

**THE AUDITION OF PRIMARY STRESS IN
COMPLEX SENTENCES**

BY TURKISH ENGLISH MAJORS

**Türk-İngilizce Öğretmen Adaylarına Karmaşık Cümleler
Üzerinde Yapılan Birincil Vurgu Testi¹**

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Abstract

The primary stress phoneme carries the meaning meant by the speaker, and if it is not heard by the non-native learners of English on the related word in sentences, the result is the misperception of speech that is converted into foreign accented perception that leads to a foreign accented speech. In order to measure the audition of the primary stress in complex sentences by Turkish English majors, 41 participants at the pre-intermediate English proficiency level participated in the study a research at a private university in Ankara. In the pretest the students listened to 12 complex sentences. After the pretest, speaking sentences with native speaker voices, which were downloaded from electronic dictionaries and text-to-speech-labs from the internet, were used as practice examples for 3+3 hours treatment. Descriptive statistics were used for the pre-and posttests, and the participants' mean accuracy score in the posttest was found to be 75%, with a 12% increase from the 63% accuracy in the pre-test.

Keywords: audition, perception, complex sentences, primary stress phoneme

Özet

Birincil vurgu sesbirimi, konuşmacının ifade ettiği anlamı taşır, cümlelerdeki ilgili kelime yerli olmayan öğrenciler tarafından duyulmazsa sonuç, yabancı aksanlı bir konuşmaya yol açan yabancı alfabe algılamaya dönüşen konuşmanın yanlış algılanışdır. Türk-İngilizce öğretmen adaylarına için karmaşık cümlelerdeki birincil stres testini bir sorun olarak ölçmek için, alt orta seviye dil bilgisine sahip olan 41 katılımcı, Ankara'daki özel üniversitelerden birinde yapılan bir araştırmada katılımcı olarak yer aldı. Ön testte öğrenciler 12 karmaşık cümleyi dinlediler. Ön test sonrasında, sınıf atmosferi ortamında, 3+3 saatlik uygulamalar yapılmıştır. Konuşan sözlüklerdeki karmaşık cümleler ve internet yoluyla kaydedilmiş konuşan karmaşık cümleler, ana dili İngilizce olan konuşucuların sesinden çok sayıda cümle alıştırmaya olarak sınıfta çalışılmıştır. Ön test ve son testte tanımlayıcı istatistikler kullanılmış ve ön testteki doğruluk oranı % 63 iken, % 12 olarak yükselme yüzdesi ile son testin ortalama doğru puanı % 75'e ulaşmıştır.

Anahtar Kelimeler: işitme, algı, karmaşık cümleler, birincil stres sesbirimi.

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1. Introduction

Sentence stress is a difficult area to work on both for non-native learners and teachers. For this reason it's is often neglected in the foreign language teaching arena. The word "intonation" refers to the suprasegmental processes which are stress, juncture (pause) and pitch phonemes. In isolation, each and every word has a primary stressed syllable. On the other hand, in a sentence, some words, such as lexical/content words, carry the syllables with primary stress, and must always be indicated under the term "sentence stress". Therefore, the assignment of sentence stress is the basis of intonation because stress is the degree of breath force on sentences uttered within a sentence.

Speech is divided into so-called tone-units, otherwise called "tone groups" or "intonation phrases", which are parts of connected speech ending in a tonic syllable that contains information the speaker thinks in the sentence. Pitch phonemes depend on what kind of intonation is used in the pronunciation of particular sentences. The pitch changes occurring throughout the whole sentences in forms of tone-units when words are grouped into meaningful phrases are called thought-groups, or the tune or intonation patterns, of the sentence to which typical meanings or functions are associated. Hearing of primary stress phoneme by non-native learners causes problems for learners in both their speaking and listening. It must be borne in mind that English is often referred to as a stress-timed language. In English sentences, "unstressed syllables, occurring irregularly, squeeze in between the stressed syllables which come at a measured rate" (Giegerich, 1992:181). This means that stress in a spoken sentence occurs at regular intervals, and the number of stressed syllables, rather than the number of syllables itself signifies what we mean. Native speakers listen for the stressed words in sentences. Japanese, Turkish, and French accentuate the words in a sentence more or less with equal emphasis while English accentuate certain words to communicate meaning accurately and rapidly. It helps the non-native learner to understand English sentences as well. The four types of sentences (simple, compound, complex, and compound-complex) take different lengths of time to say, and in each thought group, clause or a sentence a primary stress must fall on one of the content words in normal situations: it is not using stress-time in them can make students sound labored when they speak, and may cause irritation on the part of the listener. We do not utter them with the same breath force, prominence, or length. Some words are accentuated loudly while most are uttered quietly. So, although a great majority of English majors are unaware of it, the number and position of primary stress vary depending on the related context they appear, and sentence stress, which helps learners decode the meaning of utterances, is golden key for speaking and understanding English.

