remarkable amount of ambiguity when it comes to acquiring a second/foreign language;

for some learners this is what makes second language learning exciting, while for others this same supply of ambiguity is what makes learning extremely frustrating.

This study aimed at examining whether there was any statistically significant relationship between the level of ambiguity tolerance (AT) of the Iranian EFL learners and their performance on the cloze test. As mentioned before, several factors, systematic and unsystematic, tend to influence test takers performances. Among the personality factors, the ambiguity tolerance of test takers is the focus of this study. Ambiguity tolerance is among the cognitive styles which are postulated to affect second language learning acquisition. This style concerns the degree to which a person is cognitively willing to tolerate ideas and propositions that run counter to his/her own belief system or structure of knowledge. Some people are, for example, relatively open-minded in accepting ideologies and events and facts that contradict their own views; they are more content than others to entertain and even internalize contradictory propositions. Others, more close-minded and dogmatic, tend to reject items that are contradictory or slightly incongruent with their existing system; they wish to see every proposition fit into an acceptable pace in their cognitive organization, and if it does not fit, it is rejected. Again, advantages and disadvantages are present in each style. The person who is tolerant of ambiguity is free to entertain a number of innovative and creative possibilities and not be cognitively or affectively disturbed by ambiguity and uncertainty. However, tolerance of ambiguity varies, depending on skills and language learning situations. The variation might heighten since learners cannot tolerate the ambiguities produced by their failure to express adequately their ideas in writing and speaking. This situation triggers a considerable amount of intolerance that might impede their progress in these skills.

Discussions and studies regarding ambiguity tolerance usually concern ESL contexts (e.g., Chapelle 1983) and usually focus on general language learning achievement, with the exception of El-Koumy (2000) and Erten and Topkaya (2009) who related AT to reading comprehension. Furthermore, recent years have seen an emergence of studies investigating affective issues in skill specific domains (Kondo-Brown, 2006). Even so, these studies are scarce and few studies were found investigating cloze test performance and its relation to ambiguity tolerance in the Iranian EFL context.

Thus, this study was prompted by the desire to understand Iranian high-school students' tolerance of ambiguity in relation to their performance on the cloze test. A brief review of related literature is presented below, followed by a description of the research methodology and findings. The findings are then discussed in the light of literature, and consequently,

conclusions are drawn and suggestions are made.

### **1.2. Research Questions**

To achieve the purpose of this study, the following research questions were put forth:

1. How tolerant of ambiguity are Iranian high-school EFL learners?
2. What is the relationship between Iranian High-school EFL learners tolerance of ambiguity and their performance on the cloze test?

Since no study has been conducted in this realm in the Iranian EFL learning context, null hypotheses were assumed for both research questions.

## **2. Background**

### **2.1. Ambiguity Tolerance (AT)**

In the attempt to define *tolerance of ambiguity*, a double task is faced: to designate what tolerance is and to interpret the meaning of ambiguity.

McLain (1993: 184) postulates that tolerance suggests ‘begrudging acceptance’ whereas ‘intolerance suggests rejection’ and adds that tolerance ‘extends along a continuum from rejection to attraction’. Defining ambiguity tolerance is complex since many nuances are interwoven in the term. Chappelle and Roberts (1986: 30) define ambiguity tolerance as “a person’s ability to function rationally and calmly in a situation in which interpretation of all stimuli is not clear”. Tolerant people are better able to tolerate the feelings of anxiety and uncertainty. They will perceive and interpret ambiguous situations more adequately, in a realistic way, without denying or distorting parts of its complexity. Tolerant people are likely to elaborate more adaptive and better coordinated behavior. They can withstand the discomfort of the ambiguous situation long enough as to accommodate and generate a more appropriate and flexible response to it. It was concluded that tolerant individuals should perform well in new complex situations.

However, intolerant learners may tend to avoid or give up when encountering ambiguous situations. Budner (1962 as cited in Kazamia 1999) suggests that ambiguity signifies perceived insufficiency of information regarding a particular stimulus or context. He further classifies ambiguous situations in three cases:

- 1) Those that are completely new and as a result of this they do not present any known clues.
- 2) Those that are complex and have a great number of cues that must be taken into account.
- 3) Those situations that exhibit contradictory elements, where different cues suggest different structures.

Norton (1975) adds one more situation to those causing ambiguity: the unstructured situations where the cues provided cannot be interpreted. Kazamina (1999: 69) summarizes current definitions and concludes that

ambiguity is marked by “novelty, complexity, insolubility and lack of structure.”

