Evaluation of the Production of the Intonation of Adverb Clauses with Time by Turkish English Teachers: A Demonstration by Computer Application

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ABSTRACT Adverb clauses can provide additional information about how something is done in relation to time; these clauses are often called “time clauses” or temporal clauses in English grammar books and follow specific patterns of intonation. The purpose of the present study is to investigate the production of temporal clauses produced by Turkish English teachers in terms of how the participants produce the intonation units bounded by fairly perceptible pauses or thought groups. A diagnostic test that included 24 sample sentences on when, before, after, while, until, till, since, as soon as, and whenever which were downloaded by the Audacity 1.2.6 Program from the Longman Dictionary of English. 40 freshmen participants were selected on a voluntary purposeful sampling basis. They read out the sentences and their voices were recorded in a soundproof room. Their intonation was evaluated in connection to the Error Hunt Approach and the Advanced-learner Approach via the Discourse Intonation Approach of Brazil (1985, 1994) and the Neo-speech Analysis program. The data indicated that 60.4 percent of Turkish students of English are unable to manage the intonation of time clauses, which leads them to develop an unnatural-sounding non-native English, full of faulty intonation patterns that identify their easily discernible, non-native accents.

INTRODUCTION

Time adverbials indicate certain references to “time.” When, before, after, while, until, till, since, as soon as, and whenever are some of the adverbial time markers, which are highly functional parts of speech because they answer how, where, when, how often, and how much. Adverbials of time tell us more about verbs by “qualifying” or “modifying” verbs in relation to time by giving additional information. In other words, adverbs of time tell us something about the time that something happens in a course of time. They are introduced by subordinating conjunctions. They have certain intonation patterns in speech. Here, the researcher present the results of a study examining intelligibility and evaluation of the intonation of adverbial clauses of time of Turkish freshmen in the Department of English Language education at Hacettepe University. In this research, adverbials of time like when, before, after, while, until, and since are investigated in relation to their intonation patterns in terms of stress, junctures, and pitch phonemes. This is a seldom-investigated area of research.

An adverb clause of time must meet three requirements: it contains a subject and verb, it needs a subordinate conjunction that keeps the clause from expressing a complete thought, and the clause should answer when? or how often. In many books, grammar rules are given (Altenberg and Vago 2010; Brown 2014; DeCapua 2008; Low 2015; Vince 2008; Swan and Walter 1997; Williams 2005; Kroeger 2005), but without explanation on how to hear these rules in spoken language. It is therefore not common to encounter any effort to improve intonation at the elementary level. At more advanced levels, such as upper intermediate or advanced levels the rules can be learned with more precision.

Adverbials of time introduce adverbial clauses as subordinating clauses, which can take place in different parts of a sentence. According to Altenberg and Vago (2010), sentences begin with adverbs of time, which may require special intonation: when I came to myself, I was lying on the grass. Before we move on, does anyone have any questions? After you get used to driving a car, it becomes second nature. While the cat’s away, the mice will play. Until you do the work properly, I refuse to pay anything.

Adverbials of time can follow the main clause by coming after them:

I hate it when there’s no one in the office.
I was ready to rent an apartment before I saw this nice house. I saw them after I had just arrived. They painted her house while she was at work. Her assistant will work on that project until it is completed.

Grammatical Point of View

Adverbial clauses with time adverbs indicate time-relative activities. Grammatically speaking, the following observations can be given on the grammatical status of time adverbials, each of which may demand certain intonation patterns. Adverbial clauses are shadowed below:

*When* means at or during the time that something happened:
We’ll get some ice cream when we’re done. When I am in the doctor’s office, I always get anxious.

*Before* means earlier than the intended time; earlier than “when”:
Before you forget, you must write it down. We will make popcorn before he leaves the building.

*After* means later than the pointed time: later than “when”:
This message arrived after everyone had gone home. After I had arrived in the city, I saw them working very busily.

*Since* is used to introduce a statement that gives a definite point of time.
It’s been over nine years since our school has won a championship. Since I’ll be on vacation, I won’t be able to attend the meeting.

