



The Effect of Ambiguity Tolerance and Gender on Iranian EFL Learners Reading Comprehension

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Abstract

Reading is a purposeful activity, to be successful in it many variables should be taken into account. One of these variables which second language teachers must be aware of is ambiguity tolerance. While ambiguity may be presented in learning any subject, there is a remarkable amount of ambiguity when it comes to acquiring a second/foreign language. Hence this study aims to investigate the relationship between ambiguity tolerance and reading comprehension among EFL learners. To fulfill the aims of the study a total of 62, 31 females and 31 males EFL learners were selected to take part in the study. Participants were asked to fill out Ely's Second Language Tolerance of Ambiguity Questionnaire (SLTAS). For the ease of comprehension, it translated into Farsi. Having filled out the questionnaire, a reading comprehension was selected from TOEFL test and administered to them. A series of one-way ANOVA and t-test were run. The results showed male learners out performed female ones in being more ambiguity tolerant and in reading comprehension test performance. Further, the data revealed the superiority of high ambiguity tolerant students in both groups in reading comprehension over the other two groups (average and low ambiguity tolerance). The findings of the study will be helpful for all of the teachers in every educational setting from language institutes to university levels to encourage the learners to improve their level of ambiguity tolerant.

Keywords: ambiguity tolerance, gender, reading comprehension

INTRODUCTION

Reading comprehension as one of the main language skills, has a significant role in English language teaching and learning. It is defined as the process of unlocking meaning from the connected text. To date, reading comprehension as a great source of knowledge has been one of the important parts in the second/foreign language tests and examinations; it plays a crucial role in the educational and professional life of many students. In the foreign language setting, it may be rather ambiguous process that involves processing unknown linguistic and cultural input, which might eventually cause uncertainty and/or confusion on the part of readers. To come up with such a complex and uncertain process plenty of factors might be involved, one of which could be tolerance of ambiguity.

Naiman, Frohlich, Stern, and Todesco (1978) define ambiguous situation by "novelty, complexity, or insolubility, and further characterizes responses to such threatening situations by expressions of dislike, depression, attending to avoiding the situation, or by destructive behavior" (p.70). Ambiguity refers to "the state of being difficult to understand or explain because of involving many different aspects" (Oxford Learners dictionaries). It is also characterized by "novelty, complexity, insolubility and lack of structure" (Kazamia, 1999, p. 69).

This psychological construct worth to be explored since awareness of how it influences foreign language learners and learning processes paves the way for the EFL teachers to execute their lesson plans, and help learners to overcome their psychological barriers as well. Based on this, individual differences and learning styles have widely gained importance as they are considered to play a key role in helping learners to have better achievement in language learning (Başöz, 2015).

According to Furnham (1994) tolerance of ambiguity refers to the way an individual (or a group) considers and deals with the information about ambiguous situations when he/she encounters with a range of unfamiliar, complex or incongruent cues. The process of learning English may involve ambiguity to some extent because it involves unfamiliar linguistic forms and cultural patterns that are likely to create confusion among the new learners of the language (Abbe, Gulick, & Herman, 2007; Chapelle & Roberts, 1986; Ehrman & Oxford, 1990; Kamran, 2009; Kazamia, 1999).

Ely (1989) emphasizes the nature of uncertainty in the language learning context by stating that ambiguity in the language learning is visualized by uncertainty, which is observed in many occasions when learners are not sure about the exact meaning of a new vocabulary. White (1999) emphasizes that if ambiguity is not tolerated reasonably, it can involve the learners in a stressful situation in which language learning, and employment of appropriate strategies may be negatively affected.

According to Brown (2000) ambiguity tolerance is regarded as one of those styles that have emerged in the second language research as "potentially significant contributors to successful acquisition" (p. 114). Ambiguity tolerance depicted in the language learning environment is ability of dealing with new ambiguous situations without being frustrated or without resorting sources of knowledge (Ellis, 1994). It is expected that those who are ambiguity tolerant feel comfortable when face with new language uncertainties and unknown phenomena in its structural and cultural aspects. Ely (1989) suggests that ambiguity in the language learning is appeared as uncertainty, which is experienced by language learners whenever they feel they have not pronounced a sound accurately, or understood exploitation of a grammatical point or grasped the exact meaning of a word. So, in this case, if the ambiguity is not tolerant appropriately, it can put the learners in a stressful environment in which language learning, risk taking, and manipulation of the appropriate strategies may be negatively influenced. Accordingly, Rubin (1975) characterizes the good language learner as the one "who is often not inhibited and who is willing to make mistakes in order to learn and to communicate, and who is willing to live with a certain amount of vagueness" (p. 47).