Ehrman (1993, 1994, 1996, 1999) gives another perspective on tolerance of ambiguity. She has devised a tolerance of ambiguity construct which is separated into three levels:

- 1) The first level named intake
- 2) The second level called tolerance of ambiguity proper, and
- 3) The third level named accommodation

At the intake level, the learner admits new information into his or her mind. In the tolerance of ambiguity proper, which is the second level, it is assumed that intake has happened and at this stage the individual has to deal with contradictory elements, incomplete information or an incomplete system. The third level is described as accommodation and it is at this level where discriminations of the new data are made, priorities are set and ultimately integration of new information with existing structures occurs in order to alter the latter and create new cognitive schemata that did not exist before.

## **2.2. Cloze Test**

The word “cloze” was coined by Wilson Taylor who developed this new testing procedure in 1953. Taylor (1953: 416) described a cloze unit as “any single occurrence of a successful attempt to reproduce accurately a part deleted from a message (any language product), by deciding from the content that remains, what the missing part should be”.

Originally, the cloze procedure was used to determine the readability of prose passages, but very soon it gained importance as a testing device in various researches done with both native and non-native speakers. The cloze test is derived from the law of “closure” which is one of the essential concepts in *Gestalt psychology* which refers to the tendency of individuals to complete a pattern once they have grasped its overall significance. The underlying tenant in this theory is that phenomena are considered to be holistic rather than consisting of subparts. *Gestalt* theory views concrete phenomena such as visual figures, as well as abstract phenomena, such as memory or learning as organized structures or wholes, rather than as combinations of separate units. The fundamental concept in this theory is the law of “closure” which suggests a natural tendency in human beings to perceive unfinished or incomplete figures as complete entities, by filling in the gaps in broken patterns.

The use of cloze tests as a measure of L2 proficiency is certainly not new. These tests have been the object of much testing research since the seventies (e.g., Jonz 1976, Oller 1972, 1973). Although there is some controversy as to exactly what aspects of linguistic competence cloze tests

measure, one important finding of testing research is that cloze test scores tend to correlate highly with standardized proficiency scores (e.g., Bachman 1985, Fotos 1991, Hanania and Shikhani 1986). Assuming that the latter indeed tap L2 proficiency (an assumption which, admittedly, can be questioned for oral skills), this correlation then suggests that cloze tests also provide a valid proficiency measure.

Testing research has further shown that cloze tests are internally consistent and their internal consistency does not vary substantially across different cloze test formats (e.g., Bachman 1985, Brown 1983, Chapelle and Abraham 1990). While a single cloze test can discriminate between L2 learners in a wide range of proficiency levels (e.g., Fotos 1991), by manipulating the difficulty level of the test, it is also possible to tailor the test for L2 learners at a particular proficiency level (e.g., Brown, Yamashiro, and Ogane 2001). In fact, the ability of a cloze test to discriminate between L2 learners very much depends on its difficulty level and on the population it is intended for, with the test discriminating well between L2 learners who score in the middle range of possible scores, but not so much between L2 learners who score very high or very low on the test. It should be noted that discriminability and reliability also tend to go hand in hand, with the cloze test being more reliable as the distribution of L2 learners' scores approaches normality.

Cloze tests are not only a good L2 proficiency assessment measure by testing standards, as illustrated above, they are also a practical tool for research purposes for the following reasons: they can take a relatively short amount of time to complete (e.g., 15-35 minutes, depending on the difficulty level of the test); their flexible format (choice of text, length of text, word-deletion ratio, scoring method, etc.) makes it possible to target a particular range of proficiency levels; and they are easy to create and are easy to score if clear scoring criteria are established. It should therefore be possible for researchers who work on a target language for which no reliable proficiency assessment tool is available to create such a test, evaluate its validity, reliability, and discriminability with the targeted population of L2 learners, and share the final version of the test with scholars working with similar populations of L2 learners.

Despite the numerous researches done in this area, there still has been considerable controversy and uncertainty about exactly which language skills and cognitive processes are tapped in cloze test performance. As a result, there is a continued controversy about the validity of this procedure as a test of general language proficiency. Hansen and Stanfield (1983) contend that validity and reliability of cloze tests vary from one situation to another. Alderson (1980) reports that the validity of cloze tests as actual measures of second language skills varies widely. He shows that performance differs as a

function of text difficulty, scoring procedure and word deletion frequency.

### **2.3. Ambiguity Tolerance, Language Learning and FLA/SLA Success**

Many of the ambiguous situations are also common in language learning, be it in the classroom with a group of students (Ely 1995) or individually when people engage in self-instructed language study (White 1999). This is simply because both linguistic input and cultural knowledge is very likely to constitute one of the ambiguous situations described above. As such, in the simplest sense when students encounter new lexical and grammatical structures, they often face shortage or even a lack of information, multiple meanings, vagueness, and so on (Chapelle and Roberts 1986, Grace 1998). Ambiguity in language learning can cause anxiety (Ehrman 1999, Oxford 1999), which may create “a degree of apprehension and frustration which may ... [be] deleterious to progress” (White 1999: 456).

