

## Ambiguity Tolerance, Learner Beliefs, Learning Styles, and Listening Comprehension of Senior EFL Students

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IJEAP- 1912-1466

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Received: 2019-10-05

Accepted: 2019-11-31

Published: 2019-12-01

### Abstract

The current study investigated the relationship between learner beliefs, learning styles, ambiguity tolerance and listening comprehension of Iranian senior students majoring in English as a Foreign Language (EFL). Four hundred and eighty-seven participants participated in the study by completing the Beliefs about Language Learning Inventory (BALLI) developed and validated by Horwitz (1987), the Perceptual Learning Style Preference Questionnaire (PLSPQ) designed by Reid (1987), the Second Language Tolerance of Ambiguity Scale (SLTAS) developed by Ely (1995), and a listening comprehension test of IELTS. The results of Pearson Correlations indicated that there was a significant positive correlation between a) learner beliefs and listening comprehension, b) learning styles and listening comprehension and, c) ambiguity tolerance and listening comprehension of the participants. Moreover, the results of multiple regression analyses showed that ambiguity tolerance was a stronger predictor of listening comprehension of EFL learners. The results of the study might be of benefit to (foreign language) education policy makers, syllabus designers and teachers to enhance EFL learners' ambiguity tolerance level, change their written-in-the-stone beliefs, and help them choose and use the type of learning styles which suit them most in order to boost their foreign language acquisition in general and their listening comprehension in particular.

**Keywords:** Learner Beliefs, Learning Styles, Ambiguity Tolerance, Listening Comprehension, Senior EFL Students

### 1. Introduction

Listening is believed to be the most frequently-used language skill (Scarcella & Oxford, 1992), the significance of which in the acquisition of English as a Foreign/Second Language (EFL/ESL) has been highlighted in the field (e.g., Feyten, 1991). According to Mendelsohn (1994), listening is of paramount importance in acquiring a language, without which communication might break down. However, as Vandergrift (2004) argues, listening is considered to be the most difficult language skill to learn because it is probably the least explicit of the four language skills. All these, taken together, indicate the significance and the challenging nature of listening skill, the acquisition and development of which has been found to be associated with several factors such as critical thinking, learning styles and strategies, beliefs, anxiety, ambiguity tolerance, etc. (Rost, 2002). Among all these constructs, language learner beliefs, learning styles, and tolerance of ambiguity have received considerable attention in the literature which are dealt with briefly next.

Learner beliefs are defined as opinions held by language learners about language learning, materials, instructors, and learning situations, which might lead to success in learning or lack thereof (Banya & Cheng, 1997). They propose that a person's opinions about learning might not always be the same, and even a learner might hold various conflicting beliefs about learning and that the students bring those beliefs into the classroom and are affected by them. Everybody uses different and unique ways of preparing, acquiring and retrieving new information which is called a learning style. The

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advocates of learning styles maintain that different learners have different modes of learning, which might be improved by teachers' adjusting their teaching with the given preferred learning mode of the learner. That is, as Riener and Willingham (2010) rightly maintain, learners are different from each other, these differences affect their performance, and teachers should take these differences into consideration.

Chang (2019, p. 2), drawing upon Norton (1975), defines ambiguity tolerance as "uncertain situations with vague, incomplete, fragmented, multiple, probable, unstructured, uncertain, inconsistent, contrary, contradictory, or unclear cues". As Erten and Topkaya (2009) hold, ambiguity tolerance plays a vital role in various facets and dimensions of (foreign) language performance.

## 2. Literature Review

### 2.1. Learner Beliefs

Beliefs are defined as "psychologically held understandings, premises, or propositions about the world that are felt to be true" (Richardson 1996, p. 102). Among the various classifications offered on learner beliefs, Tanaka's (1999) taxonomy stands out as one of the most comprehensive classifications. It encompasses two broad dimensions of learner beliefs. The first dimension is related to beliefs about self as a language learner (e.g., self-efficacy, confidence, aptitude, motivation), and the second one is pertinent to beliefs about approaches to language learning (Tanaka, 1999, as cited in Tanaka & Ellis, 2003).

Many language researchers (e.g., Graham 2011; Mills et al. 2006) argue that self-efficacy beliefs, as discussed above, as well as some other factors such as aptitude, motivation and confidence are crucial to the development of listening comprehension proficiency. Similarly, Clark (1989) maintains that there is a positive correlation between communication confidence (i.e. a kind of self-efficacy belief) and listening comprehension of language learners. All these, taken together, indicate that there might be a relationship between language learners' beliefs and their listening comprehension.

### 2.2. Learning Styles

Another significant variable thought to affect listening is the learning styles language learners possess (Rogowsky, Calhoun, & Tallal, 2015). Cornett (1983) contends that learning styles and strategies orient learning and give direction to it. That is, the specific learning style (e.g., visual, kinesthetic, auditory, etc.) a learner possesses, might make a difference in listening success. Wong and Nunan (2011) argue that those learners who know how to learn, use classroom opportunities more effectively and are better equipped to learn language outside classroom context. In other words, in their view, learning styles are the same as knowing 'how-to-learn' skills. To Cornett (1983, p. 9), learning styles are "Overall patterns that give general direction to learning behavior". Pashler, McDaniel, Rohrer and Bjork (2008, p. 105) maintain that learning styles differentiate individuals "in regard to what mode of instruction or study is most effective for them" which implies that instructional activities should be adjusted to the given styles of the given learners to gain optimal educational achievement.