*Until* means up to the time or point that something happened:
They did not come until the meeting was half over. Until the moon came up, we stayed up talking.

Punctuation of time adverbials in relation to intonation patterns:
The position of an adverbial clause of time to the main clause carries a special importance. If the adverbial clause of time, which is a dependent clause, proceeds to the main clause, which is an independent clause, a comma is required to separate the two clauses:
So, if the adverbial time clause introduces a sentence, a comma is necessary. In terms of intonation, when the adverbial clause of time ends, there is a short duration of a pause, as seen in the following when and while clauses.

From: (http://www.grammar-quizzes.com/adv_whenwhile.html):
A non-progressive verb form is more commonly used (short duration) the adverb *When* is specially complemented by a clause with an activity with a short interruption, or when occurring nearly at the same time or shortly after another activity.

When I called, she was watching her baby. (short interruption; “at the moment”)

The adverb *While* is complemented by a clause with a same-time (simultaneous) activity it includes a verb expressing duration. In this sense, it must be noted that the while-clause often expresses a background activity to the focus-activity in the main clause.

While he was talking, he was holding his baby. (ongoing; “during the time”)

Review of Literature

It is true that many recent EFL materials overlook or omit the teaching of intonation to a great extent; there is almost no reference to the teaching of intonation of adverbial clauses. Learners are offered very simple rules about the content of intonation patterns of compound, complex, and compound-complex sentences. Is it because the teaching of intonation in English not possible, if not an impossible task? The matter of the fact is that intonation teaching is often perceived
as a difficult attempt, due to the complexities of the intonation system of patterns.

Hismanoglu (2012) discovered that Turkish students have serious placement problems of primary stress on words, compound words, and compound adjectives. Demirezen (2012) found that word stress had a meaningful impact on vocabulary item relations in teacher training. De Bot (1986), Watanabe (1988), Hahn (1999), Pennington and Ellis (2000) reported that non-native students have great problems in internalizing the functions of primary stress.

Wennerstrom (1994) found that native speakers of “Thai, Japanese, and Spanish failed to use pitch movement to highlight new or contrastive information to the same level of perception that native English speakers do” (Hahn 1999: 203). All of the scholars agreed on the fact that native speakers have difficulty in mastering the mobile primary stress system in English. Morley (1991:493) identified supra-segmentals as one guiding principle for pronunciation teaching in the field of teacher education. Demirezen (2013a) demonstrated the difficulty of the English rising terminal juncture phoneme in foreign language education by computer applications. In addition, Demirezen (2013b) analyzed the importance and functions of sustained juncture phoneme in teaching spoken English in teacher education by computer and remarked that the perception and production of sustained juncture in restrictive and non-restrictive clauses are problematic for Turkish students. Moreover, Demirezen (2013d) made a strong emphasis on the importance of rising juncture in relation to intonation in the arena of foreign language teacher education and remarked that it is a serious problem for Turks learning and producing the question forms of English sentences. Demirezen (2013c) investigated the difficulty of the learning intonation on wh-questions in teacher development in relation to text-to-speech labs on computer. Also, Demirezen (2013e) produced an analysis of the intonation patterns of conjunction “or” by computer and stressed its functions in teacher education, by giving authentic speaking examples in the form of sentences in English. Consequently, it was discovered that a great majority of intonational patterns of English work contrary to Turkish intonation, which cause very serious damage to the pronunciation and intonation of Turkish students and teachers of English language education.

Because it seems to be an impossible task due to the complexities of the English intonation system, teaching English intonation is frequently viewed as a challenging job (Thompson 1995; Saricoban 2001). Most ELT, EFL, and SLA textbooks pose grammar rules on the pages of their grammar books, while the CDs of these books don’t adequately show the spoken forms of English sentences in terms of intonation patterns. Therefore, “with intonation, it is rare to find any attempt to refine or develop, at a more advanced level, the rules that were taught to learners at an elementary or intermediate level” (Cauldwell and Hewings 1996: 327). The average teacher with an average capacity to teach is uncomfortable with intonation perceives it as a difficult subject: difficult to show pitch patterns, difficult to describe vividly, and difficult to formulate rules which make the students be able to generate appropriate examples for themselves. “As such, it tends to receive little explicit focus in the classroom” (Woolard 1993: 24).

