

## **The Relationship between Iranian EFL Learners' Ambiguity Tolerance and the Accuracy of Their Task-based Oral Speech**

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### **Abstract**

Various individual differences, including ambiguity tolerance (AT), have gained momentum because of the influence they can exert on the process and product of learning, and thereby, on various aspects of the learner's interlanguage system such as accuracy of oral speech. The present study was undertaken to examine the extent to which Iranian EFL learners' AT was significantly correlated with the accuracy of their task-based speech. To serve the purpose, a random sample of 60 Iranian EFL learners studying English at New Pegah Institute in Tabriz were selected from a population of 150. The Second Language Tolerance of Ambiguity Scale (Ely, 1995) was employed to quantify the participants' AT while the accuracy of their speech, based on a picture description task, was measured based on the ratio of the grammatical errors to the total number of t-units produced. Correlational analyses of the research data revealed that the participants were highly inaccurate in their oral performance and that there was a significant moderate relationship between the two research variables. The findings underscore the need to determine and promote Iranian EFL learners' AT and offer a number of pedagogical implications.

**Keywords:** ambiguity tolerance, accuracy, individual differences, task-based speech

### **Introduction**

Recent growth of English as an international language of communication highlights the importance of speaking. MacIntyre, Clement, Dornyei and Noels (1998) suggest that we communicate with our community members because we need their service and cooperation as well as their help. Warner (1977) states that communication can be regarded as the core of social life and that it is what defines us as human beings and the environment in which we use inhabit. Most of this communication is carried out orally and fulfills a wide range of functions including expression of opinions, making arguments, offering explanations, transmitting information and other functions. In addition to everyday communicative functions that speaking serves, many students need to learn how to interact effectively for educational and academic purposes in their future workplaces, maintaining social relations and viably undertaking professional or political endeavors. Achieving all these goals relies heavily on developing a standard command of English as a lingua franca by participating in various speaking activities (Deepa, 2012).

Accuracy is a major feature of the oral output learners produce and embodies the correct lexical, phonological, and grammatical choices made by the learner. Learners' accurate performance has been partially linked to the input they receive (Krashen 1982) but closely to the output they produce (Swain, 1985). It has been proposed that exposure to comprehensible input activates semantic processing mechanisms leading to improved comprehension while production of output entails syntactic analysis and sensitized the learner to formal features of the language, and thereby, contributes to accurate performance.

Accurate oral performance, however, is a hard target to achieve because the learner's attempts to produce output are influenced by a wide range of cognitive, affective, and social variables like attention, anxiety, the power relationship among the interlocutors, communication apprehension, and ambiguity tolerance (AT). Ambiguity tolerance is a learning style that represents the extent to which learners are capable of tolerating the ambiguity involved in learning a foreign or second language, and thus, can exert great influence on individuals' learning and performance. Experts generally agree that AT represents a relatively stable individual difference with sociological implications (Brunswik, 1948), a multi-dimensional personality trait (e.g., Williams & Budner, 1962), and a descriptor of organizations and national cultures (Furnham & Ribchester, 1995). McLain (1993) attributed ambiguity to lack of sufficient contextual information and Ely (1989) defined AT as the acknowledgement of doubt stressing the fact

that this indecision may influence various dimensions of individual's life, learning and proficiency.

When applied to the learning context, as suggested by Ellis (1994), AT embodies the capacity to handle ambiguous novel stimuli without exasperation or asking for assistance from authority. Linguae learning, according to White (1999), is replete with ambiguous situations that may arise anxiety (Ehrman, 1999) and bring about a sense of apprehension and frustration on the part of the learners (White, 1999).

Budner (1962) distinguished three types of ambiguous situations: new, complex and contradictory situations. Ambiguity is triggered by lack of sufficient cues in new situations, numerous cues in complex situations and conflicting clues that provoke different interpretations in contradictory situations. Naunabm, Frigkucgm, Stern, & Tidesci (1978) verified the first two situation types and referred to the last one as insoluble situations. They also delineated students' reactions to such menacing situations as expression of dislike, depression, attempts to avert the situation or disruptive behavior.

Under the ambiguous learning conditions, however, learners, as suggested by Sa'abadi (2014), differ in the extent to which they can tolerate the ambiguity involved in language learning and the varying degrees of AT may influence various aspects of an individual's learning and performance. Low levels of AT can negatively impact features like risk taking, appropriate strategies use, perseverance required for learning, and participation in classroom activities (Ashouri & Fotovatnia, 2010; Erten & Topkay, 2009). One of the areas that might be influenced by learners' level of AT may be the features of their task-based oral performance, for instance, grammatical accuracy (GA). GA is particularly important in EFL contexts like the Iranian context where the dominant focus is on form during long years of schooling and in national university entrance exams. Therefore, a viable concern for teachers and educators in such contexts can be exploring ways of improving the accuracy of the students' written and oral output.