Reid (1995) divides the learning styles into three main categories of cognitive, sensory, and personality learning styles. Cognitive learning styles are further divided into field-independent versus field-dependent, analytic versus global, and reflective versus impulsive sub-categories. Sensory learning styles include two categories of perceptual learning styles and environmental learning styles. The perceptual learning styles consist of auditory, visual, tactile, kinesthetic, and haptic sub-categories, and the environmental learning styles contain physical versus sociological learners. Reid (1995) also divides the personality learning styles into extroversion versus introversion, sensing versus perception, thinking versus feeling, judging versus perceiving, ambiguity-tolerant versus ambiguity-intolerant, and left-brained versus right-brained.

By the same token, Kolb and Kolb (2005) divide learning styles into the four groups of assimilators, convergers, divergers, and accommodators. According to Kolb and Kolb, while assimilators prefer to learn through listening and watching, convergers are good at deductive

reasoning and systematic planning and learn by thinking and doing. Kolb and Kolb (2005) also maintain that whereas divergers prefer technical issues and problems and look at the given situation from various perspectives, accommodators like to experience new phenomena and make use of their previous experiences.

As Reid (1995) maintains, individuals' learning styles improve learning in a way that, for instance, auditory learners can be more successful in listening comprehension or visual learners might be more successful in reading, an argument also corroborated by the tenets of Meshing hypothesis based on which "instruction is best provided in a format that matches the preferences of the learner" (Pashler et al., 2008, p. 105) (e.g., information should be presented in auditory mode through ears to 'auditory'-style learners, but visually e.g., through reading to 'visual'-oriented learners).

Some studies have found a positive correlation between specific learning styles and listening comprehension ability of EFL learners. In a very recent one, Zarrabi (2020), for instance, explored the correlation between learning styles and metacognitive listening awareness of 135 intermediate-level female Iranian EFL learners. Adopting Reid's (1995) Learner Style Questionnaire and Vandergrift, Goh, Mareschal, and Tafaghodtari's (2006) Metacognitive Awareness Listening Questionnaire (MALQ), she found a significant positive correlation between the participants' learning styles and their metacognitive listening strategy awareness. Zarrabi also found that the auditory style learners received a significantly higher mean score on MALQ than the other learner styles (i.e. kinesthetic, tactile/haptic and visual learners).

### 2.3. *Tolerance of Ambiguity*

The tolerance of ambiguity is also said to be an influential factor affecting learners' listening comprehension, meaning that how language learners tackle ambiguous situations in acquiring a foreign language might be closely linked to their success in listening comprehension. High ambiguity-tolerant students, for instance, might have learned how to cope with the situations in which they cannot fully grasp the comprehensible input they are exposed to (Ying, 2000). As defined by Furnham (1994), ambiguity tolerance is "the way an individual (or group) considers and deals with information about ambiguous situations when they encounter a range of unfamiliar, complex or incongruent cues" (p. 403). Similarly, White (1999) asserts that if ambiguity cannot be tolerated in a reasonable manner especially in language learning contexts, it can put the learners in a stressful situation wherein they would encounter various language learning difficulties.

As McLain (2009) maintains, ambiguity intolerance acts as an inhibitor to decision-making and prediction. Ambiguity tolerance, on the other hand, plays a vital role in problem-solving and decision-making processes (Arquero, Fernandez-Polvillo, Hassal & Joyce, 2017), and helps learners have a better performance in complex scenarios (Yurtsever, 2001). Ambiguity-intolerant learners, on the other hand, have a lower confidence in their decision-making (Ghosh & Ray, 1997), have a lower performance (Banning 2003), and concentrate on unfavorable outcomes (Lowe & Reckers, 1997, as cited in Arquero et al., 2017).

Numerous studies have recently explored the relationship between ambiguity tolerance and different language skills and components. The results of some studies in this regard show a significant positive correlation between EFL learners' ambiguity tolerance and their general English scores (e.g., Khajeh, 2002; Mori, 1999). For one, Ying (2000), examining the influence of ambiguity tolerance on listening comprehension proficiency of EFL students in Chinese context, found that the participants with higher levels of ambiguity tolerance tended to perform better in listening comprehension and in grasping major ideas than their counterparts with lower ambiguity tolerance. Similarly, the findings of a number of studies (e.g., Dewaele & Shan Ip, 2013; Elkhafaifi, 2005) reveal a negative relationship between ambiguous situations and foreign language achievement in general and listening comprehension proficiency in particular.

