UNDERSTANDING TOLERANCE OF AMBIGUITY OF EFL LEARNERS IN READING CLASSES AT TERTIARY LEVEL

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Abstract: This study aimed to explore tolerance of ambiguity (AT) of a group of tertiary level Turkish EFL learners at a state university in Turkey. To do this, 188 preparation year students were administered a Second Language Tolerance of Ambiguity Scale with some demographic questions. Statistical analysis indicated students on average have lower tolerance for ambiguity in the process of learning, with female students reporting less tolerance than male students. Students' AT, their self-perceived success, and strategy training they received correlated significantly. Suggestions for further research and classroom practice are offered in the light of the findings and current literature.

Keywords: ambiguity, tolerance, reading, gender difference

Özet: Bu çalışma İngilizce öğrenmekte olan bir grup Türk üniversite öğrencisinin belirsizlik hoşgörüsünü araştırmayı amaçlamıştır. Bu doğrultuda, 188 hazırlık sınıfı öğrencisine demografik soruları da içeren İkinci Yabancı Dil Belirsizlik Hoşgörüsü ölçeği uygulanmıştır. İstatistik analiz, öğrencilerin öğrenme sürecinde genel olarak düşük düzeyde belirsizlik hoşgörüsüne sahip olduklarını göstermektedir. Kız öğrencilerin erkek öğrencilerden daha az hoşgörülü oldukları tespit edilmiştir. Öğrencilerin belirsizlik hoşgörüleri ile yabancı dilde yazılan materyalleri okumaya ilişkin başarı algıları ve kendilerine verilen strateji bilgilendirmeleri arasında manidar ilişkiler belirlenmiştir. Bulgular ve güncel alan yazın ışığında sınıf içi uygulamalara ve bu konuda yapılabilecek araştırmalara ilişkin öneriler sunulmuştur.

Anahtar sözcükler: belirsizlik hoşgörüsü, okuma, cinsiyet farklılığı

Introduction

Reading in a foreign language may be a rather ambiguous process that involves processing unknown linguistic and cultural input, which might eventually cause uncertainty and/or confusion on the part of readers. Success in such a complex and uncertain process may involve a myriad of factors, one of which could be tolerance of ambiguity that readers exhibit during reading. It is significant to explore this psychological construct since an awareness of how it influences foreign language learners and learning may alter the way teachers plan and execute their lessons, and help learners overcome their psychological barriers. Thus, this study was prompted by the desire to understand tolerance of ambiguity in relation to such factors as gender, proficiency level, strategy training and self-perceived reading success. Below is presented a brief review of related literature, followed by a description of the research methodology and findings. The findings are then discussed in the light of literature, conclusions are drawn and suggestions are made.

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Literature Review

Ambiguity and tolerance

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. Norton (1975), further, summarizes causes of ambiguity as 1) multiple meanings, 2) vagueness, incompleteness, or fragmentation, 3) a probability, 4) unstructured, 5) lack of information, 6) uncertainty, 7) inconsistencies and contradictions, and 8) unclear. Kazamina summarizes current definitions and concludes that ambiguity is marked by "novelty, complexity, insolubility and lack of structure" (1999: 69).

Related to the concept of ambiguity is *tolerance*. Webster's Encyclopedic Unabridged Dictionary of English Language defined tolerance as "n.1. a fair and objective attitude toward those whose opinions, practices, race, religion, nationality, etc. differ from one's own; freedom from bigotry." Such a definition of tolerance precludes acceptance of ambiguous situations whereas intolerance may entail considering uncertainties and unclear meanings as potential sources of discomfort and treat (Norton, 1975). Tolerance of ambiguity, then, can be a reflection of our personality (Ely, 1989; Ehrman, 1993; 1994). As such, people with tolerance of ambiguity are likelier to feel comfortable under uncertain conditions (Budner, 1962).

Ambiguity Tolerance (AT) and language learning

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

This study focuses on AT in reading in a foreign language, which can itself prove to be rather ambiguous. Apart from linguistic forms and text structures which students are supposed to tackle for successful comprehension of 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 and Stoller, 2002). Further, people from different cultural backgrounds bring different expectations and habits to the language learning environment, which involves establishing shared meanings. Making sense of different cultural norms can also cause ambiguity (Lustig and Koester; 1993),

and increase the cognitive load of learning which may negatively influence reading comprehension (Alptekin, 2006; Erten and Razı, in press).