Grammatical Approach is perhaps the dominant approach used in Turkey. Grammatical Approach is based on a model which leads to perception “to make a correlation between the grammatical type of question and the intonation pattern chosen. For example, Headway Intermediate Pronunciation Unit 2.7 provides an exercise on ‘Rising and falling intonation in questions’. Learners are asked to listen to two types of questions” (Cunningham & Bowler 1990: 338) and then they are asked to formulate a rule about this (Thomson 1995: 235). Yet this is a very limited application of intonation in English sentences, which may only be on the perception scale, not the production one. Thus, there are widespread uncertainties in the minds of non-native teachers of English on the teaching of sentence intonation, which is frequently neglected or avoided for teaching purposes. All in all, Turkish teachers of English seem to be helpless when it comes to the teaching of various types of intonation in English sentences.

**intonational Remarks**

O’Connor and Fletcher (1989: 21) state that “in sentences with a main clause and a subordinate clause, a rising tone is required for the subordinate clause and a falling tone comes in for the main clause,” as in:

Before I read this novel, I thought stress was an executive disease.
Before I read this novel ↑ thought stress was an executive disease↓

However, when we observe this type of intonation tone, we soon discover there can be exceptions to this rule, for example:

Even if it rains he'll come.

Even if it rains→he'll come↑

where the falling tone occurs on the subordinate clause, and the rising tone comes on the main clause. “Few post-elementary ELT textbooks draw attention to such exceptions, or attempt to give students guidance in understanding them” (O’Connor and Fletcher, 1989: 21-22).

When the adverb clause finishes the sentence, there is no need for a comma. It is because of this fact that the intonation may show different manifestations. For example, the intonation pattern can take a /231/ pitch pattern (tone), without an internal pause, whose waveforms with stress and juncture can be demonstrated as follows:

You shouldn’t judge him until you know the circumstances↑

↓You shouldn’t’JUDGE him until you know the circumstances↓

Since no pause is heard in the whole utterance of the sentence “You shouldn’t judge him until you know the circumstances,” there is no need for a comma.

Similarly, in the sentence “He was nine when his father died”, the adverbial clause part of it does not require a comma, as heard in the utterance of the native speaker:

He was nine when his father died.

↑He was’NINE when his father died↑

But, if the adverbial clause of time begins the sentence, in most occasions a comma is put after the end of the adverbial clause, which calls in the placement of a sustained juncture phoneme to show the existence of a comma at that junction:

When lead is added to petrol, it improves the car’s performance.

↑When lead is added to‘PÉTROL’→it improves the car’s per‘FÓRmance↓

A similar incident takes place in the following example:

While it was a good school, I was not happy there.

↑While it was a’GÓOD school→I was ’NÓT happy there↓

Conversely, a comma is put by some writers when the main clause begins the sentence (Longman Dictionary of American English 2008), as heard in the sentence:

That region has plenty of water, while this one has little.

↑That region has plenty of‘WÁTER→while ’THÍS one has little↓

There are many supra-segmental factors at play for the learning of intonation in general. That’s why, according to Taylor (1993: 2), “intonation is an immensely difficult and complicated subject which is not teachable, and possibly not learnable either.”

**METHODOLOGY**

The purpose of this research was to investigate the production of intonation patterns of adverb clauses in forms of complex sentences by 32 Turkish freshmen of English language education in Hacettepe University, Faculty of Education, in the Department of English Language Education.

The research addressed the following research questions:
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1. Do the participants use /232/ intonation pattern when the subordinating clause precedes the main clause?
2. Do they use a pause when the main clause precedes the subordinate clause?
3. Do they put the primary stress on the context words?
4. Do they sound unnatural in terms of intonation?

