

TÜRK ÖĞRENCİLERİN TELAFFUZ HATALARI:
PARÇALAR ÜSTÜ ÖZELLİKLER

PRONUNCIATION PROBLEMS OF TURKISH STUDENTS:
SUPRASEGMENTAL FEATURES

Mustafa Gültekin
(Yüksek Lisans Tezi)
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THESIS OF MASTER OF ARTS
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YÜKSEK LİSANS TEZ ÖZÜ

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Dil İnsanlar arasında iletişimi sağlayan önemli bir araçtır. Bununla birlikte dinleyici ile konuşmacı aynı dili kullanmasına rağmen bazen iletişimde kopukluklar meydana gelir. Bu gibi durumlarda iletişimi sağlaması gereken dil, anlaşılmaz olur. Özellikle yabancı dil öğrenen öğrenciler, o dili ana dili olarak kullanan kişilerle iletişimlerinde telaffuz farklılıkları nedeniyle sorunlar yaşamaktadırlar. Genelde telaffuz derslerinden bahsedildiğinde öğrenciler için problem olarak parçalı (segmental) sesletim öğeleri akla gelmesine karşılık, aslında anlaşılabilirliği etkileyen asıl sorunun parçalar üstü (suprasegmental) sesletim öğelerinden kaynaklandığı söylenmektedir.

Bu çalışmada İngilizce öğrenen Türk öğrencilerin telaffuzlarının, ana dili İngilizce olan kişilere göre anlaşılır olup olmadığı araştırılmış ve İngilizce öğrenen Türk öğrencilerin telaffuz-hata envanterinin çıkartılması amaçlanmıştır. Çalışmada Anadolu Üniversitesi Eğitim Fakültesi İngiliz Dili Eğitimi Anabilim Dalı'nda birinci sınıfta okuyan 20 öğrencinin anlık konuşmaları kaydedilmiş ve bu konuşmalar dört İngiliz ve altı Amerikalı İngilizce öğretmenlerine dinletilmiştir. Alınan değerlendirmeler sonucunda öğrencilerin telaffuz-hata envanteri çıkartılmıştır.

Çalışmanın sonucunda İngilizce öğrenen Türk öğrenciler için vurgu, ritim ve tonlama gibi parçalar üstü sesletim öğelerinde yapılan hataların telaffuzu etkileyen en önemli hatalar olduğu ortaya çıkmıştır. Bu nedenle İngilizce öğretiminde telaffuz derslerine ve özellikle parçalar üstü sesletim öğelerinin öğretilmesine ihtiyaç vardır.

THESIS OF MASTER OF ARTS

ABSTRACT

PRONUNCIATION PROBLEMS OF TURKISH STUDENTS:
SUPRASEGMENTAL FEATURES

Language is an important means of communication between people. Although both speaker and listener use the same language, there are sometimes communication breakdowns. In such cases, the language becomes unintelligible especially students who are learning a foreign language have some problems due to pronunciation differences when they talk to a native speaker. When pronunciation lessons are considered, it is thought that the segmental features are problematic for students. However, the main factor affecting intelligibility is the suprasegmental features of pronunciation such as stress, rhythm, and intonation.

The study attempted to determine whether the pronunciations of Turkish students are intelligible for native speakers and to take an inventory of the students' pronunciation problems. There were 20 first year students from Anadolu University Education Faculty English Teaching Department participated into this study. While they were speaking spontaneously on some topics, they were recorded. These speech samples were listened by 4 British and 6 American English teachers and by this way a pronunciation problem inventory was prepared.

Based on the results of the study, problems of suprasegmental features such as stress rhythm, and intonation are found to be problematic for Turkish students. Among these problems, failure to blend well, to make smooth transitions between words or syllables is rated as problematic by 70.5% of the informants; stress on wrong syllable of words of more than one syllable is rated as problematic by 58% of the informants; unnatural intonation at the end of statements is rated as problematic by 54% of the informants; unnatural intonation in general questions is rated as problematic by 30.5% of the informants; improper division of sentences into thought groups is rated as problematic by 26.6% of the informants; Improper sentence stress is rated as problematic by 25% of the informants; and unnatural intonation in special questions;

and unnatural intonation in direct address are rated as problematic by 10% of the informants. Therefore, it is important to teach pronunciation, especially suprasegmentals in schools.

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1.INTRODUCTION

1.1.Language as a Means of Communication

Language is a system of communication by which people communicate with each other. For example, Macmillan Contemporary Dictionary (1983: 575) defines language as, “all the vocal sounds, and the written symbols representing them, that make up a system by which the members of a nation, tribe, or other group communicate with each other”.

Although people have many ways to communicate with each other, the two most common media used in communication are speech and writing (König, 1993: 4). When these two modes of language are compared, there is a primacy of speaking over writing (König, 1993: 4). Speaking is used more often than writing in daily life. König (1993: 4) explains the reason why speaking has a primacy over writing as follows “Children learn to speak before they learn to read and write. Speech is learned in a natural setting, but formal instruction is necessary in order to learn writing. Speech is older and more spread than writing. A great number of languages spoken in the world have not been represented in writing, but there are no communities known which do not make use of spoken language”.