Gender is known as one of the main factors influencing the acquisition of a language. Brown (2001) believes that gender is one of significant pragmatic variables which influence the acquisition of communicative competence in every language. In past years a number of studies were carried out on brain function in two genders (Shaywitz, Pugh, Constable, Skudlarski, Fulbright, Bronen, Fletcher, Shankweller, Katz, & Gore, 1995; Shield, 1975; Tavris, 1993) gender identity (Aries, 1996; Cutler & Scott, 1990; Duran & Carveth, 1990), gender role in discourse (Hawes & Thomas, 1995; Lees, 1997; Weedon, 1987), and gender bias in verbal ability (Halpern, 1986; Hyde, 1990; Hyde & Linn, 1988; Maccoby & Jacklin, 1974).

In recent years, many studies have investigated the relationship between ambiguity tolerance and different language skills and subskills (writing, reading, speaking, listening, grammar, vocabulary, and cloze test). Results of some studies indicated a significant correlation between level of ambiguity tolerance and EFL learners' general English scores (Chapelle, 1983; Khajeh 2002; Mori, 1999; Yea-Fen, 1995). However, few studies have explored possible relationship between the level of ambiguity tolerance and reading comprehension. Hence, considering the vital role of ambiguity tolerance in the language learning context and very few studies (with paradoxical results) which addressed the gender role in ambiguity tolerance of English language learners, it seems that this area needs more comprehensive investigations. Therefore, the present study aims to explore the effect of the level of ambiguity tolerance and gender among Iranian EFL learners.

Research questions

- Is there any relationship between EFL reading performance and different levels of ambiguity tolerance?
- Are females and males different in terms of their ambiguity tolerance?

LITERATURE REVIEW

Early definitions of ambiguity regarded uncertainty in real life. In such definitions, ambiguity was described as caused by the nature of cues available in the context or stimulus given. McLain (1993) for example, defines ambiguity as not having sufficient information about a context. According to Budner (1962), ambiguous situations can be of three different types: new situations, complex situations, and contradictory situations. These are, respectively, where there are not sufficient or nonexistent cues, where there are too many cues, and where cues are not easy to distinguish.

Many of the ambiguous situations are also common in language learning, be in the classroom with a group of students (Ely, 1995) or individually when people engage in self-instructed language study (White, 1999). This is because linguistic input and cultural knowledge are sources of ambiguous environment. As such, in the simplest sense when students encounter new lexicals and grammatical structures, they often face shortage or even the lack of information, multiple meanings, vagueness, and so on (Chapelle & 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).

In reading comprehension, a part from linguistic forms and text structures which students are supposed to tackle for successful comprehension of the texts, they often have to survive with their incomplete background knowledge (Alderson, 2000; Carrell, 1987; Carrell and Eisterhold, 1983) and compensate for the lack of crucial elements to complete the task of comprehension (Grabe & Stoller, 2002). Making sense of different cultural norms can also cause ambiguity (Lustig & Koester, 1993), and increase the cognitive load of learning which may negatively influence reading comprehension (Alptekin, 2006; Erten and Razi, in press).

Research into tolerance of ambiguity so far has focused on its relationship to other personality traits (Ehrman and Oxford, 1990), language achievement (Chapelle & Roberts, 1986; Naiman, et. al. 1978; Lori, 1990), and reading comprehension (El-Koumy, 2000). The results of these studies suggest that there may be positive correlation between the degree of tolerance and the levels of language achievement. Chapelle and Roberts (1986), for example, illustrate that tolerance of ambiguity is one of the factors associated to end-of-term achievement in multiple choice grammar tests, dictation tests, and parts of speaking tests. Tolerance of ambiguity has also been shown to be related to success in the listening comprehension and imitation tasks by Naiman et. al. Lori, too, identified a positive relationship between tolerance of ambiguity and English achievement.

Related to this study, El-Koumy (2000), the only study that can be identified dealing with ambiguity tolerance and reading comprehension, also found a positive relationship between tolerance of ambiguity and reading comprehension.