Ely (1989) defines AT as the acceptance of uncertainties. Such tolerance can be translated into the language learning context as "an ability to deal with ambiguous new stimuli without frustration or without appeals to authority. It allows for indeterminate rather than rigid categorization" (Ellis, 1994: 518). In this sense, students with AT, then, are expected to feel comfortable with learning a new language with its uncertainties and unknown structural and cultural norms to be dealt with. McLain (1993), for example, reports that students who are tolerant of ambiguity are more willing to take risks and open to change (Rubin, 1975; Stern, 1975; Naiman, Frohlich, Stern and Todesco, 1978) and show endurance on tasks and higher levels of achievement (Chapelle, 1983; Naiman, Todeso, and Froclich, 1975). Similarly, White (1999) views AT as a reaction to uncertainties whereby ambiguity is accommodated so that it does not impede progress.

Our level of AT may also influence the use of certain language learning strategies. Ehrman and Oxford (1990) found that learners with intuitive types of personalities who have relatively higher levels of AT reported that they often guessed from context whereas sensing type of personalities with lower AT reported that they disliked having to guess from context. Further, learners, who are called judgers, reported not using compensation strategies like the sensing type of students because of their discomfort with ambiguity, whereas perceivers who can tolerate uncertainty tended to use compensation strategies more. Moreover, judgers tended to use more planning strategies in the form of metacognition while perceivers reported that they disliked metacognitive behaviors, reflecting their tolerance of ambiguity. More recently, Nishimo's (2007) case study of two Japanese learners of English also illustrated the influence of AT on the use of strategies. The first student who was comfortable with ambiguity did not want to use a dictionary in extensive reading and wanted to carry on without looking up unknown words. However, the second student who was not so tolerant "first figured out the sentence structure, checked the meanings of unknown words, and then translated it into Japanese" (ibid: 89) to minimize any possible ambiguity.

Ehrman (1993; 1999) maintains that tolerance of ambiguity operates at three different levels: *intake*; *tolerance of ambiguity proper*; and *accommodation*. On the first level, tolerance enables learners to receive linguistic input. Students with tolerance of ambiguity can perceive and accept new information even though it involves many unknown elements. The second level involves being able "to hold contradictory or incomplete information without either rejecting one of the contradictory elements or coming to premature closure on an incomplete schema" (1993: 331). At this level, the learner has taken new information in and needs to deal with contradictory or incomplete information (e.g. inferring meanings of unknown vocabulary in an article). The last level has been borrowed from constructivist psychology (Piaget, 1967) and involves adapting the self according to new material. That is, this level entails integrating new information with the existing schemata, restructuring the latter.

Research into tolerance of ambiguity so far has focused on its relationship to other personality traits (Ehrman and Oxford, 1990), language achievement (Chapelle and 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 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 we could identify dealing with ambiguity tolerance and reading comprehension, also found a positive relationship between tolerance of ambiguity and reading comprehension. Having classified tertiary level learners of English, he administered a general tolerance of ambiguity scale (Norton, 1975) and reading comprehension subtest of TOEFL. His results indicated that the middle ambiguity tolerance group outscored both the low and high tolerance groups. There was no difference between the high and low tolerance groups.

AT has also been shown to be one of the important affective factors in reading. Kondo-Brown (2006) identified avoidance of ambiguity as a factor in her pursuit of understanding affective variables in reading ability. Correlational analysis revealed a close relationship between AT and intrinsic motivation. She comments that "only those with higher intrinsic orientation are more likely to work at reading Japanese. These students are also more likely to be tolerant of ambiguity in learning Japanese and adopt analytical approaches in studying *kanji*" (ibid: 63). This was in keeping with what Chapelle (1983) described as longer endurance on tasks when students had higher levels of AT.

How tolerant should learners be of ambiguity?

Ambiguity is an inevitable reality of learning a new language and people do tend to have different levels of ambiguity. As reviewed above, research indicates that AT is related to achievement in language learning. However, concerns have also been expressed regarding over-tolerance. This is because such high levels of tolerance may result in unquestioned acceptance (Ely, 1995; Kazamina, 1999). Ely maintains that the lack of sensitivity to ambiguous linguistic data may cause early pidginization or fossilization in language development. The question then becomes "what level of ambiguity is ideal for success in language learning?"