2. Review of literature

Right from the beginning, it must be noted that there is a great scarcity of research on the audition of complex sentences. The present study was undertaken to fill this gap in the relevant body of research.

In English, relative clauses are building blocks in the structure of complex sentences; therefore, they are extremely essential because no complex sentences can come into being without relative clauses. Due to their structural complexity, English relative clauses are difficult to acquire for EFL learners (MacWhinney & Pleh, 1988; Hsin, 2005; Reali, & Christiansen, 2006) because pertaining to their length they are difficult to hear as well. Audition and perception of primary stress phonemes of L2 in complex sentences of English is profoundly influenced by the stress pattern characteristics of a listener's native language (L1). This finding supports the idea that the native phonological system, which

is acquired very early in life (Werker & Tees, 1984), dominates the learning process right from the early ages. In the field of foreign language learning, Celce-Murcia, Brinton, & Goodwin, J. M., 1996: 191) claim that “each clause has its own intonation pattern.” Similarly, Richards, Hull, & Proctor (2004: 20) claimed that there are different intonation patterns with clauses in complex sentences

The evaluation of the production of the intonation of adverb clauses with time by Turkish Teachers of English was researched by Demirezen (2015) who discovered that 60.4% of Turkish students of English were unable to put the primary stress on content words. Such an error generally leads the learners to develop an unnatural-sounding, non-native English full of non-native-like intonation patterns that identify them as non-native speakers with their easily discernible accents. Again, the audition of primary stress by Turkish English freshmen majors was studied by Demirezen (2016: 537-546), who found that while overall audition rate of success was 17.47% in the pre-test on hearing the primary stress in words, the student success rate increased to 52.4% in the post-test. This result supports the conclusions by Werker & Tees (1984). Arbisi-Kelm (2003: 35-50) researched the intonation of complex sentences in Farsi and discovered that complex sentences in Farsi follow relatively robust intonation patterns, but still the placement of the primary stress created accent problems for the learners. Similarly, Eghlidi (2016: 88-102) made a brief sketch of intonation patterns of English and Persian by analyzing and discussing the patterns of the two languages in a contrastive method and discovered that “Actually they err while using their version of target language, i.e. interlanguage,” which supports the ideas of Werker & Tees (1984). Hsin (2005) discovered that there is a difficulty hierarchy in English relative clause acquisition for Chinese EFL students. Likewise, MacWhinney & Pleh (1988) mentioned the hardship of learning the processing of restrictive relative clauses in Hungarian. In addition, Reali & Christiansen (2006) claimed that processing of relative clauses was made easier by frequency of occurrence, which reminds us the importance of repeating the relative clause utterances as much as possible during EFL instruction. The assumption is that the longer the relative clauses are, the harder they are to be recognized in terms of their stress patterns pertaining to sentence intonation.

3. Methodology

The aim of this research is to determine the perceptive audition of primary stress phoneme in relatively short and relatively long complex English sentences by Turkish English majors with one main and two subordinate clauses.

3.1. Setting and Participants

Participants are 41 freshmen of the Department of English Language Education at one of the leading Universities in the Faculty of Education in Ankara, Turkey. 30 of them are females and 11 of them are males. Their ages ranged from 18 to 19. The participants were the graduates of Anatolian High Schools and Anatolian Teacher High Schools, so they formed a homogeneous group as they were all in the same department. The study addressed the following research questions:

1. What is the general overall student success rate of all participants?
2. Is there a meaningful difference between the pre-test and post-test results?
3. What is the order of student success in short sentences (1-6)?
4. What is the order of student success in long sentences (7-12)?
5. What is the overall order of student success?
6. Do the participants need a remedial treatment?

3.2. Data collection tools

6 short and 6 long sentences with best audibility were randomly extracted by the unanimous decision of the expert panel members from the speaking Dictionary of *Longman Dictionary of American English* (2008) and *Longman Dictionary of Contemporary English* (2012) and downloaded by the Audacity Program 1.2.6, within Audio Tract Mono 44100Hz 32-bit float.