Furthermore, adopting an explanatory mixed-methods design, Trabanco (2017) investigated the impact of language strategy training on ambiguity tolerance as well as the relationship between ambiguity tolerance and listening comprehension of 32 (N Experimental=16, N Control=16)

elementary-level learners of two Spanish courses at Delaware university. The results indicated that the strategy training to which the experimental group was exposed, had a significant impact on enhancing the learners' ambiguity tolerance. However, the results of multiple regression analysis found a negative correlation between learners' enhanced ambiguity tolerance and their total listening scores, the reasons for which, we think, might lie in the fact that over-tolerance of ambiguity could lead to over-relaxation; whereas, as psychologists note, a certain dosage of ambiguity and anxiety (i.e. *facilitative anxiety* to use psychologists' terminology) is necessary for success in learning. Trabanco's further analysis of the results indicated that high ambiguity tolerance correlated positively with such top-down processes or macro skills as grasping the main ideas of a listening passage. Low ambiguity tolerance, on the other hand, correlated positively with such bottom-up processes as answering true/false or multiple-choice items, a finding that corroborates Ely's (1995) results in this respect which showed that low ambiguity-tolerant learners concentrated more on details (i.e. bottom-up processes). Moreover, Trabanco (2017) found that the participants in the experimental group felt more comfortable, enjoyed the listening experience more and perceived a higher self-image and self-esteem than their counterparts in the control group.

#### 2.4. *The Relation between Learner Beliefs, Learning Styles, Ambiguity Tolerance and Listening Comprehension*

On the one hand, as Frenkel-Brunswick (1949, 1951, as cited in Furnham & Marks, 2013, p. 717) argues, "TA [tolerance of ambiguity] generalises to the various aspects of emotional and cognitive functioning of the individual, characterising cognitive style, belief and attitude systems, interpersonal and social functioning and problem solving behavior". This highlights the fact that there is a relationship between tolerance of ambiguity and other personality variables especially learning styles and learner beliefs.

On the other hand, as language researchers (e.g., Graham, 2011; Mills et al., 2006) argue, self-efficacy beliefs (Tanaka, 1999) as well as some other factors like aptitude, motivation and confidence are crucial to the development of listening comprehension proficiency. Similarly, as Clark (1989) maintains, there is a positive correlation between communication confidence (i.e. a kind of self-efficacy belief) and listening comprehension of language learners. All these, taken together, indicate that there might be a relationship between language learners' beliefs and their listening comprehension.

Furthermore, based on the learning style classification of Reid (1995), it might be argued that individuals' learning styles are related to success in learning i.e. auditory learners can be more successful in listening comprehension or visual learners might be more successful in reading tasks, a line of reasoning also supported by the tenets of Meshing hypothesis (Pashler et al., 2008) as stated earlier. Accordingly, on the one hand, the positive relationship between language learning styles and strategies has been confirmed by many researchers in the field (e.g., Uhrig, 2015; Wong & Nunan, 2011). On the other hand, some scholars (e.g., Vandergift & Goh, 2012) have found a positive correlation between listening comprehension strategy use and listening comprehension proficiency. Hence, it could be stated that there might exist a positive relationship between language learning styles and EFL learners' listening comprehension proficiency.

Considering the relationship between ambiguity tolerance and EFL learners' listening comprehension, it could be stated that language learners with higher ambiguity tolerance levels tend to perform significantly better in listening comprehension (Ying, 2000). Finally, several researchers (e.g., Dewaele & Shan Ip, 2013; Elkhafaifi, 2005) have corroborated the existence of a negative relationship between ambiguity intolerance and foreign language achievement in general and listening comprehension in particular. Despite the above-mentioned studies, the present study is noteworthy in that it deals in particular with three major factors affecting listening comprehension mentioned above which have rarely been investigated collectively in the Iranian EFL context.

In addition, as Goh (2000) maintains, listening comprehension is a complex language skill causing difficulty for most language learners (including those majoring in English language in EFL contexts). Listening comprehension is, in reality, a multifaceted active language skill that is believed

to be affected by or associated with a plethora of variables including learner beliefs comprising self-efficacy beliefs (Graham, 2011; Mills et al., 2006), learning styles (Reid, 1995) and finally ambiguity tolerance (Dewaele & Shan Ip, 2013; Elkhafafi, 2005).

Therefore, on the one hand, the existence of a relationship among learner beliefs, learning styles and ambiguity tolerance and listening comprehension as explained above, renders it necessary and justifiable to do more research in various contexts including the EFL context of the present study for the simple fact that context might affect learning in general and such factors as learning styles and learner beliefs in particular (Flores, 2001; Phipps & Borg, 2009). On the other hand, although scholars in the field have investigated the relationship between different variables which are thought to affect or correlate with listening comprehension separately, to our knowledge, the relationship between listening comprehension and learner beliefs, learning styles and ambiguity tolerance has been little or even not researched in EFL contexts including Iran, especially integrally and comparatively. Hence, the present study explored the relationship between the variables mentioned to fill the research gap felt in the context of the current study. Therefore, to address the objectives of the study, the following research questions were postulated:

**Research Question One:** Is there any significant relationship between language learner beliefs and listening comprehension of Iranian senior students majoring in English language?

**Research Question Two:** Is there any significant relationship between language learning styles and listening comprehension of Iranian senior students majoring in English language?