Ely (1989) defines AT as the acceptance of uncertainties. Such tolerance can be translated into the language learning context as “an ability to deal with ambiguous new stimuli without frustration or without appeals to authority. It allows for indeterminate rather than rigid categorization” (Ellis 1994: 518). In this sense, students with AT, then, are expected to feel comfortable with learning a new language with its uncertainties and unknown structural and cultural norms to be dealt with. McLain (1993), for example, reports that students who are tolerant of ambiguity are more willing to take risks and open to change (Rubin 1975, Stern 1975) and show endurance on tasks and higher levels of achievement (Chapelle 1983, Naiman, Todeso, and Frolich 1975). Similarly, White (1999) views AT as a reaction to uncertainties whereby ambiguity is accommodated so that it does not impede progress.

Lori (1990) found that ambiguity tolerance correlated significantly with English achievement, Arabic achievement, self concept, and overall school achievement. The results also showed that tolerance of ambiguity correlated significantly low with attitudes toward learning English as a foreign language. Tolerance of ambiguity has also been shown to be related to achievement in listening comprehension and imitation tasks (Naiman et. al. 1978) and reading comprehension (El-Koumy 2000, Kondo-Brown 2006, Lori 1990). Kondo-Brown (2006) identified avoidance of ambiguity as a factor in her search for affective variables in reading ability. Correlational analysis revealed a close relationship between ambiguity tolerance and intrinsic motivation. She stated that “Only those with higher intrinsic orientation are more likely to work at reading Japanese. These students are also more likely to be tolerant of ambiguity in learning Japanese and adopt analytical approaches in studying kanji” (p. 63). This was somehow in line with what Chapelle (1983) described as longer endurance on tasks when

students had higher levels of ambiguity tolerance.

The level of AT may also influence the use of certain language learning strategies. Ehrman and Oxford (1990) found that learners with intuitive types of personalities who have relatively higher levels of AT reported that they often guessed from context whereas sensing types of personalities with lower AT reported that they disliked having to guess from context. Furthermore (moreover), learners, who are called judgers, reported not using compensation strategies like the sensing type of students because of their discomfort with ambiguity, whereas perceivers who can tolerate uncertainty tended to use compensation strategies more. Moreover, judgers tended to use more planning strategies in the form of meta-cognition while perceivers reported that they disliked meta-cognitive behaviors, reflecting their tolerance of ambiguity.

In this line, El-Koumy's (2000) study, that dealt with ambiguity tolerance and reading comprehension, found a positive relationship between tolerance of ambiguity and reading comprehension. His results indicated that the middle ambiguity tolerance group outscored both the low and high tolerance groups, and there was no difference between the high and low tolerance groups.

Ely (1989) suggests that ambiguity in language learning is materialized as uncertainty. He explains this by saying that language learning is fraught with uncertainty and examples of the cases of this may be the fact that rarely do learners know the exact meaning of a new lexical item or feel that they have pronounced a sound with total accuracy, or have fully comprehended the temporal reference of a grammatical tense. The pervasive character of uncertainty, or to put it differently, ambiguity affects language learning positively or negatively. Ely (1995) specifies three cases where tolerance of ambiguity has a negative impact on language learning:

- 1) Learning individual linguistic elements (phonological, morphological, syntactic, semantic....)
- 2) Practicing language learning skills.
- 3) Adopting those skills as permanent strategies.

The second item (practicing language learning skills) can be directly related to language testing. In the area of practicing language learning skills, we can take an example from a learning strategy such as guessing for meaning, be this in oral form, talking with native speakers or in written form such as skimming in a passage. This skill involves risk taking and learners who are impeded by the uncertainty underlying guessing produced by the fact they do not know the meaning of a word or a number of lexical items, are not able to internalize and master the skill.