It is generally suggested that a moderate level of tolerance of ambiguity should be beneficial for effective language learning. Ely claims "[t]he ideal case, of course, is that of the learner who is neither inhibited by low tolerance of ambiguity nor oblivious to linguistics subtleties" (ibid: 93). However, Kazamina (1999) purports that this mid point has not yet been fully defined. To elucidate this mid point, El-Koumy (2000) illustrated that moderately tolerant students were more successful than both high tolerance students and low tolerance students. His findings are illustrative of what degree of tolerance is suitable for language learning and reading comprehension. Yet, more research is needed to understand the nature and place of AT in the process of reading in a foreign language.

Rationale for the study

Discussions and studies regarding ambiguity tolerance usually concern ESL contexts (e.g. Chapelle, 1983) and usually focus on general language learning achievement, with the exception of El-Koumy (2000) who related AT to reading comprehension. Further, recent years have seen an emergence of studies investigating affective issues in skill specific domains (Kondo-Brown, 2000). Even so, these studies are scarce in the world and no studies were found investigating this trait and its relation to different variables in the Turkish context.

Therefore, seeing the need to better understand this powerful construct, we designed a descriptive correlational study using survey methodology. A group of EFL learners in reading classes of a mandatory one-year English language preparation class at Çanakkale Onsekiz Mart University, Turkey were asked to fill in a tolerance of ambiguity scale (Ely, 1995) as well as a set of demographic and self-evaluation questions.

Study

Aim of the study

This study aimed to understand how tolerant learners of English are in the preparatory classes of Çanakkale Onsekiz Mart University as well as to explore the relationship between tolerance of ambiguity and three major variables: gender, language proficiency, and perceived success in reading in a foreign language. This study sought to answer the following research questions.

1-   How tolerant are Turkish university level EFL learners of ambiguity?
2-   Are females and males different in terms of their tolerance of ambiguity?
3-   Does tolerance of ambiguity increase as level of English proficiency develops?
4-   Is receiving instruction on how to tackle reading problems helpful to improve tolerance of ambiguity?
5-   Is tolerance of ambiguity related to self-perceived success of Turkish EFL learners in reading in a foreign language?

Setting and Participants

The study was carried out at Çanakkale Onsekiz Mart University, Foreign Languages Teaching and Research Centre, where a compulsory one-year English course is offered to students before they join their mainstream undergraduate education. The data was collected in the spring term of the 2007-2008 academic year during normal class hours. It took about 10 minutes to fill in the questionnaires.

A total of 232 students, approximately 90% of the total number of students, participated in the study. After examining the care check items in the questionnaire used for data collection, some participants were excluded from the data analysis due to careless coding, bringing the final number of students to 188. Demographic information about the participants is summarized in Table 1.

Table 1: Demographic information about the participants

Demographic variables		Frequency	%
GENDER	Male	67	36
	Female	106	56
	Not reported	15	8
ENGLISH PROFICIENCY LEVEL	Elementary	48	26
	Pre-Intermediate	108	57
	Intermediate	27	14
	Not reported	5	3
PERCEIVED SUCCESS IN READING IN ENGLISH	Poor	36	19
	Average	115	61
	Good	34	18
	Not reported	3	2
AGE		**Mean**	**SD**
	(N=184)	19.67	1.51

When the data were collected, the students had received English instruction for at least seven months at the institution, with a possibility of previous exposure to foreign language instruction. Students had been assigned to their language proficiency groups after a placement test. The previous length of exposure to language instruction was ignored in this study as length does not necessarily indicate the quality and intensity of language instruction received.

Of the 188 participants, the majority was females while there were fewer male students (106 – 56% vs. 67 – 36%). Fifteen students did not report their gender. The students had a mean age of 19.67 (SD=1.51), representing a very close age band. They generally had a pre-intermediate level of English proficiency (108 – 57%), followed by elementary (48 – 26%), and intermediate (27 – 14%) students. A big proportion of students perceived themselves as average readers (115 -61%) while 34 students (18%) reported that they thought they were good at reading in English. An important proportion of students (19%) thought they were not good at reading in English.

Instrument & procedures for data collection

The data were collected through the Second Language Tolerance of Ambiguity Scale (SLTAS) (Ely, 1995) with some embedded demographic questions. Although there are other scales for measuring AT available in the literature (e.g. Budner, 1962; Norton, 1975), to the best of our knowledge, the SLTAS is the only published scale especially designed for measuring ambiguity tolerance in language learning.