Maubach and Morgan (2001) investigated the effect of gender on language learning style of 72 students of French and German (57 girls, 15 boys). The findings revealed that males had higher level of ambiguity tolerance comparing to the females. In a study conducted by Lin and Wu (2003), It was unfolded that males outperformed females in the grammar, vocabulary, and cloze test sections in TOEFL test, however, listening comprehension obviously favored females. In contrast, Kissau (2006), conducted a study on 490 French language learners (254 girls, 236 boys), reported no gender difference in tolerance of ambiguity. Shamsodini (2005) investigated Ambiguity Tolerance/Intolerance and Performance on Cloze Test. It was found that there was a significant difference between the performance of two groups concluding that those with higher ambiguity tolerant had a better performance than their counterparts. Etern and Topkaya (2009) in their study on 106 females, and 67 males indicated that a significant difference between males and females in their tolerance of ambiguity with females exceeding males.

METHODOLOGY

Participant

The participants were 62 EFL learners. They studied English in a private language institute in Kermanshah at the advanced level. They were within the age range of 22-35 and have been studying English for three years at the institute.

Instrument

Placement test

A placement test, $r=78$, was used. It included questions on grammar, vocabulary followed by an interview.

Ely's Second Language Tolerance of Ambiguity Scale (SLTAS)

Cronbach's alpha internal consistency reliability of SLTAS is .84. SLTAS is a 4-point Likert scale questionnaire, with Likert scales of strongly agree, agree, disagree and strongly disagree. To score the items on SLTAS, one mark is given to strongly agree, two marks to agree, three marks to disagree, and four marks to strongly disagree. The scores could range from 12 to 48, and the higher the mark, the higher was the ambiguity tolerance of the participants. To eliminate any possible misunderstanding of the items and ease of comprehension, SLTAS was translated into native language of the participants (Persian) by the researcher.

Reading practice test

A reading practice test (include three passages) was selected from TOEFL Test Preparation Kit 2nd Edition, including 25 items with the reliability of .87.

Procedure

The researcher distributed the translated Persian version of the SLTAS questionnaire to the participants and explained the instructions to them in Persian. She also clearly explained the purpose of the research to the students, and informed them that there were no correct answers. Having filled out the questionnaire, the reading practice test administered to them (in the same session). Those answers which were left blank or were answered incorrectly were assumed incorrect and given a zero score. The raw scores were collected and submitted for quantitative analysis.

RESULTS

In order to analyze the obtained data, the researcher used a series of one-way ANOVA statistics. Table.1 shows descriptive statistics for the relationship between the level of ambiguity tolerance and reading performance among males.

Table 1. Descriptive Statistics for the Relationship between the Level of Ambiguity Tolerance and Reading among males

Groups	N	Mean	St Deviation	Std Error	Interval for Mean		Min	Max
					Lower band	Upper band		
high	14	84.4000	2.987514	.452136	84.3245	86.1101	80.00	89.00
Average	9	66.3216	4.347985	.198745	69.3668	77.2287	70.00	72.00
Low	8	62.9632	2.947852	.122000	70.3366	79.4425	72.00	88.00
Total	31	65.3216	2.354126	.9014485	72.2588	88.6655	77.00	78.00

As the summary statistics indicate, three groups outperformed differently. A one-way analyses of variance (ANOVA) was employed to check whether these differences were significant (see Table 2).

Table 2. ANOVA Results for the Relationship between the Level of Ambiguity Tolerance and reading among males

Groups	Sum of squares	df	Mean squares	F	Sig
Between groups	1959.113	2	925.66	222.5	.000
Within groups	181.452	29	3.301		
Total	132.658	31			

The results of ANOVA revealed statistically significant differences ($F = 222.5$, $p = 0.00$) among three groups, that is, high, average, and low ambiguity tolerant learners regarding reading test performance.

Table 3. Descriptive Statistics for the Relationship between the Level of Ambiguity Tolerance and reading comprehension among females

Groups	N	Mean	St Deviation	Std Error	Interval for Mean			
					Lower band	Upper band	Min	Max
high	12	71.3257	2.24050	.3214	80.2365	92.1245	89.00	86.00
Average	6	65.5236	1.60368	.6325	72.3652	85.6589	75.00	72.00
Low	13	61.2365	1.42365	.2563	66.7412	81.5896	77.00	78.00
Total	31	60.9632	1.45698	.1254	70.2563	87.6985	79.00	89.00

As the summary statistics show, there was a difference among three groups. A one-way analyses of variance (ANOVA) was employed to check whether these differences were significant. (see Table 4).