AT and accuracy of oral speech have been investigated separately. AT was explored in relation to intuitive learner types by Ehrman and Oxford (1990) who found that learners with intuitive types of personalities and relatively higher levels of AT reported that they often guessed from context whereas sensing type of personalities with lower AT reported that they disliked having to guess from context. More recently, Nishimo's (2007) case study of two Japanese learners of English also illustrated the influence of AT on the use of strategies.

A positive relationship was also reported between AT and reading comprehension by El-Koumy (2000) who found that learners with moderate AT outperformed low or high tolerant groups. There was no difference between the high and low tolerance groups. Likewise, Kondo-Brown (2006) emphasized the aversive nature of ambiguity that could impede reading comprehension and underscored the importance of averting it.

In another study, Hakki (2009) scrutinized the nature of AT in tertiary level foreign language learners reading comprehension aiming to find out viable relationships with other variables like the participants proficiency level, perceived success in reading and strategy training as well as their gender. The findings revealed moderate levels of AT for tertiary level learners and a negative relationship between degrees of AT and proficiency. More recently, Marzban (2011) investigated AT among male and female Iranian Senior EFL Undergraduates and reported a moderate level of AT with females being less tolerant compared to males.

Language learners oral performance has also been explored in relation to various factors that may have a bearing on it in EFL and ESL contexts. Various features of task-based speech have been investigated with regard to intonation (Wennerstorm, 2000), pre-task and on-line planning (Seifoori, 2012; Yuan & Ellis, 2003), different conditions of listener backchannels (Wolf, 2007), risk-taking (Ghoorchaei & Kassaian, 2009), planning time (Mehnert, 1998), mixed planning (Seifoori & Birjandi, 2008), detailed and undetailed pre-task planning (Rouhi & Saeed-Akhar, 2008), concept mapping (Ghonsooly & Hoseinpour, 2010), pushed output tasks (Sadeghi Beniss & Edalati Bazzaz, 2014; Seifoori & Goodarzu, 2012), and fluency strategy training (Seifoori & Vahidi, 2012). The results from these studies supported the role of planning in improving various features of language production including fluency and accuracy (Mehnert, 1998; Rouhi & Saeed-Akhar, 2008; Seifoori & Birjandi, 2008; Yuan & Ellis, 2003). Research findings confirm the positive role of pushed output tasks like picture description, question and answer and retelling in positively influencing the accuracy and fluency of Iranian EFL learners speaking (Sadeghi Beniss & Edalati Bazzaz, 2014).

As the research review indicates no previous study has embarked on the relationship between AT and accuracy of Iranian EFL learners task-based speech. Dolati and Mikaili (2011) accentuated the speaking difficulty shared by many Iranian foreign language learners. This difficulty might be attributed to various factors including the intricate nature of speech production and the educational system in which English pedagogy is dominated by an exclusive focus on grammar and translation as educational

priorities. What adds to the intricacy of developing oral proficiency might be underestimating and ignoring the significance of individual differences like AT that can greatly impact educational outcomes. Yet, no attempt has ever been made to identify learners' AT and its viable relationship with the extent to which learners can perform accurately. Identification of such individual differences need to be taken more seriously into consideration if any significant improvement is to be made in learners' oral proficiency (Erten & Topkaya, 2009; Chaffee, 1999). Therefore, the present study sought to investigate any significant relationship between Iranian EFL learners' AT and the accuracy of their task-based oral speech. To this end the following question was posed:

RQ: Is there any significant relationship between Iranian EFL learners' AT and the accuracy of their task-based oral performance?

## Method

### Design

The current correlational study explored the relationship between AT and Iranian EFL learners' accuracy of oral speech.

### Participants

The participants in this study included 60 Iranian undergraduate EFL Learners studying in intact lower-intermediate, intermediate and upper-intermediate classes. The sample, comprising 18 males and 42 females, was recruited randomly from a pool of 80 learners taking general English courses at New Pegah Language Institute in Tabriz. The participants ranged in age from 20 to 40. Most of them were native speakers of Azari Turkish, had already learned Persian as their second language and were learning English as a third language.