The version of SLTAS used in this study has 12 items with a four point likert scale. The items aim to measure students' agreement level with statements depicting intolerance of ambiguity in given situations.   This version of the SLTAS was previously reported to have high internal consistency (Kazamina, 2000) and was employed in this study with the consent of Professor Christopher M. Ely.

In its original version the SLTAS was used with anchors being at 4 (Strongly Agree), 3 (Agree), 2 (Disagree), and 1 (Strongly Disagree). In this current study, however, to avoid any bias and not to make students take a forced decision between a negative or positive choice (Dörnyei, 2001), Ely's SLTAS was modified to have a five point Likert scale, inserting a new anchor 3 (not sure). Moreover, the scale, originally written in English, was translated into Turkish. Back translation measures were taken and no significant semantic shift was detected by two expert readers. The Cronbach's alpha internal consistency reliability for Turkish version of the SLTAS with the five point Likert scale was found to be .75.

Findings

How tolerant/intolerant are EFL learners of ambiguity at tertiary level?

To identify the level of ambiguity tolerance of the students, descriptive statistics were utilized. To avoid any misunderstandings, the readers are reminded that the items in the SLTAS sought respondents' reactions to statements describing intolerance of ambiguity in some language learning contexts. Disagreement with an item, then, is conversely a sign of tolerance. Therefore, while interpreting how tolerant students are, a mean of 3.00, which was also the anchor for *not sure,* can be used as the borderline of tolerance/intolerance. Values above this borderline will indicate lower levels of tolerance while those below will suggest more tolerance depending on their distance to the mean score of 3.00. Further, a composite score of tolerance of ambiguity will be referred to rather than treating individual scale items as separate ambiguity indicators. Table 2 presents students' mean scores from the SLTAS.

Table 2: Ambiguity Tolerance scores from the SLTAS

	N	Mean	sd
TOTAL AMBIGUITY TOLERANCE SCORE	**175**	**3.69**	**.47**
When I'm reading something in English, I feel impatient when I don't totally understand the meaning	186	3.85	.99
It bothers me that I don't understand everything the teacher says in English	188	4.40	.84
When I write English compositions, I don't like it when I can't express my ideas exactly.	186	4.28	.92
It is frustrating that sometimes I don't understand completely some English grammar	186	4.14	1.05
I don't like the feeling that my English pronunciation is not quite correct	185	4.11	.96
I don't enjoy reading something in English that takes a while to figure out completely	188	3.82	1.23
It bothers me that even though I study English grammar some of it is hard to use in speaking and writing	186	4.05	1.06
When I'm writing in English, I don't like the fact that I can't say exactly what I want	186	4.35	.80
It bothers me when the teacher uses an English word I don't know	187	3.42	1.36
When I'm speaking in English, I feel uncomfortable if I can't communicate my idea clearly.	186	4.30	.85
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.	188	3.88	1.13
One thing I don't like about reading in English is having to guess what the meaning is.	188	2.99	1.33

The participants reported a level of tolerance of ambiguity that is a little above the mid point (mean= 3.69). This was also congruent with what Kazamina (1999) found with Greek civil servants. This gives support to Oxford (1999) who claimed that with its uncertainties language learning can be quite an ambiguous and stressful experience. The level of tolerance identified here shows that the participants in this study, on average, will not exhibit high tolerance/intolerance of ambiguity, neither accepting without questioning nor being hampered by incomplete linguistic information. However, an item-by-item analysis of the scale reveals a mean range between 4.35 and 2.99, which indicates that the total score of 3.69 should not lead to

stereotyping as people may have different levels of tolerance of ambiguity: low, moderate, or high tolerance (El-Koumy, 2000; Ely; 1995; Ehrman, 1999).

Such a classification can be made by calculating each student's ambiguity scores and placing her in an ambiguity group on a continuum ranging from high tolerance to low tolerance (see for example, Ely, 1995; El-Koumy, 2000). An alternative to this can be cluster analysis which is a reductionist statistical technique similar to factor analysis. The main difference between the two is that while factor analysis examines whether certain constructs in the forms of different variables do hold together and form meaningful groups, cluster analysis attempts to group cases (i.e. participants) according to their scores on one or more variables (for details see, Hatch and Lazaraton, 1991).