Setting and Participants

The study was carried out at Hacettepe University, in the Faculty of Education, in the Department of English Language Education. Subjects were freshmen, 5 males and 27 females, whose ages ranged from 18 to 19. They were graduates of Anadolu Lisesi (Anatolian High School) and Anadolu Öğretmen Lisesi (Anatolian Teacher School) in 2012.

They studied, for about 9 hours, primary stress in sentences with the researcher. During the practice, over 300 examples on word, phrase, and sentence levels with primary stress samples were handled. By means of the Grammar Intonation Approach, they listened to the sentences uttered by native speakers from the computer and were asked to diagnose the places of primary stresses. Production practices were conducted via the Discourse Intonation Approach, as presented in Brazil (1985, 1994).

The students, in their free time, read out 24 sentences that included 24 sentences with time adverbials like when, before, after, while, until, and since, each of which carried two main clauses that began the sentence and two subordinate clauses that followed the main clauses. The participants, on a voluntary, purposeful basis, taped their utterance by themselves away from noise so they were under no pressure or anxiety.

Data Gathering Process

The participants were given 24 sentences that included complex sentences conjoined with when, before, after, while, until, and since, each of which carried 4 sentences in which two were main clauses preceding the adverbial clauses while the other two sentences they were subordinate clauses which began the sentences.

As previously mentioned, the participants had previously studied the place of primary stress in English sentences on the sentences in the Longman Dictionary of American English.

Table 1: Diagnostic test

<table>
<thead>
<tr>
<th>Que. 1#</th>
<th>Que. 2#</th>
<th>Que. 3#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When the meal was finished, Rachel washed up and made coffee.</td>
<td></td>
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<tr>
<td>2. When I watch him play, I just can’t take my eyes off him.</td>
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<tr>
<td>3. I was in the shower when the doorbell rang.</td>
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<tr>
<td>4. Why does she steal things when she could easily afford to buy them?</td>
<td></td>
<td></td>
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<tr>
<td>5. Before we move on, does anyone have any questions?</td>
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</tr>
<tr>
<td>6. Before I could say anything more, Holmes had rushed off towards the station.</td>
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<td></td>
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<tr>
<td>7. It will be several days before we know the results.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. You have to pass a test before you get a license.</td>
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<tr>
<td>9. After numerous delays in the project, some people began to get impatient.</td>
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<td></td>
</tr>
<tr>
<td>10. After all the trouble I had, Reese didn’t even say thank you.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I am not surprised he left her after the way she treated him.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. How can you treat me like this after all I’ve done for you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. While it was a good school, I was not happy there.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. While she was asleep, the thieves broke in and stole her handbag.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Would you look after the children while I do the shopping?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. We plan to stay at a bed and breakfast while we’re in England.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Until we find it, we can’t leave.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Until I have got all the information, I cannot comment further.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. We won’t start until everyone’s here.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. You’ll just have to wait until they call your name.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Since I was a boy, there have been many changes around here.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Since Jane was born, I’ve known her.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. I haven’t seen him since we graduated from high school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. I hadn’t seen her since she went to live in Cyprus.</td>
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</table>
(2008) and the Longman Dictionary of Contemporary English (2009). The placement of primary stress and secondary stress were practiced from the voices of native speakers in these dictionaries on hundreds of words, phrases, clauses, and sentences in class.

After two weeks, the participants are asked to tape their utterances by putting a primary stress on the content words in the main and subordinate clauses in the following diagnostic test. They taped their utterances and handed the tapes in to the researcher. The sample sentences were taken from authentic speech, and were based on the Discourse Intonation Approach as presented in Brazil (1985, 1994; Cauldwell and Hewings 1999: 327-333). The Discourse Intonation Approach has an advantage to explain both the occurrence of examples and their variations which conform to the textbook rules. In addition, all intonation preferences are regarded as being associated with the setting in which they take place (Table 1).