**Research Question Three:** Is there any significant relationship between ambiguity tolerance and listening comprehension of Iranian senior students majoring in English language?

**Research Question Four:** Among language learner beliefs, language learning styles, and ambiguity tolerance, which one is a stronger predictor of listening comprehension of Iranian senior students majoring in English language?

### 3. Methodology

#### 3.1. Participants

The participants of the study included 487 students (204 males and 283 females) studying for a BA in English Language Translation, English Literature and Teaching English as a Foreign Language in 14 universities (state universities, Azad universities, Payam-e- Noor Universities) in various regions of the country. The age of the participants ranged from 18 to 35 with the mean age being nearly 22. All the participants spoke Persian as their first language and were learning English as a Foreign Language. The participants, who took part in the study voluntarily, were senior students who were selected based on cluster random sampling. The participants had already passed Basic English courses, including Grammar 1 and 2, Vocabulary and Reading Comprehension 1, 2 and 3, Listening and Speaking 1 and 2, and Writing (both basic and advanced), as required by the syllabus of the BA program designed by the Ministry of Science, Research and Technology. All the participants were assured that their responses to the questionnaires and their scores on the Listening test would be kept confidential and would be used only for the purposes of the present study. The informed consent of the participants was also obtained before the study began.

#### 3.2. Instruments

##### 3.2.1. Beliefs about Language Learning Inventory (BALLI)

To explore learner beliefs, Horwitz's (1987) Beliefs about Language Learning Inventory (BALLI) was used. The questionnaire is composed of five factors, which taken together, comprise 34 Likert-scale items. The five factors or sub-scales include foreign language aptitude, the difficulty of language learning, the nature of language learning, learning and communication strategies, and motivations and expectations. The validity and reliability of the questionnaire have been estimated frequently in different EFL contexts. BALLI's both validity and reliability have already been established in Iran by Kasraee Nejad (2014) through pilot study, expert view and factor analysis and Cronbach's Alpha

internal consistency reliability estimation respectively. A copy of BALLI can be found in Appendix A.

### 3.2.2. Perceptual Learning Style Preference Questionnaire

For the purpose of the study, Reid's (1987) Perceptual Learning Style Preference Questionnaire (PLSPQ) which includes 30 Likert-scale items, was used to assess the participants' learning styles. The questionnaire measures visual, auditory, kinesthetic, tactile, group learning and individual learning styles of the participants. Jhaish (2009) maintains that this questionnaire has been devised and validated for non-native speakers. Additionally, the reliability coefficient of the questionnaire was measured to be 0.82, which is a high reliability index. See Appendix B for a copy of this questionnaire.

### 3.2.3. Second Language Tolerance of Ambiguity Scale (SLTAS)

In order to evaluate ambiguity tolerance of the participants, Ely's (1995) Second Language Tolerance of Ambiguity Scale (SLTAS) was adopted. The questionnaire is composed of 12 Likert-scale items (see Appendix C). Karbalaee Kamran (2011) estimated the Cronbach's Alpha internal consistency measure of the questionnaire for the EFL context of Iran to be 0.84 which is high enough. However, to ensure its validity and applicability for Iranian non-native EFL learners, the instrument was piloted with 80 subjects similar to those of the present study and the KMO measure of sampling adequacy was calculated, the results of which demonstrated that the instrument had a KMO index of 0.70. A factor analysis was then run in order to calculate the items' factor loadings, the results of which can be found in Appendix D. Furthermore, Cronbach's Alpha internal consistency reliability was run, the results of which indicated SLTAS enjoyed an acceptable reliability index of 0.72.

### 3.2.4. International English Language Testing System (IELTS) Listening Exam

The last instrument used in the current study was an IELTS listening test selected from the book *Practice Tests for IELTS 1* compiled by Jakeman and McDowell (1997). IELTS is regarded as a valid test measuring English language learners' general English proficiency level which is accepted worldwide (Dorothy & Kuzma, 2009). It should be mentioned here that the original IELTS listening test included 40 items; however, for practicality purposes, twenty questions and their relevant texts were eliminated simply because it was, in reality, very difficult, if not impossible, to keep the participants sitting 20 more minutes after they had completed the three questionnaires of the study. The reliability and validity of this series of IELTS listening tests have already been estimated and established (Jakeman & McDowell, 1997). However, since two sections (out of the whole four sections of the standard IELTS listening test) including 20 items were eliminated as mentioned above, we estimated the reliability of the (20-item) test, the results of which showed that the test still enjoyed a high reliability index of 0.98.

## 3.3. Data Collection Procedure

After validating SLTAS and ensuring that the questionnaire was appropriate for the Iranian EFL context as mentioned above, the instruments of the study i.e. BALLI, PLSPQ and SLTAS, which were all in English, were distributed among the 487 participants of the study who were selected from various universities across the country based on cluster random sampling as mentioned earlier. After the participants completed the three questionnaires mentioned above, the second author of the study, who was present at the time of the administration of the questionnaires and the listening test to resolve any probable ambiguities, played the CD of the IELTS listening section and the participants answered the 20 questions that followed it. Overall, it took nearly an hour for the participants to complete the questionnaires of the study and another 20 minutes to respond to the IELTS listening test.