To explore whether participants could be placed in the suggested three ambiguity groups, a further K-means cluster analysis on SPSS was performed. It illustrated that the participants could be classified into three distinct clusters of students according to their ambiguity scores. The results can be seen in Table 3.

Table 3: Clusters of students according to their tolerance of ambiguity

Ambiguity Cluster	N	% of Total N	MEAN	SD	Minimum	Maximum
High (H)	18	10.3%	2.7176	.3761	1.75	3.08
Moderate(M)	74	42.3%	3.5000	.1655	3.17	3.75
Low (L)	83	47.4%	4.0773	.2019	3.83	4.58
Total	175	100.0%	3.6933	.4788	1.75	4.58

A further analysis of variance (ANOVA) between these three groups confirmed that these clusters of students were distinct from one another (p<.000) in terms of their AT. The differences can be seen in Table 4.

Table 4: Differences between three AT clusters

	Sum of Squares	df	Mean Square	F	Sig.	Direction of differences
Between Groups	32.141	2	16.070	356.706	.000	H>L p<.000
Within Groups	7.749	172	4.505E-02			M>L p<.000
Total	39.889	174				H>M p<.000

Descriptive statistics, coupled with cluster analysis and analysis of variance, point to three different groups of students according to their tolerance of ambiguity. An important proportion of students (f=83; 47.4%) had very high levels of intolerance (mean= 4.07), while a similar proportion (f= 74; 42.3%) had moderate levels (mean= 3.50). Only a very small group of students (f=18; 10.30%) reported they can tolerate ambiguity to a great extent (mean= 2.71). This means that, expectedly, there are variations among language learners and they will not always tolerate ambiguity unanimously.

Are females and males different in terms of their tolerance of ambiguity?

Gender is related to many affective constructs in the process of language learning. 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 value	df	Sig.
Ambiguity	**Female**	101	3.7904	.4151	.2495	3.198	158	.002
Score	**Male**	59	3.5410	.5659				

As can be seen from Table 5, although both groups had a mean score that is above the mid-point indicating lower tolerance of ambiguity, female participants appeared to be less tolerant of ambiguity than their male peers. To further elaborate on this, the distribution of male and female participants to each of the previously identified tolerance groups was explored. An analysis of frequency confirmed the findings from the t-test. These can be seen in Table 6.

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

Tolerance group	Male	%	Female	%
Low	24	40.67	54	53.46
Moderate	22	37.28	43	42.57
High	13	22.03	04	03.96
Total	59	100	101	100

df:2, x^2 :12.955, p<.002

A careful reading of the frequency analysis in Table 6 reveals that, in addition to mean differences in ambiguity scores, large proportions of female students tended to fall into low (53.46%) and moderate (42.57%) tolerance groups while these figures were low with male students (40.67% and 37.28% respectively). 13 of 59 male students (22.03) reported high tolerance of ambiguity while the proportion of female students who fell into this tolerance group was only 3.96% (f=4). This indicated higher levels of intolerance of ambiguity among female students in language learning.

To the best of our knowledge, gender differences in ambiguity tolerance have not been directly investigated. However, there are studies from affective and cognitive domains that deal with the issue. One such study by Fukuchi and Saamoto (2005: 342) reports less tolerance among men than women. Though their findings were not conclusive, more men reported discomfort "when they did not completely understand grammar, or that they felt discomfort when they could not find English words that meant the same as the Japanese words with which they are familiar". The authors maintain that ambiguity tolerance may be less common among men than women. However, research from learning styles and personality traits report similar results to the findings of this study. It was often reported that males are more field-independent than females and therefore can identify details from confusing backgrounds more effectively than their female peers (Oxford, 1993). More support comes from the reflection-impulsivity distinction. Reflective learners tend to think details over when making a decision or accepting a hypothesis. They are

likely to dislike incomplete data. Impulsive learners, on the other hand, seem to be impatient to make decisions when confronted with uncertainty (Larsen-Freeman and Long, 1991). Oxford reports that girls are often found to be more reflective than males while males can be more impulsive. Therefore, females are likelier to be more closure oriented, thus, less tolerant of ambiguity in language learning than their male peers. The findings regarding gender difference in this study can be in keeping with learning styles research (for a review of research into gender differences see Oxford, 1993 and 1995). Female students who cannot see details from confusing background and who need to consider details before making a decision may find incomplete and uncertain situations in language learning more discomforting than their male peers who, by definition, can see details and are impatient to jump to conclusions in ambiguous situations.