### Instruments

The instruments used in the current study included the Cambridge ESOL Preliminary English Test (PET) to ascertain the intermediate level of the learners, a picture description task to elicit oral performance from the participants, and the AT Questionnaire (Ely, 1995). In order to assess the participants' accuracy of oral speech, the speaking section of the PET was administered to the participants. They were required to speak for 3 to 5

minutes about two pictures while their task-based performance was being recorded. Further, the recorded audios were transcribed by two raters and the accuracy of their oral performance was measured, following Skehan and Foster (1996), as the ratio of inaccuracy to the overall terminal units (t-units) used, that is, the number of t-units and grammatical errors were calculated; then, the number of errors were divided by the number of t-units. The lower the score, the more accurate the participants' performance was considered. The two sets of accuracy measures obtained by the two raters were further correlated to check the scorer reliability of the data that was acceptably high (.85).

**The AT Questionnaire.** The Second Language AT Scale (SLTAS) (Ely, 1995) was employed to measure the participants' AT. It was a five-point Likert-scale device comprising 12 items that was in line with the revisions made in the original version by Erten and Topkaya (2009) and Dornyei (2001). Among the revisions was the insertion of the new level of 'not sure' which was added to oblige the respondents to take a forced decision between a negative and positive choice. The purpose of the revised scale is to quantify the respondents' agreement level with statements that indicate their tolerance of unambiguity in specific situations. The 12-item questionnaire taps on different factors such as comprehension, usage, mood and feeling of learners and measures the respondents' AT on a 5-point scale, ranging from strongly agree = 4, agree = 3, undecided = 0, disagree = 2 and strongly disagree = 1, rendering a score range of 12 to 48. High scores point to lower levels of AT whereas lower scores indicate higher levels of AT.

**Data Collection Procedure.** To collect the research data first, the SLTAS Ely (1995) was administered at the New Pegah Language Institute during the initial 20 minutes of their regular class time. After administering the questionnaires, the participants received information about the purpose of the study and instructions about how to complete the questionnaires. To increase the response validity, the researchers informed the participants that their responses on the questionnaire had no effect on their grade and that the obtained information would be used only for research purposes. They were ensured that the data would be kept confidential. It took approximately 20 minutes to obtain the relevant data in each class.

We also employed the two-frame picture description task of PET, *ways of travelling*, in order to elicit the participants' oral production. The participants were individually invited to describe the tasks after their class time. A time limit of 8 to 10 minutes was devoted to this task with two minutes for pre-task planning and eight minutes for picture description while their voice was being audio-recorded. They were also required to mention their own travelling preferences at the end of the description task. The researcher did not intervene in case of hesitations or problems.

Having recorded the research data, we transcribed the audio-recorded files and coded the transcripts for t-units and inaccurate utterances for further analysis. Following Foster and Skehan (1996), accuracy was measured as the ratio of inaccurate forms to the total number of t-units used. Hence, the lower an individual's score, the more accurate their performance would be. Another English teacher working at the same institute was asked to check 15 percent of the scored transcripts and the inter-rater reliability of the score sets were found to be acceptably high (.86).

## Results

Like any quantitative study in applied linguistics, the first step was to test the normality of the research data. To this end, we first checked the normality of the research data. Table 1 presents the results.

Table 1  
*Tests of Normality of the Group's AT and Accuracy Scores*

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
AT	.13	60	.013	.90	60	.00
ACC	.11	60	.047	.92	60	.01

a. Lilliefors Significance Correction

As it is displayed in Table 1, the score distributions obtained from the AT and the accuracy measures violated the normality assumption ( $p > .05$ ).

Further, the descriptive statistics of the participants' accuracy of speech were calculated, as displayed in Table 2.

Table 2  
*The Group's Descriptive Statistics of the Accuracy Scores*

	N	Range	Minimum	Maximum	Mean	Std. Deviation
AT	60	3.57	.18	3.75	1.35	.85
Valid N (listwise)	60					

The participants' task-based oral accuracy, as shown in Table 2, ranged from .18 to 3.75 with the Mean of 1.35 and the Standard Deviation of .85. It should be borne in mind that the lower the measure, the more accurate the performance would be.

The research question was concerned with the relationship between Iranian EFL learners' AT and the accuracy of their task-based speech. Having found that the AT and accuracy measures were not normally distributed, we further performed the preliminary analyses to check the linearity and homoscedasticity assumptions. Figure 1 illustrates the results.