## 3.4. Data Analysis

The data obtained were analyzed through SPSS version 20. To answer the first, second and third research questions of the study, three separate Pearson Product Moment Correlations were run. In order to answer the fourth research question, a multiple regression analysis was conducted.

## 4. Results

### 4.1. Normality Check Results

Before presenting the results of the study, it should be mentioned here that we first performed normality checks to make sure whether the data for various variables of the study were normally distributed. Since the skewness values for all the variables were below +1 or -1 (Learning Styles Skewness= -.59; Ambiguity Tolerance Skewness= -.16; Learner Belief Skewness= -.98; and Listening Skewness= -.09), we concluded that all data sets were normally distributed which means that the prerequisites for running parametric statistics were met.

### 4.2. Results of Question 1

The first research question of the study set out to investigate whether there was a significant relationship between language learner beliefs and listening comprehension of Iranian senior students majoring in English language. To this end, a Pearson Correlation was run, the results of which are summarized in Tables 1 and 2.

Table 1: Descriptive Statistics of Listening Comprehension and Language Learner Beliefs

	Mean	Std. Deviation	N
Listening comprehension	12.17	2.75	487
Language learner beliefs	156.64	17.49	487

Table 2: Correlation between Language Learner Beliefs and Listening Comprehension of Senior EFL Majors

	Listening comprehension	
	Pearson Correlation	.305**
Language learner beliefs	Sig. (2-tailed)	.000
	N	487

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

As shown in Table 2, there was a statistically significant positive correlation between language learner beliefs and listening comprehension of Iranian senior students majoring in English language ( $r(487) = .305, p = .000 < .01$ ).

### 4.3. Results of Question 2

The second research question of the study explored whether there was a significant relationship between language learning styles and listening comprehension of Iranian senior students majoring in English language. To this end, a Pearson Correlation was run, the results of which are tabulated in Tables 3 and 4.

Table 3: Descriptive Statistics of Listening Comprehension and Language Learning Styles

	Mean	Std. Deviation	N
Listening comprehension	12.17	2.75	487
Language learning styles	100.86	10.26	487

Table 4: Correlation between Language Learning Styles and Listening Comprehension of Senior EFL Majors

	Listening comprehension	
	Pearson Correlation	.355**
Language learning styles	Sig. (2-tailed)	.000
	N	487

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

As indicated in Table 4, there was a statistically significant positive correlation between language learning styles and listening comprehension of Iranian senior students majoring in English language ( $r(487) = .355, p = .000 < .01$ ).

4.4. Results of Question 3

The third research question of the study investigated whether there was a significant relationship between ambiguity tolerance and listening comprehension of Iranian senior students majoring in English language. To this end, a Pearson Correlation was run, the results of which are displayed in Tables 5 and 6.

Table 5: Descriptive Statistics of Listening Comprehension and Ambiguity Tolerance

	Mean	Std. Deviation	N
Listening comprehension	12.17	2.75	487
Ambiguity tolerance	38.36	7.40	487

Table 6: Correlation between Ambiguity Tolerance and Listening Comprehension of Senior EFL Majors

	Listening comprehension	
Ambiguity tolerance	Pearson Correlation	.473**
	Sig. (2-tailed)	.000
	N	487

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

As it is evident from Table 6, the correlation between ambiguity tolerance and listening comprehension of senior EFL majors was statistically significant ( $r(487) = .473, p = .000 < .01$ ).

4.5. Results of Question 4

To determine which of the predictor variables (i.e. learner beliefs, learning styles, and ambiguity tolerance) strongly predicted the criterion variable of the study, a multiple regression analysis was run, the results of which are summarized in Tables 7, 8 and 9.

First, Table 7 shows the multiple correlation coefficient and the adjusted and unadjusted correlation of learner beliefs, learning styles and ambiguity tolerance with the participants' listening comprehension.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.57 <sup>a</sup>	.32	.32	2.26

a. Predictors: (Constant), Ambiguity tolerance, Beliefs, Styles

As shown in Table 7, the multiple correlation coefficient (R) using all the predictors (i.e. learner beliefs, learning styles and ambiguity tolerance) is .57 ( $R^2 = .32$ ). The adjusted R square is also .32, implying that 32% of the variance in the participants' listening comprehension can be predicted from the combination of the predictor variables of the study, namely, learner beliefs, learning styles and ambiguity tolerance.

ANOVA was then conducted to see whether the combination of the predictors (i.e. learner beliefs, learning styles, and ambiguity tolerance) significantly predicted the participants' listening comprehension. The results are presented in Table 8.



Table 8: ANOVA Investigating Prediction of Learner Beliefs, Learning Styles and Ambiguity Tolerance for the Participants' Listening Comprehension

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1206.53	3	402.17	78.12	.000 <sup>b</sup>
	Residual	2486.28	483	5.14		
	Total	3692.81	486			

a. Dependent Variable: Listening

b. Predictors: (Constant), Ambiguity tolerance, Beliefs, Styles

As indicated in Table 8, the combination of the predictor variables strongly predicted listening comprehension of the participants,  $F(3, 483) = 78.12, p = .000 < .01$ .