Does tolerance of ambiguity improve as proficiency improves?

A slight improvement has been detected in tolerance of ambiguity as the level of English proficiency increases. Table 7 presents mean values for tolerance of ambiguity for each proficiency level while Table 8 shows the findings from analysis of variance.

Table 7: Tolerance of ambiguity at different levels of language proficiency

Proficiency Level	Tolerance of Ambiguity (Mean)	N	SD
Elementary (E)	3.6913	44	.4894
Pre-intermediate (P)	3.7475	101	.4814
Intermediate (I)	3.4647	26	.4070
Total	3.6901	171	.4806

Table 8: Effects of proficiency level on tolerance of ambiguity

	Sum of Squares	df	Mean Square	F	Sig.	Direction of differences
Between Groups	1.654	2	.827	3.693	.027	E<P p<.511
Within Groups	37.614	168	.224			I>P p<.055
Total	39.268	170				I<E p<.007

The only significant difference was observed between elementary and intermediate students in favour of the latter (p<.007). Although there was also a considerable difference between the pre-intermediate and intermediate learners, this difference was slightly outside the significance level (p<.055). This finding shows that as students improve their language proficiency, their level of tolerance also improves. This is to be expected as students becoming more equipped may feel safer in dealing with new information. After all, with their intermediate level of language proficiency, the participants must have mastered both an important proportion of grammatical structures and very valuable basic vocabulary to be able to read without looking up unknown words (Nation, 1990).

Is receiving instruction on how to tackle reading problems helpful to improve tolerance of ambiguity?

One of the aims of learner training is to help learners become independent in the learning process and become more confident with the uncertainties of language learning. Therefore, students who can become more confident can better tolerate ambiguities. To see whether receiving any form of such help influences tolerance of ambiguity, correlation coefficients were calculated between tolerance of ambiguity scores and the amount of help received from lecturers. A moderate negative correlation was identified between the two variables (n=170, r=-.246, p<.001). Such a finding indicates that the more students receive instruction on know-how of reading in a foreign language, the more tolerant they can become of ambiguity in language learning. This is congruent with many learner training studies reporting that introducing and equipping learners with crucial strategies may improve their self-confidence, self-sufficiency and perception of responsibility in learning as well as enable them to acquire techniques for enhancing their learning (Atkinson, 1985; Dickinson, 1987; Chamot and Kupper, 1989). Without a doubt much more investigation is necessary to determine the precise role of learner training in improving tolerance of ambiguity, but even at this stage it could be suggested that teachers should become more aware of the crucial role of training to help learners cope with their fears in the language classroom.

Is tolerance of ambiguity related to self-perceived success of Turkish EFL learners in reading in a foreign language?

A strong relationship between tolerance of ambiguity and perceived success in reading in a foreign language was identified (n=173, r=-.303, p<.000), implying that the more tolerant learners are of ambiguity, the more successful they can be in the reading process. This is in keeping with previous research that reported a positive impact of ambiguity tolerance on success in language learning (Chapelle & Roberts; 1986; Naiman, et. al. 1978; Lori, 1990). Obviously, students who can cope with the uncertainties of learning a new language, be it coping with new language structures or dealing with new vocabulary and cultural issues, feel more successful in reading in a foreign language or vice versa. This finding on the other hand did not support the preferable moderate level of ambiguity tolerance (Ely, 1995, Ehrman, 1999). To further elaborate on this issue, the difference between different tolerance groups in self-perceived reading success was examined. The results of the analysis of variance can be seen in Table 9 and Table 10.

Table 9: Perceived success in reading according to tolerance of ambiguity

Tolerance group	Mean	N	SD
High	3.33	18	.49
Moderate	3.04	73	.70
Low	2.77	82	.74
Total	2.94	173	.72

Table 10: Analysis of Variance: perceived success in reading and AT

	Sum of Squares	df	Mean Square	F	Sig.	Direction of differences
Between Groups	5.948	2	2.974	6.056	.003	H>L p<.002
Within Groups	83.474	170	.491			M>L p<.017
Total	89.422	172				H>M p<.115

The high tolerance group reported better self-perceived success than both the moderate and low tolerance groups, the low tolerance group reporting the lowest level of self-perceived success. This is not in keeping with El-Koumy (2000) who reported that moderately tolerant students outscored both highly tolerant students and those with low tolerance. Yet, success in reading in a foreign language appears to be related to how much language learners can tolerate uncertainties in the reading process. The question of how much tolerance is more preferable remains to be answered in further research.