A committee of three experts was set up to evaluate the 12 test items of complex sentences with two subordinate clauses to achieve inter-rater reliability. The test items were further revised and finalized according to the feedback provided by the expert panel, who also gave their evaluations according to which the test was reshaped.

These 12 sentences, which were set up with 12 multiple choice alternatives, were administrated to the participants as a pretest in a soundproof classroom. Since the title of the research is "The perception of primary stress of complex sentences with one main clause and two subordinate clauses" the participants listened to 12 questions produced from an audio recording of English spoken by native speakers in a shadow listening manner. They listened to each question with five alternatives three times with five second intervals. In addition, while they were choosing the correct alternative, they followed the lines of questions by sight. They only saw the questions as a single line without their punctuation marks. The results of the pre-test were evaluated in accordance with SPSS 20.

3.2.1. Before the pretest

Participants had an intermediate level of knowledge about the place of primary stress (/ˈ/) and its placement in words. They had gone through some practices on audition of the place of primary stress in classroom atmosphere. The recognition tests were conducted by means of listening to simple, compound, complex, and compound-complex word. The other types of exercises practiced in class were broad transcription; fill in the blanks, and doing shadow reading and writing.

3.2.2. After the pretest

After the administration of the pre-test, the teaching of primary stress in all types of words, phrases, clauses and sentences was practiced for 6 hours (3+3) with the aid of taped material and two speaking dictionaries on a computer in a normal language classroom atmosphere. The practices in class were also correlated to copies of exercises which students would write as they heard them read (by means of computer recording) in connection with the related primary stress phonemes. Exercises practiced in class also included certain exercise types in which the participants heard by listening to stress pattern cues in audio-forms spoken by native speakers, whose productions were used as aural-visual stimuli. One month later, the same pretest was administrated to the participants as a posttest in the same manner.

The students, individually equipped with specially modified tape recorders, walkman and computers, which were the available technical devices for the research at the moment, recorded what they were hearing aurally, both their own productions of sentences and of the ones that were exercised in class. Upon finishing their utterances in written and aural forms, they were able to proofread while listening to the tape and computer, thereby determining whether or not they had marked down the primary stress phoneme as they had meant to bestow them.

The teaching of primary stress relation rules were also being taught by dictation practices. Exercises included primary stress phoneme connections in recorded forms via audacity 1.2.6 program on simple, compound, complex, and compound-complex sentences. The results of the pre-test and posttest were entered into to SPSS 20. In addition, a paired-samples t-test was conducted to determine whether the mean difference between two sets of observations is zero.

4. Results & Discussion

The collected data from pre-test and post-tests were entered into to SPSS 20. Our general findings in line with the research questions are presented below.

1- What is the general overall success rate of all participants?

In determining the participants' rate of success at hearing the primary stresses for both tests, descriptive statistics were used to identify the mean score for valid cases. As Table 1 shows, the mean score of the pre-test was 6.3 out of 10 (SD = 1.14), demonstrating that the participants' success rate was % 63 for the pre-test. On the other hand, the mean score of the post-test was 7.54 out of 10 (SD = 0.98). Thus the success rate in the post-test was % 75. Therefore, the participants' post-test scores were higher than their pre-test scores. In terms of overall success rate, the mean was 6.92 out of 10 (SD = 0.76), and thus the percentage of overall success was % 69.

Table 1: Descriptive statistics for pretest and posttest results

		N	Min	Max	Mean	Std. Deviation
Valid N (listwise)	Pre-T	41	3.00	8.00	6.30	1.14
	Post-T	41	5.00	9.00	7.54	0.98
	Overall	41	5.00	8.00	6.92	0.76

2- Is there a meaningful difference between the pre-test and post-test?

In order to find out whether there was a statistically significant difference between the pretest and post-test scores of the participants' hearing of short and long sentences, the Paired Samples T-Test was conducted, assuming that the case for this sample group requires parametric tests in use. A statistically significant difference was found between the pretest scores (M= 6.30, SD=1.14), and post-test scores (M=7.54, SD=0.98) $t(40)=5.32$, $p<.005$ as can be seen in Table 2 below:

Table 2: Paired Samples T- Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pre-T – Post-T	-,12398	,14921	,02330	-,17108	-,07689	-5,320	,000	

As can be seen, the mean score of the posttest is %75 and of the pretest is %63. Therefore, the percentage of accuracy improvement is %12.

3- What is the order of success in short sentences (1-6)?