**Data Analysis**

The students voluntarily taped themselves and handed in their taped material to the researcher. To achieve inter-reliability, a commission of three experts on this issue was convened. The researcher and the three members of the commission worked together on the scorings. Each sample sentence in the corpus of the diagnostic test was evaluated individually.

In the evaluation of the diagnostic test, the Error Hunt Approach and the Advanced-learner Approach were utilized in relation to the Grammar Intonation Approach. During the analysis of the utterances of the participants, the existence of a primary stress, both in the main clause and subordinate clause, was accepted as a correct utterance. If there was only a single stress on the content words of either the main clause or the subordinate clause, this kind of utterance was not accepted as correct. In addition, if the participants’ utterance carried more than one primary stress in the main or subordinate clauses, they were not accepted as correct.

**RESULTS AND DISCUSSION**

**The Reliability of the Test**

In statistics, the reliability of a test is measured by Kidder–Richardson Formula 20 (KR-20) which was first published in 1937 (Kidder and Richardson 1937) titled “The theory of the estimation of test reliability,” in *Psychometrika*, 2(3): 151–160). Later, this case of statistics was revised by Stone and Wright (1999), which works as a measure of internal consistency reliability for measures with dichotomous choices. As the current instrument used in this research consisted of such dichotomous items as correct and wrong (0-1), the KR20 reliability test was employed to reveal reliability levels.

KR20 test was performed through Microsoft Excel software as there was no way to calculate it in SPSS 20. The results are as follows (Table 2):

<table>
<thead>
<tr>
<th><strong>Table 2: KR20 Reliability test results</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KR20 coefficient</strong></td>
</tr>
<tr>
<td><strong>ITEMS</strong></td>
</tr>
<tr>
<td><strong>24</strong></td>
</tr>
<tr>
<td><strong>N</strong></td>
</tr>
<tr>
<td><strong>32</strong></td>
</tr>
<tr>
<td><strong>KR20 Reliability Test Results for Part 1</strong></td>
</tr>
<tr>
<td>(Q 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22)</td>
</tr>
<tr>
<td><strong>KR20 coefficient</strong></td>
</tr>
<tr>
<td><strong>0.61 &lt; 0.70 (Acceptable)</strong></td>
</tr>
<tr>
<td><strong>ITEMS</strong></td>
</tr>
<tr>
<td><strong>12</strong></td>
</tr>
<tr>
<td><strong>N</strong></td>
</tr>
<tr>
<td><strong>32</strong></td>
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</tbody>
</table>

This is the total reliability of the 24 questions, corresponding to the first research question. The result is 0.91, which means that the test is highly reliable because the score is far greater than 0.70 (Table 3).

<table>
<thead>
<tr>
<th><strong>Table 3: KR20 Reliability test results for Part 1</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KR20 Reliability Test Results for Part 1 (Q 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24)</strong></td>
</tr>
<tr>
<td><strong>KR20 coefficient</strong></td>
</tr>
<tr>
<td><strong>0.78 &gt; 0.70 (Good)</strong></td>
</tr>
<tr>
<td><strong>ITEMS</strong></td>
</tr>
<tr>
<td><strong>12</strong></td>
</tr>
<tr>
<td><strong>N</strong></td>
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<tr>
<td><strong>32</strong></td>
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</tbody>
</table>

According to KR20 calculations, the reliability coefficient of the second part equals 0.61, which means that this part has an acceptable reliability level. The acceptability level is between 0.6 and 0.70 (Table 4).

<table>
<thead>
<tr>
<th><strong>Table 4: KR20 Reliability test results for Part 2</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>KR20 Reliability Test Results for Part 2 (Q 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24)</strong></td>
</tr>
<tr>
<td><strong>KR20 coefficient</strong></td>
</tr>
<tr>
<td><strong>0.78 &gt; 0.70 (Good)</strong></td>
</tr>
<tr>
<td><strong>ITEMS</strong></td>
</tr>
<tr>
<td><strong>12</strong></td>
</tr>
<tr>
<td><strong>N</strong></td>
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<td><strong>32</strong></td>
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This part indicates that the 3rd research question, according to KR20 calculations, has a reliability coefficient equal to 0.78, which means that this part has a good reliability level, which is
PRODUCTION OF THE INTONATION OF ADVERB CLAUSES

greater than 0.7. Again, any conclusion over 0.7 is considered to be good.