Now the fundamental question is whether ambiguity tolerance affects performance, and if so, what is an optimal degree of ambiguity tolerance? In

other words, how tolerant of ambiguity should a person be in order to perform well on language tests, especially on the cloze test? Language acquisition researchers state that although tolerance of ambiguity is significant for language learning processes, high tolerance can lead to language problems such as unquestioning acceptance and cognitive passivity. Lack of sensitivity to L2 data may culminate too early and lead to permanent pidginization or fossilization of incorrect grammar vocabulary and pragmatic use. On the one hand if a person is not receptive to new situations, then how will he/she master a foreign language? To put it more simply, if an individual is reluctant to accept that a word in the target language may carry more than one denotation or that he does not need to know the meaning of every word of a text in order to understand a passage, then his/her language learning will be seriously hampered (Ely, 1995). It is suggested that moderate levels of tolerance of ambiguity are recommended for optimum results in language learning. Since high tolerance may cause cognitive passivity and low tolerance may impede language learning, midpoint tolerance seems to be satisfactory (Ely, 1995). Unfortunately, nobody up to now has operationalized this mid-point tolerance of ambiguity. Consequently, it is very difficult to indicate the desired level of tolerance of ambiguity. Despite this lack of quantification, it is believed that it is worth investigating this phenomenon because one may be able to detect tendencies and patterns among language learners and synthesize a profile for their way of coping with language learning ambiguities.

### **3. Method**

#### **3.1. Participants**

The participants of the present study were 38 third-year high-school students from a private school in the north of Tehran, Iran. All participants were female and were at the same age of 17; they all had a minimum of 5 years of experience of studying English at school from the second year of guidance school up to the time of conducting the research. The school comprised of students who were studying in three different majors entitled: 'Literature', 'Math', and 'Science'. The participants of this study included students from three different classes which were in the three different majors. The basis for choosing these three particular classes lied in having the same English teacher. This controls for *teacher effect*, which could possibly have a part in increasing anxiety levels among students. Each class also studied the same English book, followed the same syllabus, and considering the fact that they were accepted into a particularly high-level school in terms of academia, they were all considered to be high-achievers. The Literature class had 10 students; likewise, the Math class originally had 17 students; however, on the session that the questionnaires were distributed, two students were absent

and accordingly 15 students were left. The Science class had 13 students which were all present at the time of the distribution of the questionnaires.

### **3.2. Instrumentation**

Three instruments were adopted in this study: The Second Language Tolerance of Ambiguity Scale (SLTAS) (Ely, 1995), a cloze test, and an English final achievement test.

#### **3.2.1. The SLTAS**

The SLTAS questionnaire was used to assess the students' level of ambiguity tolerance. The SLTAS questionnaire was selected because it is the only one specially designed for language learning. It has 12 items and the responses are in Likert-scale format with a set of four responses (see Appendix A). The questions have been assigned 5 points for "strongly agree", 4 points for "agree", 3 points for "no comment", 2 points for "disagree", and 1 point for "strongly disagree". Each questionnaire has been tabulated according to this system. The original English version of the SLTAS was translated using a back-translation method to assure its validity. (The Persian version of the SLTAS is provided in Appendix B). To achieve this, the content of the translated version of the SLTAS was assessed by a psychologist holding a doctoral degree in the field of clinical psychology, and two full-time English language instructors. The participants were asked to rate each item on a five-point Likert-scale (strongly agree to strongly disagree). The total score shows the general tolerance/intolerance learners show and it may range from 12 to 60. The higher the score, the more intolerant learners are of foreign language ambiguities.

#### **3.2.2. Cloze Test**

A cloze test was administered to the students in order to identify performance differences (see Appendix C). In order to insure the compatibility of the cloze text and the participants' proficiency levels, the cloze passage was chosen from the last lesson of the 3<sup>rd</sup> year English high school book. It should be noted that they had not studied the aforementioned lesson. A deletion rate of  $n=7$  was used in the construction of the cloze test.

#### **3.2.3. English Final Exam**

Finally, an English final exam which was administered at the end of the semester by the school was used to assess the overall English proficiency/achievement of the students and to ensure homogeneity in terms of language proficiency. The test included six different sections: spelling, vocabulary, grammar, language function, pronunciation, reading comprehension, and a cloze passage.

### **3.3 Procedure**

The procedures of this study are described as follows. At the first stage, the researchers distributed the translated Persian version of the SLTAS questionnaires to the participants and explained the instructions to them in Persian. The researchers also clearly explained the purpose of the research to the students, and informed them that there were no correct answers. It was also clarified that the responses were confidential, and that no names would be used in the research, and that scores would not be given to the school. The questionnaires were then retrieved for quantitative analysis; then, the cloze test was administered to the students, and as before, the instructions were clearly presented and students were informed that their names would remain anonymous and scores would not be presented to any school administrator. It should be noted that the cloze test was scored according to precise/correct dimension; that is, answers which were not exact but were grammatically accurate were accepted as correct answers and were given a one score. Those answers which were left blank or were answered incorrectly were assumed incorrect and were given a zero score. Finally, one week later, students took the final standardized English exam administered by the school. The raw scores were collected and submitted for quantitative analysis.