Table 3: Descriptive Statistics for pretest (short sentences)

	N	Minimum	Maximum	Mean	Percentage	Std. Dev.
Item 3	41	0	1	.926	92.6	.263
Item 1	41	0	1	.926	92.6	.263
Item 5	41	0	1	.804	80.4	.401
Item 4	41	0	1	.707	70.7	.460
Item 2	41	0	1	.512	51.4	.506
Item 6	41	0	1	.487	48.7	.506
Valid N (listwise)	41					

The table 3 displays the pre-test scores of all short sentences in a descending order. The highest score belongs to Item 3 (M = .926) and the lowest score belongs to Item 6 (M = .487). Item (3) carries 53 characters in the complex sentence and is relatively short, holding the highest percentage while item (6) carries 73 characters and shows the lowest percentage, which boils down to mean that the longer the sentence is the harder its audition and perception by the pre-intermediate students. Apparently, sentence length matters both for the audition and perception of complex sentences to Turkish English majors with a pre-intermediate background in English.

Table 4: Descriptive statistics for posttest (short sentences)

	N	Minimum	Maximum	Mean	Percentage	Std. Dev.
Item 5	41	1	1	1	100	.000
Item 3	41	0	1	.951	95.1	.218
Item 1	41	0	1	.926	92.6	.263
Item 4	41	0	1	.853	85.3	.357
Item 2	41	0	1	.682	68.2	.471
Item 6	41	0	1	.658	65.8	.480
Valid N (listwise)	41					

Table 4 above displays the posttest scores for all short sentences in a descending form. As can be seen, the highest score belongs to Item 5 (M = 1), which score also means that all the participants gave the correct answer for item 5. Besides, Item 3 follows it with a mean score of .951 and it is followed by Item 1 (M =.926) and Item 4 (M =.853). The lowest scores are of Item 2 (M = .682) and Item 6 (M = .658).

One can conclude that all the scores show an increase except Item 1 which remains unchanged.

4- What is the order of success in long sentences (7-12)?

Table 5: Descriptive statistics for pretest (long sentences)

	N	Minimum	Maximum	Mean	Percentage	Std. Dev.
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Item 11	41	0	1	.756	75.6	.434
Item 7	41	0	1	.609	60.9	.493
Item 12	41	0	1	.585	58.5	.498
Item 10	41	0	1	.536	53.6	.504
Item 8	41	0	1	.463	46.3	.504
Item 9	41	0	1	.243	24.3	.434
Valid N (listwise)	41					

Table 5 displays the pre-test scores of all long sentences in a descending order. The highest score belongs to Item 11 ($M = .756$), and the lowest score belongs to Item 9 ($M = .243$).

Table 6: Descriptive statistics for the posttest (long sentences)

	N	Minimum	Maximum	Mean	Percentage	Std. Dev.
Item 11	41	0	1	.926	92.6	.263
Item 10	41	0	1	.853	85.3	.357
Item 12	41	0	1	.804	80.4	.401
Item 7	41	0	1	.609	60.9	.493
Item 8	41	0	1	.463	46.3	.504
Item 9	41	0	1	.317	31.7	.471
Valid N (listwise)						

Table 6 above displays the scores of long sentences in a descending order. The highest score belongs to Item 11 ($M = .926$), followed by Item 10 ($M = .853$) and Item 12 (.804). The lowest scores belong to Item 7 ($M = .609$), Item 8 ($M = .463$) and to Item 9 ($M = .317$) respectively. Besides, the scores for the short sentences can be seen to be higher than the long ones.

It can be concluded that the Items 9, 10, 11 and 12 show an increase in success. However, the Items 7 and 8 remained the same.

5- What is the overall order of success?

Table 6: Descriptive statistics for posttest (short and long sentences)

	N	Minimum	Maximum	Mean	Percentage	Std. Dev.
Item 5	41	1	1	1	100	.000
Item 3	41	0	1	.951	95.1	.218
Item 11	41	0	1	.926	92.6	.263
Item 1	41	0	1	.926	92.6	.263
Item 10	41	0	1	.853	85.3	.357
Item 4	41	0	1	.853	85.3	.357
Item 12	41	0	1	.804	80.4	.401
Item 2	41	0	1	.682	68.2	.471
Item 6	41	0	1	.658	65.8	.480
Item 7	41	0	1	.609	60.9	.493
Item 8	41	0	1	.463	46.3	.504
Item 9	41	0	1	.317	31.7	.471
Valid N (listwise)	41					

Table 6 includes all the sentences, both short and long ones in a descending order. The highest score belongs to Item 5 ($M = 1$) and the lowest score belongs to Item 9 ($M = .317$). The other items are also demonstrated in the table.