The amount of the contribution of each of the predictor variables (i.e. learner beliefs, learning styles and ambiguity tolerance) to the dependent variable (i.e. listening comprehension) is shown in Table 9.

Table 9: Multiple Regression exploring the Predictor Power of Learner Beliefs, Learning Styles and Ambiguity Tolerance for the Participants' Listening Comprehension

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-3.72	1.20		-3.09	.002	
	Learner beliefs	.01	.00	.11	2.66	.008	.810
	Learning styles	.07	.01	.26	6.48	.000	.837
	Ambiguity tolerance	.15	.01	.42	11.01	.000	.956

As shown in Table 9, both learner beliefs and learning styles as well as ambiguity tolerance were significant predictors of listening comprehension; however, ambiguity tolerance was a stronger predictor of EFL learners' listening comprehension ( $Beta = .42, t = 11.01$ ).

## 5. Discussion

The findings of the first research question of the study showed that as the participants grew more positive beliefs towards the target language (e.g., felt they had higher self-efficacy), they attained more excellence in listening. This finding could thus imply that more positive beliefs towards language learning would bring about more success in listening comprehension.

Taking into account the 'agency' dimension of Paris and Winograd's (1990) beliefs categorization model, which includes learners' beliefs about their own abilities and competencies, Graham (2011) argues that self-efficacy (i.e. the beliefs about one's own competencies) is crucial to the development of listening skills. Furthermore, in a broader sense, Mills et al. (2006) also contend that language learners' self-efficacy affects their academic performance in different ways. They add that according to social cognitive theory, if students' sense of efficacy is weakened, they would grow more anxiety, a finding which has been corroborated by various scholars in the field (e.g., Elkhafaifi 2005) to have a negative correlation with learners' listening proficiency. Additional support to this line of reasoning might come from the findings of Rahimi and Abedini (2009), who found that self-efficacy and listening comprehension were positively correlated.

Moreover, as stated by Schulz (2001) and Wenden (1999), both American and Colombian ESL students tended to place great emphasis on studying grammar and error correction in their language learning process, signifying that students with a tendency to study grammar might have different language learner beliefs from those with a tendency to learn a foreign language (i.e. English) through communicating with its native speakers as included in item 15 ('The most important part of learning

a foreign language is learning the grammar') and item 20 ('I enjoy practicing English with the native speakers I meet') of Horwitz's (1987) BALLI revalidated for Iranian EFL context by Kasraee Nejad (2014).

The benefits of growing positive beliefs in learning in general and in acquiring listening comprehension in particular appears to be twofold. On the one hand, language learners with more positive beliefs and attitudes towards the materials, speakers of the target language, usefulness of the language being learned, etc. might become acculturated to the target culture more easily and experience less difficulty in language skills, particularly in speaking and listening. On the other hand, those with more positive beliefs in learning a language have also been found to be more diligent and more persistent, adopting various strategies, which might lead to a better listening comprehension proficiency (Mills et al., 2006).

The second research question of the study sought out to investigate the relationship between Iranian senior EFL students' language learning styles and their listening comprehension proficiency. The results indicated that there was a significant positive correlation between the two variables, a finding which could be supported by Reid's (1995) classification of styles, which holds that the language learners with auditory learning styles might be more proficient in listening comprehension than their counterparts with other styles. Meshing hypothesis (Pashler et al., 2008) also lends support to this reasoning as mentioned earlier. The hypothesis is based on the belief that individual's learning styles improve learning i.e. visual learners can be successful in reading and that auditory learners might be more successful in listening comprehension. Moreover, the success of field-dependent (FD) and field-independent (FI) language learners might also differ widely in terms of listening comprehension proficiency. Zeynali and Khodadadi (2012), investigating the relationship between field-dependence/field-independence, as two types of learning styles, and listening comprehension in the Iranian EFL context, found that test-takers' type of cognitive style influenced their listening comprehension i.e. the FI language learners outperformed their FD counterparts, a finding which is in line with the tenets of the Meshing hypothesis and the findings of the present study, but stands in contrast to the results of Rogowsky et al. (2015) in this respect. The findings here are also corroborated by the results of Zarrabi (2020), who found that the auditory style learners received a significantly higher mean score on the metacognitive awareness listening measure than the other learner styles (i.e. kinesthetic, tactile/haptic and visual learners).

Accordingly, there might be a difference between the listening comprehension of auditory learners and that of tactile, visual, haptic, etc. language learners, which could be found in item 24 of Reid's (1995) PLSPQ, i.e. 'I learn better by reading than listening to someone'. Hence, it could be posited that the learning styles language learners adopt might be correlated with their listening success, in that language learners who have auditory styles might perform differently in listening comprehension compared to the ones with, for instance, a visual style.