### **3.4. Data Analysis**

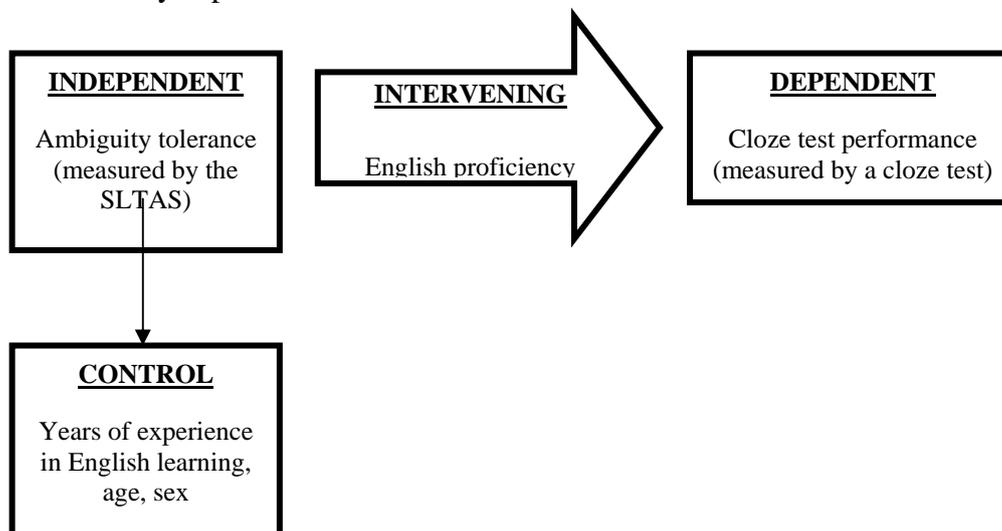
Data analysis was conducted using the SPSS (Statistic Package for the Social Science) 16.0 program. Since the students were studying the same English book, had the same teacher following the same syllabus, and ultimately took the same final English exam by the school, they were considered as a single group. To ensure the students homogeneity in general, one-way analyses of variances (one-way ANOVA) were run between the three majors using their scores obtained from, their English final exam. To be extra cautious in claiming that the students were in fact drawn from a single population, they were also homogenized in terms of their cloze test performance and ambiguity tolerance levels.

In order to answer the first research question, the scores obtained from the SLTAS scores were tabulated and analyzed to discover the learners' ambiguity tolerance level. For the second research question, Pearson Product correlation coefficient was used to discover the relationship between the level of ambiguity tolerance and cloze test performance.

### **3.5. Design**

This study was descriptive in nature, and the groups were not chosen randomly but as intact groups placed in three high school classes. The

dependent variable in this study was cloze test performance, and the independent variable was ambiguity tolerance. The intervening variable was English proficiency. The control variables are: age of subjects (second year high school students with an average age of 17) and years of experience in English learning (a minimum of 5 consecutive years). The schematic design of the study is presented below:



#### 4. Results

##### 4.1. Homogeneity of the Three Majors in Terms of Overall English Language Proficiency

The raw data was fed into the computer and was then analyzed by using SPSSX16. The results are discussed below.

**Table 1: Descriptive Statistics of the Final English Exam of the Three Majors**

Exam	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		
					Lower Bound	Upper Bound	Maximum
Literature	10	18.48	.72121	.22807	17.96	18.99	17.00
Math	15	18.62	1.33586	.34492	17.88	19.36	15.50
Science	13	18.38	1.13015	.31345	17.7	19.07	16.25
Total	38	18.5	1.10741	.17965	18.14	18.86	15.50

Descriptive statistics of the results of the final English exam is shown in Table 1. Moreover, to assure the homogeneity of participants of the three

majors of Literature, Math and Science, a one-way ANOVA was run between the mean scores of their final English exam. Table 2 displays the results of the one-way ANOVA between the three majors.

**Table 2: Results of the One-Way ANOVA for the Three Majors on the English Final Exam**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.383	2	.192	.149	.862
Within Groups	44.992	35	1.285		
Total	45.375	37			

\*level of significance is set at 0.05 (two-tailed)

As shown in Tables 1, and 2, there was no significant difference among the means of the three major groups on the final English exam. Accordingly, it was suggested that the three groups were from the same population of 3<sup>rd</sup> year high school students, and were considered as one homogeneous group.

#### **4.2.Homogeneity of the Three Majors in Terms of Cloze Test Performance**

To be extra cautious in assuring homogeneity of the participants in terms of English language proficiency, a one-way ANOVA was run between the three groups of high school students' scores on the cloze test. The results are displayed in Table 3.