Posttest percentage values of the sentences that were used as aural stimuli can be stated as follows:

1. She was so nervous she just started saying whatever came to mind. (51 characters, **92.6%**)
2. You're fooling yourself if you think he's going to come back to you. (53 characters, **68.2%**)
3. He discovered that the jewel was fake ten days after he bought it. (51 characters, **95.1%**)
4. You can copy down my answers, although I'm not sure they are right. (53 characters, **85.3%**)
5. I have no doubt in my mind you are the woman I'm going to marry. (51 characters, **100%**)
6. If I make any decisions myself, my boss challenge it is a direct challenge to her authority. (73 characters, **65.8%**)
7. I don't quite believe it when I hear someone claim they can speak more than five languages fluently. (78 characters, **60.9%**)
8. It doesn't necessarily follow that you're going to do well academically even if you're highly intelligent. (86 characters, **46.3%**)
9. Before getting out of bed, I spend a little time thinking about what I'll be doing the rest of the day. (79 characters, **31.7%**)
10. I never thought this rubber band would come in handy when I put it in my pocket this morning. (73 characters, **85.3%**)
11. Her only problem, if you can call it a problem, is that she expects to be successful all the time. (72 characters, **92.6%**)

Processing difficulty in comprehension and production of relative clauses with one main clause and two subordinate clauses in degrees of AUDITION can be listed as follows:

- 1.(9). Before getting out of bed, I spend a little time thinking about what I'll be doing the rest of the day. (79 characters, **31.7%**).
- 2.(8). It doesn't necessarily follow that you're going to do well academically even if you're highly intelligent. (86 characters, **46.3%**).
- 3.(7). I don't quite believe it when I hear someone claim they can speak more than five languages fluently. (78 characters, **60.9%**).
4. (6). If I make any decisions myself, my boss challenge it is a direct challenge to her authority. (73 characters, **65.8%**).
5. (2). You're fooling yourself if you think he's going to come back to you. (53 characters, **68.2%**).
6. (12). Even though my friend was a vegetarian, I didn't tell him that the soup had some meat in it. (72 characters, **80.4%**).
7. (4). You can copy down my answers, although I'm not sure they are right. (53 characters, **85.3%**)
8. (10). I never thought this rubber band would come in handy when I put it in my pocket this morning. (73 characters, **85.3%**)
9. (11). Her only problem, if you can call it a problem, is that she expects to be successful all the time. (72 characters, **92.6%**).
10. (1). She was so nervous she just started saying whatever came to mind. (51 characters, **92.6%**)
11. (3). He discovered that the jewel was fake ten days after he bought it. (51 characters, **95.1%**)
12. (5). I have no doubt in my mind you are the woman I'm going to marry. (51 characters, **100%**).

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11. (3). He discovered that the jewel was fake ten days after he bought it. (51 characters, **95.1%**).
12. (5). I have no doubt in my mind you are the woman I'm going to marry. (51 characters, **100%**).

6- Do the participants need a remedial treatment?

When the scores for both pre-and post-tests are taken into consideration, it can be understood that the participants' scores for posttest are higher than those of pre-test. However, a remedial treatment is needed, when the sampling group is taken into consideration. As the participants are enrolled in an English Language Teaching program, the mean score of 75% success is inadequate although the passing grade is 60%. In addition, there are some items such as Item 9, 8, 7, 6 and 2, with low scores. They can be the focus point for remedial treatment, as well. Besides, further research can be conducted on the reasons why the participants scored low on these specific items.

5. Conclusion

It was the mean score of the participants for the posttest was found out to be 75%, with a 12% rise in success from their score of 63% in the pre-test. The pre-test measured the audition of complex sentences with one main and two subordinate clauses, whose successful perception rate gets lower as the complex sentences go longer by inclusion of two subordinate clauses. Such a situation indicates the *individual limits of phonetic memory and maturational constraint* (Schmid, 2014: 386-410; Izumi, 2003) in foreign language learning and teaching, which signifies the fact that adults English majors differ in their abilities to accurately perceive and retain complex stimuli on the complex sentences in terms of processing difficulty in comprehension. The result goes on par with Kuno's (1975) Perceptual Difficulty Hypothesis (Izumi, 2003). The resulting figures of the present research from 63 % to 75 % cannot be accepted as satisfactory due to passing and proficiency grade scale of many Universities in Turkey. Since the participants are English majors, they must gain scores over 80 or above, which must be the average cutting point of acceptable proficiency in the target language for the sake of