All in all, the KR20 tests indicated that reliability levels of the 24-item test are enough to perform further statistical procedures.

The present study is a descriptive one that seeks to investigate the following research questions in the intonation of the utterances of 32 participants. The purpose of this research is to identify the following difficulties:

1. Do the participants use /232→ intonation pattern when the subordinating clause precedes the main clause?

As seen in the appendix, the participants used the→232'! / the intonation pattern properly in questions 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, and 22. This pattern indicates that when the subordinating clause in relation to time precedes the main clause, and if there is a comma at the end of it, the time adverbial clause ends with a pitch phoneme /2/, which indicates that the utterance is not terminated at that moment and some more will soon come. In addition, there is a pause that lasts one second or more with the accompaniment of a sustained juncture phoneme. Apparently, the existence of the comma helps the participants to make the required pause as a grammatical help (SPSS 20) (Table 5).

Table 5: Correct and wrong rates in the /232→ intonation pattern

<table>
<thead>
<tr>
<th></th>
<th>Correct rate</th>
<th>Wrong rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>94.1%</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

2. Do they use a pause when the main clause precedes the subordinate clause?

The rate of success drops a bit when the main clause comes first and the subordinate clause comes second, as occurred in the test items 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, and 24, as seen in the following descriptive statistics (SPSS 20) (Table 6).

Table 6: Correct and wrong rates when the main clause precedes the subordinate clause

<table>
<thead>
<tr>
<th></th>
<th>Correct rate</th>
<th>Wrong rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>64.4%</td>
<td>35.6%</td>
</tr>
</tbody>
</table>

The participants tended to pause, which is a bit slighter than the first one as the main clause terminates; this seems to be an assimilatory process for them.

3. Do they put the primary stress on the context words?

The participants were not successful at this point, as seen in the descriptive statistics (SPSS 20) (Table 7).

Table 7: Correct and incorrect rates for the primary stress on the context words

<table>
<thead>
<tr>
<th></th>
<th>Correct rate</th>
<th>Wrong rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>39.6%</td>
<td>60.4%</td>
</tr>
</tbody>
</table>

Even though they studied the placement of primary stress on words, phrases, clauses, and sentences by applying the primary stress rules on the spoken English of sample sentences of the Longman Dictionary of American English (2008) and the Longman Dictionary of Contemporary English (5th Edition 2009) via listening comprehension for 9 hours, they had a 60.4 percent error rate. Apparently, Turkish participants find the primary stress patterns of English challenging.

The main reason behind this error is the typology of English language, which comes from a stress-time type of language. As opposed to this, Turkish, which is the mother tongue of the participants, has a syllable-timed nature. Turkish, as a syllable-timed language, tends to give its syllables approximately equal prominence; in other words, in Turkish, syllables take up roughly the same amount of time. In addition, Turkish has no reduced vowels. The transfer from the native Turkish in relation to stress recognition and production interferes with learners’ ability to appropriately produce English-like stress alternations in a phrase, clause, and sentence.


It was discovered in this research that misplacement of the primary stress on the content words of clauses impedes the Turkish participants’ grasp of the rhythm of adverbial clauses. Moreover, they give less energy of pitch and volume to the content words on which the primary stress falls in their utterances. There were also examples on primary stress correctly placed, incorrectly placed, or missing entirely on the adverbial clauses. Its correct placement improves the intelligibility of speech. This is a typical case...
of L1 intrusion over L2. In English discourse, thus, correctly-placed primary stress signals new and contrastive information. Therefore, it plays a crucial role in communication by putting the greatest meaningful impact on the comprehensibility English by the non-native learners of English.