**Table 3: Homogeneity of the Three Majors in Terms of Cloze Test Performance**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	52.485	2	26.243	1.246	.300
Within Groups	737.331	35	21.067		
Total	789.816	37			

As can be seen in Table 3, there was no statistically significant difference among the means of the three groups on cloze test performance; so, the homogeneity of the participants in terms of English language proficiency was assumed.

#### **4.3.Homogeneity of the Three Majors in Terms of Ambiguity Tolerance**

To recap, it was shown that the three groups of participants, enrolled in three different majors, were at the same level of English language proficiency/achievement. Then to assure that the ambiguity tolerance of the intended 3<sup>rd</sup> year high-school participants were not significantly different, a one-way ANOVA was run between the means of the SLTAS scores of the three

majors. The results are shown in Table 4.

**Table 4: Results of the one-way ANOVA on the SLTAS for the three majors**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	166.311	2	83.156	.882	.423
Within Groups	3300.031	35	94.287		
Total	3466.342	37			

Table 4 displays that the significance level obtained by ANOVA was not less than 0.05; therefore, the means were not significantly different. So, the intended groups were found homogenous in terms of ambiguity tolerance as well.

#### 4.4. The general situation of high school students' tolerance of ambiguity in English classrooms

**Table 5: Descriptive statistics of SLTAS for 3<sup>rd</sup> year high school students**

Majors	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Literature	10	41.6000	10.25454	3.24277	34.2643	48.9357	23.00	52.00
Math	15	37.2000	9.60060	2.47886	31.8834	42.5166	21.00	53.00
Science	13	36.5385	9.41289	2.61067	30.8503	42.2266	22.00	53.00
Total	38	38.1316	9.67910	1.57016	34.9501	41.3130	21.00	53.00

As Table 5 shows, the minimum score of the overall ambiguity tolerance was found 21, and the maximum was found 53. Since the obtained scores formed a normal curve, the obtained results were divided into three levels. Students whose scale points ranged below 33.3% of the participants were considered to have a high ambiguity tolerance level. Likewise, those whose scale points range between 33.4% and 66.6% of the participants were the intermediate ambiguity-tolerant students, and those whose scale points range above 66.7% of the participants were considered to be the low ambiguity-tolerant students. The results showed that although some students had very low ambiguity tolerance, a large percentage of the students had moderate to high ambiguity tolerance levels. Therefore, the first null hypothesis which stated that ambiguity tolerance exists at a very low level among Iranian 3<sup>rd</sup> year high school students was rejected.

#### 4.5. The Relationship between Ambiguity Tolerance and Cloze Test Performance

To detect the relationship between Iranian high-school participants' ambiguity tolerance and their cloze test performance, Pearson Product Moment Correlation was used based on the SLTAS scores and the cloze test scores of the participants. The results are shown in Table 6.

**Table 6: Correlation between the participants' ambiguity tolerance and their cloze test performance**

		Cloze test	SLTAS
Cloze test	Pearson Correlation	1	-.866**
	Sig. (2-tailed)		.000
	N	38	38
SLTAS	Pearson Correlation	-.866**	1
	Sig. (2-tailed)	.000	
	N	38	38
**. Correlation is significant at the 0.05 level (2-tailed).			

According to Cohen and Holliday's (1982) *Statistics for Social Scientists*, correlation coefficients of and under .19 are very low, from .20 to .39 are low, from .40 to .69 are modest, from .70 to .89 are high, and from .9 to 1.00 are very high. As can be seen from Table 6, the total SLTAS scores had a significantly high negative correlation ( $r = -.866$ ,  $p < .05$ ) with the total cloze test scores of the participants. This means that the respondents with higher levels of ambiguity tolerance were likely to achieve higher scores on the cloze test performance, and students with lower levels of ambiguity tolerance were likely to obtain lower scores on the cloze test performance. Therefore, the second null hypothesis claiming that there was no significant relationship between EFL learners' ambiguity tolerance level and their performance on the cloze test was also rejected.

#### 5. Discussion and Conclusions

Considering the limitations of the participants' size, gender, not randomly being chosen, female students from only one school, generalization from provided data must be made with caution. The findings of this study cannot be said to represent all 3<sup>rd</sup> year high school students in Iran. Furthermore, not all variables influencing foreign language learning have been controlled. For instance, personality, self-perceptions, beliefs, attitudes, intelligence, classroom atmosphere, etc., are also important variables which may influence foreign language learning. Moreover, the results of the present study cannot be generalized to the other cognitive styles and language test

methods. On the other hand, it can approve the replicability of the study since future research studies can focus on the other cognitive styles or other skills.

To recap, this study aimed at examining whether there was any statistically significant relationship between the level of ambiguity tolerance of the Iranian EFL learners and their performance on the cloze test.