professionalism. For example, Hacettepe University grade system accepts 85-89 out of 100 as A3 with a GPA of 3,50 as proficient; similarly, Bilkent university accepts 92, 5 point with a GPA of A - while Middle East Technical University accepts 84- 89 scale as BA grade with a 3,50 GPA average as a proficient level. In addition, Bahçeşehir University requires 83, 5 for a B+ average with a 3.33 GPA score. I must be borne in mind that in none of these leading universities, the average proficiency success percentage of the English majors is not lower than % 80 level out of 100. Therefore, the cutting point of success percentage of Turkish English majors must be at least 80 out of 100 in Turkey. Of course, scores over 80 out of 100 must be expected from them for professionalism

In this research, it must be noted that students are definitely in need of guidance since they have attained at a level of 75 scores out of 100. Therefore, they must practice with sentence stress on all types of sentences towards intonation correlation in a remedial practice of 3 hours more at least. In this respect, listening to native speakers and authentic audio of sentences in intonation books, electronic dictionaries like *Longman Dictionary of American English* (2008), *Longman Dictionary of Contemporary English* (2012), some sites on the internet like myenglishlanguage.com, <https://englishwithjennifer.com>, JenniferESL, Rachel's English Academy, are only some of the available aids. Fluency in English cannot be achieved unless students practice stress and intonation in all types of sentences with every level of frequency.

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6. If I make any decisions myself, my boss thinks it's a direct challenge to her authority.

- a) if/my/CHALenge b) Myself/boss/it's
c) any/boss/direct **d) deCIision/THINKs/AUTHority**
e) mySELF/boss/authORity

7. I don't quite believe it when I hear someone claim they can speak more than five languages fluently.

- a) beLieve/SOMEone/more b) don't/hear/speak
c) quite/claim/five d) I/hear/LANguages
e) don't/hear/FLUENTly

8. It doesn't necessarily follow that you're going to do well academically even if you're highly intelligent.

- a) FOLlow/Going/inTElligent **b) DOesn't/well/inTElligent**
c) It/do/HIGHly d) neCESSarily/acaDEmically/Even
e) follow/going/intelligent

9. Before getting out of bed, I spend a little time thinking about what I'll be doing the rest of the day.

- a) GETting/time/rest **b) bed/LITTle/what**
c) Before/THINKing/day d) out/spend/Doing
e) bed/time/I

10. I never thought this rubber band would come in handy when I put it in my pocket this morning.

- a) NEver/band/MORning b) I/RUBber/put
c) thought/HANDy/POCket d) thought/RUBber/MORning
e) Never/band/POCket

11. Her only problem, if you can call it a problem, is that she expects to be successful all the time.

- a) PROBLEM/PROBLEM/sucCESSful** b) Only/call/expect
c) PROBLEM/if/time d) her/you/all
e) ONly/PROBLEM/time

12. Even though my friend was a vegetarian, I didn't tell him that the soup had some meat in it.

- a) though/DIDn't/meat b) friend/tell/meat
c) Vegetarian/DIDn't/soup d) friend/I/meat
e) vegeTarian/tell/soup

Appendix 2: The length of the sentences used as the aural stimuli for the research

The following sentences were used as aural stimuli:

1. She was so nervous she just started saying whatever came to mind. (51 characters)
2. You're fooling yourself if you think he's going to come back to you. (53 characters)
3. He discovered that the jewel was fake ten days after he bought it. (53 characters)
4. You can copy down my answers, although I'm not sure they are right. (53 characters)
5. I have no doubt in my mind you are the woman I'm going to marry. (51 characters)
6. If I make any decisions myself, my boss thinks it is a direct challenge to her authority. (73 characters)
7. I don't quite believe it when I hear someone claim they can speak more than five languages fluently. (78 characters)
8. It doesn't necessarily follow that you're going to do well academically even if you're highly intelligent. (86 characters)
9. Before getting out of bed, I spend a little time thinking about what I'll be doing the rest of the day. (79 characters)
10. I never thought this rubber band would come in handy when I put it in my pocket this morning. (73 characters)
11. Her only problem, if you can call it a problem, is that she expects to be successful all the time. (72 characters)
12. Even though my friend was a vegetarian, I didn't tell him that the soup had some meat in it. (72 characters)