Conclusions and Implications

This study aimed to explore the nature of ambiguity tolerance in reading in a foreign language among tertiary level learners of English and to determine likely relationships between ambiguity tolerance and different personal and cognitive variables such as gender, proficiency level, perceived success in reading and strategy training. The findings of this study allow the authors to draw some conclusions. Firstly, the tertiary EFL learners participating in this study reported having a moderate level of ambiguity intolerance in language learning. Cluster analysis confirmed that the majority of the learners have either a high or moderate level of intolerance while only a small number of them have low intolerance. Therefore, it can be said that learners in an EFL context are generally less tolerant of ambiguity. The findings also suggested that there is a significant difference between ambiguity tolerance and learners' language proficiency levels, indicating that the higher the proficiency level, the more tolerant learners become in foreign language learning. One factor that may have impacted this result is that, as learners develop their linguistic knowledge, the need to control every detail in language learning becomes less important, thus resulting in higher tolerance of ambiguity. Another aspect of ambiguity that has been explored in this study was gender differences. The findings revealed that females are less tolerant of ambiguities in the language classroom than their male peers. This may show us that since females are more intolerant they do not take things for granted and study more to see the details, a desirable habit when the complexities in language learning are taken into account. One last aspect of this study dealt with ambiguity tolerance, success in reading and strategy training. A significant correlation between these variables was found, which allows us to conclude that affective and cognitive factors do influence one other. As such, the more students are trained about strategies they could employ while reading in a foreign language, the more tolerant they can become of ambiguities, which may eventually bring success in reading in a foreign language.

The implications of this study are two fold: pedagogical and further research. Firstly, students were found to have low tolerance of ambiguity. Such levels of intolerance can simply interfere with the learning process. As active agents in this learning process, teachers, then, have responsibilities to assist learners in their efforts to succeed in language learning. They should be prepared to set an agenda and share it with their students to help them increase their awareness of classroom procedures as well as the content to be learnt. As suggested by the literature, when

learners are informed about classroom procedures, they feel more comfortable, self-confident and motivated in the language classroom (Dörnyei, 2005; Williams and Burden, 1997), which may in return help lower tolerance of ambiguity. Secondly, as this study also indicated, elementary learners tend to be less tolerant of ambiguity. Therefore, it could be more conducive to learning if teachers adopt a teaching approach, especially with such low proficiency level students, that includes more insight into negative affective factors influencing language learning. This way, teachers are more likely to give valuable guidance and navigation about what and how to learn in the language classroom. Thirdly, the findings show that ambiguity tolerance is closely associated to perceived success in reading in a foreign language. This conclusion calls for the employment of ambiguity reducing strategies by teachers. To do this, they can use a number of pre, while and post reading activities. While pre-reading activities can help learners set an agenda and have a purpose for reading, while-reading activities will reduce any ambiguities inevitable in the process of reading comprehension. Finally, this study showed that being informed about strategies seems to reduce intolerance in the reading process, with high tolerance relating to perceived success. Therefore, this has a clear message for language teachers in that they should be able to identify what strategies their learners use, introduce some alternative effective strategies in real reading tasks such as guessing and inferencing, thus helping students to learn how to cope 'without appeals to authority' (Ellis, 1994: 518).

As for implications for further research, we need to note that this study is not without limitations. Firstly, this study did not employ a standard measure of reading comprehension. Neither did it measure the students' proficiency level through a standardized placement test. Finally, this study focused on a small number of university level EFL learners from one educational context. Therefore, it would be fruitful to further explore the relationship between all these variables employing more standardized measures and larger samples.

This study relied upon learners' reports on how frequently teachers introduced useful reading strategies. Therefore, one cannot be sure of the intensity or quality of the training process the learners received. For this reason, it is recommended that further research into this issue could incorporate measurements of ambiguity tolerance in a planned, deliberate training process. Only then can we be sure of the relationship between the two constructs. These coupled with standardized measures of proficiency levels and reading comprehension can better help us elucidate the issue under question.

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