4. Do they sound unnatural in terms of intonation?

Turkish, like French, Italian, Catalonian, Icelandic, Cantonese Chinese, Mandarin Chinese, Georgian, Welsh, and Slovene, are usually cited as being a perfect example of syllabic isochrony. Arabic, Danish, Faroese, English, German, Norwegian, Portuguese, Persian, Russian, Swedish, and Thai are typical stress-timed languages with stress time musicality. Due to the syllable-timed nature of Turkish, the participants cannot catch the rhythm of English. This case is also termed isochrony, which is accepted as the rhythmic division of time into equal portions by a language. According to Wells (2006: 3), rhythm is an aspect of prosody, the others being intonation, stress, and tempo of speech. In Turkish, the duration of every syllable is equal, but at the opposite pole; not so in English, because the temporal duration between two stressed syllables is equal. Stress timing is strongly related to vowel reduction processes (Gimson 1989; Wells 2014). The stress and vowel structure permits the incident of getting roughly equal intervals among the syllables. In addition, Halliday (1985: 272) expresses that “there is a strong tendency in English for the salient syllables to occur at regular intervals; speakers of English like their beats to be all roughly the same length”. In the connected speech of English, there is also a strong inclination to make the stressed syllables follow each other as nearly as possible at equal distances, even though vowel reduction seems to harm this process. The reduction of all vowels of English into schwa [Y] cannot be heard by the participants. The misplacement of the primary stress by Turks on the words of English gives them an accent problem, which in turn makes them sound unnatural or non-native by developing the wrong intonation pattern.

Non-native speech is recognized by the erroneous productions of the non-native speakers. Even if you don’t produce any utterances that are ungrammatical per se, you might give yourself away without using correct pronunciation and intonation features of English. In terms of pronunciation, native speakers are tuned to all sorts of fine phonetic details. Some English consonant and vowel phonemes and phonotactic patterns are not available in Turkish, and this helps accent development.

Your articulations must be attuned to tiny details of the target language. The pronunciation of vowels stands out as important. If the quality of your consonants and vowels are very close to that of a native speaker, you could give yourself away by other subtle differences, like putting the primary stress on content words as a supra segmental phoneme and in the duration of vowel sounds and secondary articulations.

All in all, these contrary consonant and vowel articulations build up accent problems which come from slight differences in the structure of your native language, totally bleeding into your English that makes you sound unnatural or like a non-native speaker. Many Turkish speakers of English do not realize that they are using rules from their own language that are not compatible with the rules of English. Since they assume the rules to be true, their accent goes astray because people often don’t realize that they are speaking with a non-native-like intonation pattern. As professional teachers of English, they should abide by the TESOL-Law Draft Code of Ethics.

CONCLUSION

As previously mentioned, there are some phenomena at play in the faulty learning of the intonation of adverbial clauses by Turkish students of professional English. Firstly, there is scanty explanation on how to learn and teach the intonation rules. There are deficiencies in giving the rules and general points about on the intonation in the available textbooks. A casual research through recently-published EFL teaching materials will likely to show that intonation is either completely missing or dealt with in a rather haphazard way in many of them. In addition, many speakers violate the rules of intonation on them in connected speech, which makes their internalization doubly hard and confusing. In this research, the third research question indicates that Turkish students of English (60.4%) are unable the put the primary stress on content words, which leads them to develop an unnatural-sounding non-native English full of a non-native-like
intonation patterns that identify them with their easily discernible accents.

**RECOMMENDATIONS**

A workable teaching model must be developed to eradicate the setbacks created by the syllable-timed nature of Turkish while teaching English. Students must be urged to acquire appropriate intonation patterns via exposure to authentic (in dictionaries, audio-books) or quasi-authentic listening materials and practice activities, such as listen-and-repeat or language awareness tasks, or by means of dialogues, live chats, and interviews. When it comes to the learning of intonation patterns, it must be kept in mind that the development of good intonation habits is best dealt with via exposure to, repetition and imitation of contextualized examples with plenty of opportunity of practice. As previously mentioned, the misplacement of the stress phonemes of English on words, phrases, clauses, and sentences is an apparent foreign accent developer for Turks.

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