The findings of the third research question of the study showed a significant positive correlation between ambiguity tolerance and listening comprehension of senior EFL learners. According to Reid (1987), ambiguity tolerance/intolerance, like introversion/extroversion, is a kind of learning style which might profoundly make a difference in EFL learners' English proficiency in general and listening comprehension in particular (Busch, 1982), a line of reasoning which might shed light on our findings in this respect.

The findings of the study are also in line with those of Ying (2000), who, investigating the effect of ambiguity tolerance on listening comprehension, found that there was a significant positive relationship between Chinese EFL learners' ambiguity tolerance and their listening comprehension i.e. those with higher levels of ambiguity tolerance had a better performance in the listening skill overall, and in the sub-skills of listening for retrospective tasks, main ideas and inference than their counterparts with lower levels of ambiguity tolerance, a finding also supported by the results of Chappelle and Roberts (1986), and Erten and Topkaya (2009).

It is worth mentioning here that ambiguity tolerance has also been found by many scholars in the field (e.g., Dewaele & ShanIp, 2013; Elkafaifi, 2005) to have a negative correlation with foreign

language learning anxiety (FLLA), denoting the fact that the learners with higher tolerance of ambiguity feel less anxious. This might imply that the language learners who are more ambiguity-intolerant might be more prone to stressful situations in language learning in general and in listening comprehension in particular, which in turn, might lead to their weaker performance in listening comprehension.

Foreign language anxiety has also been found to be linked to perfectionism. As argued by Gregersen and Horwitz (2002), perfectionist learners (e.g., ambiguity-intolerant learners) set higher personal performance standards which might be a reason why they might not be able to confront easily with the problems and ambiguous situations and are thus weaker in listening comprehension. This could be attributable to the fact that these types of learners become stressed severely and fail to catch the main ideas of the text, and are thus overwhelmed by the unknown or perhaps, unnecessary parts in listening.

The findings of the last research question of the study revealed that among learner beliefs, learning styles and ambiguity tolerance, ambiguity tolerance was a stronger predictor of EFL learners' listening comprehension. This finding could be corroborated by Matsuura's (2007) argument that,

Listeners' tolerance of ambiguity possibly contributes to lowering their anxiety level when listening to unfamiliar speakers and novel speech content. Anxieties as well as ambiguity tolerance seem to play a crucial role in facilitating or impeding the comprehensibility levels of listeners. (p. 295)

## 6. Conclusion and Implications

The findings of the present study revealed a statistically significant relationship between Iranian senior EFL students' a) beliefs and their listening comprehension, b) learning styles and their listening comprehension and c) ambiguity tolerance and their listening comprehension. Furthermore, the results showed that ambiguity tolerance was a stronger predictor of the participants' listening comprehension than learner beliefs and learning styles. This shows the paramount role such personality factors and learner variables as ambiguity tolerance, learning styles and learner beliefs might play in the acquisition of a foreign language in general and listening comprehension in particular.

The findings of the study might be of benefit to educational policy makers, syllabus designers, EFL teachers and EFL learners. The findings suggest that language education policy makers propose more humanistic approaches of language teaching to syllabus designers and educational systems in order to create such a stress-free atmosphere in textbooks and reduce EFL learners' anxiety, which could consequently lead to their higher levels of ambiguity tolerance in language learning in general and in listening comprehension in particular. Furthermore, EFL teachers have also a heavy burden on their shoulders as to make the classroom environment more humanistic and less anxiety-provoking, helping their learners experience less anxiety in language class environment to help them make progress in all language skills including listening. EFL teachers are also suggested to instruct their learners how to tolerate listening ambiguity through use of various strategies both in learning and testing situations.

Additionally, EFL teachers are suggested to raise self-efficacy beliefs in language learners so that they might hold more positive beliefs towards language learning, which in turn, might lead to fostering language learners' motivation and bring about progress in language learning process in general and listening comprehension in particular, as shown by the findings of the present study. The findings might further suggest that EFL learners use various strategies in language learning. As shown earlier, a positive correlation was found between adopting strategies in learning a foreign language and higher self-efficacy levels, meaning that the students who adopt a multitude of strategies might

grow more positive beliefs towards foreign language learning, which might consequently lead to more successful acquisition of language skills including listening. EFL learners are also suggested to find and use strategies to increase their level of ambiguity tolerance which was shown by the findings of the study to be positively correlated with listening comprehension.

Finally, caution should be exercised in generalizing the findings of the present study because this study, like many other studies, might suffer some limitations and delimitations. Although the study enjoyed a rather large pool of participants (i.e. 487 senior English students) as a quantitative project, it could have adopted a mixed-method design, in the qualitative phase of which the participants would have stated, in an interview for instance, *how* ambiguity tolerance, certain learning styles and learner beliefs correlated with and/or contributed to their listening comprehension. Also, although all the participants were senior students majoring in various branches of English language, for practicality reasons, we decided not to administer them a pre-test to make sure of their homogeneity in terms of proficiency level which can be considered as a delimitation of the current study.