Table 4. ANOVA Results for the Relationship between the Level of Ambiguity Tolerance and reading comprehension among females

Groups	Sum of squares	df	Mean squares	F	Sig
Between groups	2223.942	2	1611.97	218.960	.000
Within groups	331.729	31	6.746		
Total	4655.672	36			

The results of ANOVA revealed statistically significant differences ($F = 238.96$, $p = 0.000$) among three groups.

Regarding the effect of gender, to identify any gender differences, an independent samples t-test was conducted. The results are presented in Table 5.

Table 5. Gender differences in tolerance of ambiguity

	Gender	N	Mean	SD	Mean difference	t	df	Sig
Ambiguity tolerance	Females	31	2.2904	.3121	.2163	2.215	128	.002
	Males	31	2.8410	.4127	.2112	2.213	128	.002

According to the table, female participants appeared to be less tolerant of ambiguity than their male counterparts.

To further analysis, the distribution of male and female participants to each of the previously identified tolerance groups was explored. (Table 6).

Table 6. Distribution of males and females to different tolerance groups

Groups	Males	Percent	Females	percent
High	14	45.16	12	38.70
Average	9	29.03	6	19.35
Low	8	25.80	13	41.93
Total	31	100	31	100

As it is clear, a large proportion of the females tend to fall into Low ambiguity tolerance group category (41.93%) while just 25.80% of males were placed in this category, which illustrate that males were more ambiguity tolerant than their peers.

DISCUSSION

The present study probed into the relationship between ambiguity tolerance and reading comprehension across gender. The results of the study uncovered that high ambiguity tolerant learners performed much better than low and average ones. The results do not support the findings of a study by El-Koumy's (2000) that investigated the relationship between ambiguity tolerance and reading comprehension. They indicated that the middle ambiguity tolerance group outperformed the other two groups (high and low), and there were no differences between them. Furthermore, these results strongly support the results of the research carried out by Chappelle and Roberts (1986) which unfolded that tolerant learners could function more rationally and calmly and were much more successful in conducting their behavior to the problematic part. Having shown a high level of ambiguity tolerance, they were much more successful in accommodating themselves with the discomfort of the situation in order to produce more appropriate and correct responses to the reading comprehension.

Regarding the effect of gender on reading comprehension and the level of ambiguity tolerance, results indicated that males outperformed females in reading comprehension. The results are in accordance with Maubach and Morgan's (2001) study which revealed that male students had higher level of ambiguity tolerance in comparison to their female counterparts. However, the findings were in contrast with Kissau (2006) who reported no gender difference in tolerance of ambiguity. Furthermore, the results of a study by Erten and Topkaya (2009) reported a significant difference between males and females in their tolerance of ambiguity in which females outperformed males. Moreover, the findings confirm the results of a study by Barati, Moinsadeh, and Marzban (2012) which indicated that females were less tolerant of ambiguities in the language learning context than their male classmates. This shows that females' intolerance of ambiguities in language would make them look for the details more closely which is a useful strategy applied to complex issues in the process of language learning.

CONCLUSION

Reading comprehension in foreign language learning setting can be an ambiguous process involving decoding unfamiliar linguistics input that leads to confusion and

uncertainty in the readers. Success in such a complex and uncertain process may involve various factors, one of which could be tolerance of ambiguity that learners might be face with regarding doing task. It is not worthless to investigate this construct because awareness of how it affects foreign language learners and learning may change the teachers' attitude, lesson plans and their performance. So they help learners to overcome their psychological barriers.

To shed light on the effect of the gender, the results revealed that males were more ambiguity tolerant and more successful in reading comprehension than their female counterparts. In addition, high ambiguity tolerant learners in both groups (i.e., males and females) outperformed in reading comprehension compared to the other two groups (average and low). The findings showed that high level of ambiguity tolerance was influential in increasing both female and male learners' reading comprehension. High level of intolerance can be a kind of hindrance in the process of language learning. As Dornyei (2005) explained, when learners are informed about procedures applied to classroom context in order to help them lower tolerance of ambiguity, they feel more self-confident and motivated in the language classroom.

The results of the study are very helpful for all the teachers in any educational setting. Furthermore, the teachers should be cautious in interpreting the scores of the learners, since, factors other than language knowledge are involved in determining the learners' success. In addition, teachers should encourage students to adopt their own strategies and create an atmosphere in the classroom in which students feel comfortable.

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