The findings of this study allowed the authors to draw some conclusions. Firstly, the Iranian EFL learners participating in this study reported having an almost high level of ambiguity intolerance in general. The findings, in line with Erten, & Topkaya's (2009) findings, also suggest that there is a significant relationship between ambiguity tolerance and learners' language proficiency level, i.e. cloze test performance, indicating that the higher the proficiency level, the more tolerant learners become in foreign language learning. One factor that may have impacted this result is that, as learners develop their linguistic knowledge, the need to control every detail in language learning becomes less important, thus resulting in higher tolerance of ambiguity.

There were only a limited number of research findings available on this topic in second/foreign language learning. Naiman et al. (1978) found that the ambiguity tolerance was one of the only two significant factors in predicting the success of their high schools learners of French in Toronto. Chappelle and Roberts (1986) measured tolerance of ambiguity in learners of English as a second language in Illinois. They found that learners with high tolerance for ambiguity were slightly more successful in certain language tasks. These findings suggest - though not strongly so - that ambiguity tolerance may be an important factor in second language learning. These findings have intuitive appeal. It is hard to imagine a compartmentalizer - a person who sees everything in black and white, no shades of gray - ever being successful in the overwhelmingly ambiguous process of learning a second language.

If ambiguity tolerance has an impact on second language learning, therefore it may be suggested that it may have an influence on the test taking of the students as well. However, research studies which examine the relationship between level of ambiguity tolerance and performance of the various test taking methods are relatively scant. Considering the unusual characteristics associated with the cloze test, including the fact that input is presented in an incomplete and mutilated way which may be ambiguous to the test taker, this type of test seemed appropriate for testing the intended research hypotheses. Therefore this study aimed at filling this gap by shedding light on the relationship between ambiguity tolerance and performance on cloze tests.

As revealed by the results of this study, ambiguity tolerance not only

exists among EFL learners who participated in the study, but it also has a statistically significant influence on cloze test performance. A reason for this finding is that individuals with high ambiguity tolerance might be expected to perform well on the cloze test, in which there are frequently several correct answers and the correctness of one's answer to earlier blanks may be called into question as one works through the passage and in which the test taker is often not able to successfully complete the text until the passage has been read several times. Another important factor is the fact that the texts are mutilated and therefore many concepts may be intentionally or unintentionally left ambiguous for the learners to decipher and may therefore arouse in them a sense of anxiety when attempting to conceive the overall meaning of the cloze passage.

As it was mentioned before, McLain (1993) believes that tolerance extends along a continuum from rejection to attraction. The results of the present study, in line with his claim, demonstrated that the cloze test performance of the learners who were much more tolerant of the mutilated text, were favored towards the attraction end of the continuum. Furthermore, these results are strongly supported by the research carried out by Chappelle and Roberts (1986). As it was expected, tolerant learners who could function more rationally and calmly were much more successful in coordinating their behavior to the distorted part. Having shown a high level of ambiguity tolerance, according to the results of the questionnaire, they were much more successful in accommodating themselves with the discomfort of the situation in order to generate more appropriate and flexible responses to the cloze text.

The results of this study can yield some pedagogical implications and pave the ground for increased assistance for low ambiguity tolerant learners to perform better on the cloze test. If teachers can familiarize the students with the existence of this cognitive factor and make them recognize and realize its influence on cloze test performance, students can accept the nature of ambiguous situations and try to overcome the debilitating effects of low ambiguity tolerance by consciously heightening their tolerance levels.

Ambiguity tolerance, discussed alongside other individual learner differences, is still considered to be a relatively new and developing area within foreign language research. Although this research does not put forth generalizable results, it does draw the reader's attention to the phenomena of the influence of ambiguity tolerance on cloze test performance. Hopefully, the importance and influence of ambiguity tolerance in second language acquisition will be realized in every English class in Iran, and important measures will be taken to direct this cognitive style as efficiently as possible.

Of great importance is to mention that the investigation of the influence of ambiguity tolerance on other test formats such as the multiple-choice is ripe for research.

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#### **Appendix A. The English Version of SLTAS Questionnaire**

1. When I'm reading something in English, I feel impatient when I don't totally understand the meaning.
2. It bothers me that I don't understand everything the teacher says in English.
3. When I write English compositions, I don't like it when I can't express my ideas exactly.
4. It is frustrating that sometimes I don't understand completely some English grammar.
5. I don't like the feeling that my English pronunciation is not quite correct.
6. I don't enjoy reading something in English that takes a while to figure out completely.
7. It bothers me that even though I study English grammar some of it is hard to use in speaking and writing.
8. When I'm writing in English, I don't like the fact that I can't say exactly what I want.
9. It bothers me when the teacher uses an English word I don't know.
10. When I'm speaking in English, I feel uncomfortable if I can't communicate my idea clearly.
11. I don't like the fact that sometimes I can't find English words that

mean the same as some words in my own language.