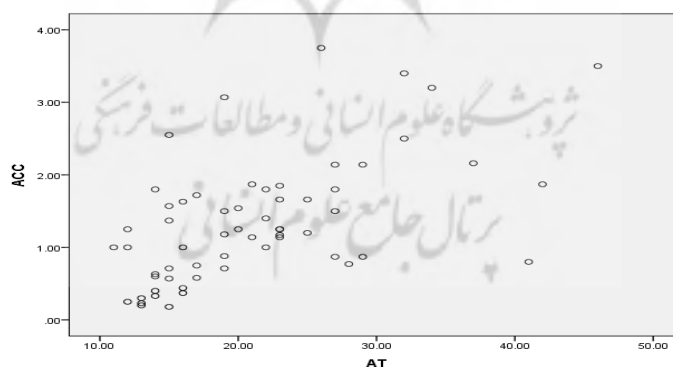


Figure 1. Scatterplot (BIVAR) = AT with accuracy of task-based speech

As depicted in Figure 1, there appeared to be a moderate and positive correlation between the participants' AT and the accuracy of their task-based performance. Since the Normality assumption has not been met, as



displayed in Table 1, the relationship between the groups AT (as measured by the AT Questionnaire) and the accuracy of the oral performance (as measured by the picture description task) was investigated using Spearman Brown correlation coefficient. Table 3 displays the results.

Table 3  
*The Correlations between the Group's AT and Accuracy Scores*

		AT	ACC
Spearman's rho	AT	Correlation Coefficient	1.00
		Sig. (2-tailed)	.00
		N	60
ACC	ACC	Correlation Coefficient	.58**
		Sig. (2-tailed)	.00
		N	60

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

As illustrated in Table 3, there was a moderate and positive correlation between the two variables,  $r = .58$ ,  $n = 60$ ,  $p < .005$ , with high levels of AT, at the lower poles of the scoring continuum, associated with high levels of accuracy. Hence, the research question was answered positively; that is, there was a relationship between Iranian EFL learners AT and the accuracy of their task-based oral performance: the more tolerant of ambiguity the participants were, the more accurate descriptions they could produce.

Further, the coefficient of determination was calculated to determine how much variance the two variables shared. The Spearman correlation was found to be .58, which when squared indicates .34 percent shared variance; that is, AT helps to explain 25 per cent of the variance in respondents accuracy of oral speech. This is quite a respectable amount of variance explained when compared with a lot of the research conducted in the social sciences.

### **Discussion**

The findings revealed an average moderate level of AT with individuals ranging from extremely low to high AT levels, forming a widely variable distribution. As for accuracy, the participants were found to be highly inaccurate. The findings also supported a significant moderate and positive relationship between the participants' AT and the accuracy of their task-based speech; that is to say, high levels of AT were found to be positively associated with high levels of accuracy whereas less tolerant participants were found to produce more inaccurate speech. The research findings regarding the correlation of the research variables support those previous studies that found positive correlations between AT and success (Chapelle, 1983), perceived success in reading (Erten & Topkaya, 2009), language learning strategy use (Jun-yong, 1998; Khajeh, 2002; Oxford, 1999; Yea-Fen, 1995), reading comprehension (Hadiani, 2005), and risk-taking (Beebe, 1983, Ely, 1989; Rubin, 1975).

With regard to language learning success, Chapelle (1983) investigated the relationship between adult second language learners' AT and the success in acquiring English. Her reported results showed insignificant relationship between AT and the participants' scores at the beginning of the semester but significant positive correlation at the end-of-semester scores obtained from grammar test, dictation and speaking.

The findings are specifically contradicted by those of Madhubalan Viswanathan (1997) who reported negative relationship between AT and the need for precision. That is, people who need to be precise will have a low tolerance for ambiguity while people with lower needs for precision will be more tolerant of ambiguous situations.

In the context of Iran, the findings contradict those of Karbalaei and Maftoon (2012) and El-Koumy (2000). They explored the relationship between AT and reading strategy use of 114 (60 males and 54 females) intermediate EFL learners at Iran Language Institute. The results of their study showed that the participants' tolerance of ambiguity was not significantly correlated to their overall reading strategy use nor with their use of Global, Problem Solving, and Support subscales of reading strategy.

More recent investigations have revealed that AT is an important learner variable in the context of instructed language learning (Lai, 2009; Shao &

Yang, 2007; Wang, 2004; Yin, 2005). Ongoing research has also indicated that AT is positively correlated with proficiency and is a significant predictor of EFL learners' learning performances (Bu, 2007; Chen, 2004; Shao, 2005). Close ties have also been established between AT and listening comprehension with highly tolerant students performing significantly better than less tolerant ones (Ba, 2012; Tang, 2009; Yu, 2007).