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**Appendices**

Appendix A: BALLI Questionnaire – Horwitz (1987) (Validated by Kasraee Nejad, 2014 for Iranian Context)

	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree 5
1-it is easier for children than adults to learn a foreign language.					
2-Some people have a special ability for learning foreign languages.					
3-It is easier for someone who already speaks a foreign language to learn another one.					
4-People who are good at mathematics or science are not good at learning foreign languages.					
5- Women are better than men at learning foreign languages.					
6-People who speak more than one language are very intelligent.					
7-Every one can learn to speak a foreign language.					
8-Some languages asre easier to learn than others.					
9-English is a language of medium difficulty.					

---

10-It is easier to speak than understand a foreign language.

---

11-It is easier to read and write English than to speak and understand it.

---

12-It is necessary to know about English-speaking cultures in order to speak English.

---

13-It is best to learn English in an English-speaking country.

---

14-The most important part of learning a foreign language is learning vocabulary words.

---

15-The most important part of learning a foreign language is learning the grammar.

---

16-Learning a foreign language is different from learning other academic subjects.

---

17-The most important part of learning English is learning how to translate from one's native language into another language.

---

18-It is important to speak with an excellent pronunciation.

---

19-You shouldn't say anything in English until you can say it correctly.

---

20-I enjoy practicing English with the native speakers (e.g. Americans, British, etc.) I meet.

---

21-It's O.K. to guess if you don't know a word in English.

---

22-It is important to repeat and practice a lot.

---

23-People in my country feel that it is important to speak English.

---

24-If my students learn to speak English very well, it will help them get a good job.

---

25-I would like to have native speaker friends.

---

26-I want to learn English well because it can help me access information from around the world.

---

27-English language is important for higher education level.

---

28-Learning English will help me communicate with people from other countries because English is an international language.

---

29-Individuals are born with the ability to teach.

---

30-Teaching requires innate talent and pedagogical preparation.

---

31-To be a teacher, individuals have to develop their natural abilities.

---

32-Teaching is a skill that is developed with training and expertise.

---

33-The skills needed to become a teacher are learned.

---

34-For me, as a teacher, it is important to know a variety of teaching techniques.

---

35-For me, as a teacher, it is important to have knowledge of child/adolescent development.

---

36-For me, as a teacher, it is important to understand the cultural background of the students I teach.

---

37-For me, as a teacher, it is important to know the theoretical foundations and implications of my teaching practices.

---



38-For me, as a teacher, it is important to have extensive knowledge of the subject matter I teach.

39-For me, as a teacher, it is important to know how to motivate and engage students.

40-For me, as a teacher, it is important to know how to deliver information so that students can understand it.

41-For me, as a teacher, it is important to know the strengths and weaknesses of the students I teach.

42-For me, as a teacher, it is important to know subject specific teaching methods.

43-For me, as a teacher, it is important to have knowledge of classroom management.

44-For me, as a teacher, it is important to know how to present information in multiple ways.

45-For me, as a teacher, it is important to know how to assess student performance.

Appendix B: Perceptual Learning Style Preference Questionnaire – Reid (1987)

Questionnaire Statements	Strongly disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly agree 5
1-When the teacher tells me the instructions, I understand better.					
2-I Prefer to learn by doing something in class.					
3-I get more work done when I work with others.					
4-I learn more when I study with a group.					
5-In class, I learn best when I work with others.					
6-I learn better by reading what the teacher writes on the chalkboard.					
7-When someone tells me how to do something in class, I learn it better.					
8-When I do things in class, I learn better.					
9-I remember things I have learned in class better than things I have read.					
10-When I read instructions, I remember them better.					
11-I learn more when I make a model of something.					
12-I understand better when I read the instructions.					
13-When I study alone, I remember things better.					
14-I learn more when I make something for a class project.					
15-I enjoy learning in class by doing experiments.					
16-I learn better when I make drawings as I study.					
17-I learn better in class when the teacher gives a lecture.					
18-When I work alone, I learn better.					

---

19-I understand things better in class when I participate in role-playing.

---

20-I learn better in class when I listen to someone.

---

21-I enjoy working on an assignment with two or three classmates.

---

22- When I build something, I remember what I learned better.

---

23- I prefer to study with others.

---

24- I learn better by reading than listening to someone.

---

25- I enjoy making something for a class project.

---

26- I learn best in class when I participate in related activities.

---

27- In class, I work better when I work alone.

---

28- I prefer working on projects by myself.

---

29- I learn more by reading textbooks than by listening to a lecture.

---

30- I prefer to work by myself.

---

#### Appendix C: SLTAS Questionnaire – Ely (1995)

	Strongly disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly agree 5
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 ideas 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 D: Factor Loadings for the Rotated Factors of the SLTAS Questionnaire

Item	<u>Factor Loadings</u>				Communalities
	1	2	3	4	
1				.825	.747
2	.607				.500
3		.660			.577
4			.510		.452
5	.735				.666
6			-.885		.805
7	.711				.605
8			.405		.526
9		.765			.646
10	.531				.368
11				.687	.595
12		.756			.614
Eigenvalues	3.256	1.551	1.203	1.092	
% of variance	18.604	16.193	12.414	11.967	
Total variance				59.178	