12. One thing I don't like about reading in English is having to guess what the meaning is.

### Appendix B. The Persian Version of the SLTAS Questionnaire

- 1) وقتی متنی را به زبان انگلیسی می خوانم اگر کاملاً معنای آنرا درک نکنم بی طاقت می شوم.
- 2) زمانی که معلم مطالبی را به زبان انگلیسی بیان می کند و من متوجه نمی شوم آزرده می گردم.
- 3) زمانی که مطلبی را به زبان انگلیسی می نویسم اگر نتوانم ایده هایم را بیان کنم بی علاقه می شوم.
- 4) نفهمیدن کامل گرامر انگلیسی کلافه ام می کند.
- 5) از اینکه تلفظ انگلیسی ام کاملاً صحیح نیست احساس خوبی ندارم.
- 6) از خواندن مطالبی به زبان انگلیسی که درک کامل آن نیاز به زمان دارد لذت نمی برم.
- 7) از اینکه بعضی از نکات گرامر انگلیسی را که مطالعه می کنم به سختی در نوشتن و صحبت کردن بکار می گیرم آزرده می شوم.
- 8) زمانی که به زبان انگلیسی می نویسم اینکه نمی توانم آنچه را که می خواهم بیان کنم آزارم می دهد.
- 9) وقتی معلم کلمه ای را که نمی دانم استفاده می کند آزرده میشوم.
- 10) وقتی به زبان انگلیسی صحبت می کنم اگر نتوانم ایده ام را واضح بیان کنم مؤذّب می شوم.
- 11) از اینکه نمی توانم کلماتی معادل انگلیسی در زبان خودم پیدا کنم خوشم نمی آید.
- 12) یکی از چیزهایی که دوست ندارم اینست که در هنگام خواندن مطالب انگلیسی باید معنی آنرا حدس بزنم.

### Appendix C. The Cloze Test

#### What is a Computer?

Computers are changing all our lives and also old ways of doing things with their superhuman speed. They come in different sizes-from \_\_\_\_ (1) \_\_\_\_ large to small pocket-sized ones. They \_\_\_\_ (2) \_\_\_\_ almost be used in any field \_\_\_\_ (3) \_\_\_\_ activity. It isn't possible to deny \_\_\_\_ (4) \_\_\_\_ importance.

Computers are used to design \_\_\_\_ (5) \_\_\_\_ things. They are used in giant \_\_\_\_ (6) \_\_\_\_ and modern cars. All spacecrafts which \_\_\_\_ (7) \_\_\_\_ orbiting out throughout space are controlled \_\_\_\_ (8) \_\_\_\_

computers.

In addition to helping us \_\_\_\_ (9) \_\_\_\_ work better, computers are opening new \_\_\_\_ (10) \_\_\_\_ of endeavor. Perhaps the most important \_\_\_\_ (11) \_\_\_\_ in medicine where computers are helping \_\_\_\_ (12) \_\_\_\_ to research disease, chemists to design \_\_\_\_ (13) \_\_\_\_ and disabled people to learn skills. \_\_\_\_ (14) \_\_\_\_ how is the computer able to \_\_\_\_ (15) \_\_\_\_ so many different tasks?

A computer \_\_\_\_ (16) \_\_\_\_ all these tasks by means of \_\_\_\_ (17) \_\_\_\_ the information. It can do all \_\_\_\_ (18) \_\_\_\_ because it is programmable. This means \_\_\_\_ (19) \_\_\_\_ it can be given instructions, called \_\_\_\_ (20) \_\_\_\_, which tell it exactly what to \_\_\_\_ (21) \_\_\_\_\_. By feeding in different programs, computers \_\_\_\_ (22) \_\_\_\_ be switched from one job to \_\_\_\_ (23) \_\_\_\_\_. Furthermore, computers can also be programmed \_\_\_\_ (24) \_\_\_\_ do many separate tasks at the \_\_\_\_ (25) \_\_\_\_ time. The central computer of an airline, for example, is constantly busy sending and receiving information to and from offices and airports around the world.

**Answers:**

Q=Question

A=Answer

Q	A	Q	A	Q	A	Q	A	Q	A
1	Very	6	Airplanes	11	Is	16	Does	21	Do
2	Can	7	Are	12	Doctors	17	Processing	22	Can
3	Of	8	By	13	Drugs	18	This	23	Another
4	Their	9	To	14	But	19	That	24	To
5	different	10	fields	15	Perform	20	programs	25	Same