Based on a series of research studies investigating AT (e.g., Beebe, 1983; Ely 1989; Rubin, 1975), Ely (1995) proposed that tolerance of ambiguity can influence three areas of language learning. The first area that may be affected by AT is learning decontextualized linguistic features like phonological, morphological, syntactic and semantic elements in isolation. AT can also influence practicing language learning skills as well as application of those skills in other contexts. The findings from this study can be explained with regard to the impact of AT on learning individual syntactic elements. It seems that the more tolerant participants, taking part in this study, had the chance to focus on and learn syntactic elements and could attend to such elements during their task-based speech.

The findings might be explicated in terms of the theoretical framework of tolerance of ambiguity that was developed by Ehrman (1993) to explain its role in linguistic domain. Based on this framework, there are three levels of AT. These levels are summarized by Chen Liu (2015, p. 1878) as the intake level which allows information arrive the individual's conceptual background, the tolerance of ambiguity proper level copes with and tolerates fragmentary data that might even seem contradictory, and accommodation level whose function is to make distinctions, set priorities and restructure cognitive schemata. This categorization also explains how high AT learners can perform better. It seems that the intake level of AT allows them to let in a wide range of the L2 input while the proper AT permits dealing with incomplete input more meticulously until some resolution is reached and that learning takes place when the new information is accommodated in the learners' cognitive schemata.

These research findings highlight the role of tolerance of ambiguity in second and foreign language learning and the need to consider this learner

variable into account. Although the study was limited in terms of sample size, data collection instruments, and the dependent variables measured, it is still possible to draw some conclusions based on the findings. First of all, the intrinsic ambiguity of learning a foreign language should be acknowledged and the need to tolerate this ambiguity should be underscored to the learners so that they can come to terms with it and realize that they are not alone. Secondly, AT does play a role in the accuracy of speech. With regard to the importance of oral proficiency and the need to enhance learners' accuracy, it seems necessary to first identify learners' level of AT and then to help less tolerant learners to learn how to cope with ambiguity of the situation in language learning contexts.

A number of implications may also be drawn from the findings. Since task and text difficulty can lead to ambiguity in language learning, it seems essential for course book developers and syllabus designers to match task difficulty and complexity with the learners' cognitive development and learning proficiency (Robinson, 1996). Cognitively, it has been suggested that teaching materials and course books should be written in a way to prevent any excessively outrageous demand on their processing mechanism. In addition to these cognitive justifications, it has been suggested that too difficult materials can increase the ambiguity of the task at hand and may exceed learners' tolerance of ambiguity.

Even in the face of difficult tasks and teaching materials, teachers are invited to think about ways of performing their mediating function more adequately (Lantolf, 2006). They need to assess the teaching materials, on the one hand, and the proficiency level of their learners, on the other hand, searching ways of making the content more accessible and lowering negative affective filters. This suggestion is supported by the conceptualization of learning as a mediated process that takes place in the classroom and under the supervision of the teacher, a process that starts from object-regulation and leads to self-regulation through the other-regulation (Ortega, 2015).

Teacher educators also need to emphasize principles of learner-centered instruction more seriously and incorporate them in various teacher education programs. During years of studying at university, student teachers should be familiarized with the significance of learning styles and ways of

accommodating different styles in the classroom. They usually read a lot on such topics. What they need is some practical techniques that can be employed in real classrooms to enhance students' tolerance of ambiguity, willingness to communicate, and to lower their anxiety and communication apprehension.

Last but not least, individual EFL learners should realize that learning a foreign language is an ambiguous process that has to be tolerated if ultimate levels of mastery are to be achieved. They may decide to wait for their teachers to inform them about this ambiguity or take the lead and find ways of coping with the ambiguity through concentration, persistence, and practice. They should remember that the ambiguity reduces as they go on and eliminates altogether as they learn how to cope with it.

A fertile soil for research would be replicating this study with larger samples of participants from state schools and universities, triangulation of data collection procedures, exploration of other aspects of the learning process like other individual characteristics such as anxiety and willingness to communicate as well as other features of oral performance across factors like proficiency and gender.

The function of research is to provide insights for more social spheres of practice. Educational research findings provide a rich source of inspiration for authorities involved in the ministry of education and higher education who are responsible for linking research to practice by keeping in touch with research findings and forming accountable committees that can seek ways of applying the beneficial findings. Experience of many learners and teachers as well as the large plethora of university postgraduates allude to the gap in this regard. It is hoped that this gap is soon bridged when the authorities acknowledge the significance of linking scholarly research to social practice as the key to development and progress.

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