Spoken language has its own properties which consists of a combination of both segmental and suprasegmental features. While segmental features consist of individual sounds, suprasegmental features consist of how these sounds are combined to form words, across words (linking), word stress, sentence stress, and intonation of the language. The smallest units of information when pronouncing a language are speech sounds which are consonants and vowels (Halbert, 1999: 1). Knowing how to accurately produce these sounds will help the speaker to speak with greater precision and reduce misunderstandings. However, speakers do not use sounds alone, rather these sounds are combined to form words. Therefore, accurate pronunciation at the word level requires that the speaker understand and accurately use word stress which is stressing the appropriate syllable of a word (Halbert, 1999: 1). For example, when stressed syllables are shown in bold, the syllables of the following words are as follows (Halbert, 1999: 2)

desktop

leader

design

correct

intention

beautiful

Similarly, Prator (1957: 18) reports that “if you stress the wrong syllable in the word it may be quite impossible for anyone listening to understand what you are trying to say”.

Another feature of spoken language is blending, or linking which is the part of pronunciation which involves linking the ends of words with the beginnings of the following words (Halbert, 1999: 2). As Mortimer (1977 cited in Temperley, 1987: 64) argues “to pronounce English fluently, it is necessary to link words together as a native speaker of English normally does”. Linking words together allows the speaker to say parts of the phrases faster which affects the rhythm of the statements (Halbert, 1999: 2). According to Halbert (1999: 2), for example, the words in sentences are linked as follows

I'll see you. ---" I'llseeya."

He had a lot of questions. --- " He hadalotaquestions "

Another feature is rhythm. As Prator (1957: 25) argues “we do not really talk in words, most of the time , but in sentences, or at least phrases”. Therefore, as Halbert (1999: 2) states “the rhythm, stressing the important words of your statements and reducing the less important words, has a profound effect on how easily people understand you when you speak”. The following sentences should be stressed as follows (Halbert, 1999: 2)(The stressed words are shown in bold).

The **Sharks** blew another **game** last night.

It seems like they can't win **big** games, **clutch** games.

Well, I guess there's always **next** year.

Yeah, and there's **always** the **Niners**.

This is because native speakers of the language expect the material to be presented a certain way and when the speaker's stress and rhythmic patterns meet the listener's expectations, the listener hears them more clearly and so s/he understands the speaker's idea more precisely, but when the stress and rhythmic patterns don't meet the listener's expectations, the listener is distracted or misunderstands (Halbert, 1999: 2).

The other feature of spoken language is thought groups and pause. As Gilbert (1987: 38) reports "musical signals are used to mark the end of thought groups. The listener is aware of the grouping because the speaker marks the end of a group with a pause". If linking is properly used in the speech, the listener will understand the difference between the pairs of the following sentences (Gilbert, 1987: 38).

They like pie and apples.

They like pineapples.

"Alfred," said the boss, "is stupid."

Alfred said, "The boss is stupid."

On the other hand, intonation which is the tune of what we say is another feature of spoken language. More specifically, it is the combination of musical tones on which we pronounce the syllables that make up our speech (Prator, 1957: 41). "Producing the rising and falling tones of the language allows us to reveal our meaning more precisely and to speak more efficiently. We differentiate certain questions and statements using intonation. In addition we separate parts of statements with intonation" (Halbert, 1999: 2). Speakers use intonation patterns to separate ideas, distinguish questions and sentences, show special emphasis. According to Halbert (1999: 2) a speaker can express a variety of ideas by using intonation.

1. Distinguishing yes/no questions and statements

Sue: Really?

Joe: Really

2. Separating ideas or items of a list

There is a lot of traffic on the highway, so we'll have to take surface streets.

We are going to need good planning, good financing and good luck.

3. Emphasizing key words

The CFO quit
 I think everyone should attend.

Key

Rising intonation ↗

Falling intonation ↘

Speaking through which much of the daily communication takes place, is then a complex process which involves both the production of segmental features, i.e., individual sounds, and the right patterns of suprasegmental features such as stress, rhythm, linking, thought groups and pause, and intonation. Therefore, a speaker should combine these features of spoken language in his/her speech to convey his/her ideas (Mackey, 1965 cited in Bygate, 1987: 5).

Because speaking is the most commonly used skill in daily life, it is especially crucial for the speakers to be successful in this skill. In language teaching, however, the focus of speaking classes is generally on accuracy and fluency. Accuracy refers to the use of correct grammar, correct sentence structure, and choice of vocabulary items while fluency refers to the ease a user has in using the language. It is believed that accuracy and fluency are interrelated and the major task is to balance these two points so that the learners are able to communicate adequately (Ülserver, 1993: 55). On the other hand, a language learner could be accurate and fluent yet his/her speech may be unintelligible.

As a speaker, many learners of English have a communication breakdown with a native-speaker of English due to pronunciation differences. In many situations, they find that they are not understood because of their pronunciation. Pronunciation refers to not only individual sounds, but also suprasegmental features. Therefore, it is important for a speaker and a listener to share similar features of the language to achieve meaningful communication. However, because different nationalities have different patterns of pronunciation (Hycraft, 1991: 2), pronouncing the target language with the patterns of the native language will cause problems and/or unintelligibility in communication. Because “paralinguistic features such as pitch, intonation, tone of voice and gesture play an important part in conveying the meaning

of the spoken message” (König, 1993: 8), in language learning, a special attention should be directed to teaching of these features. Thus, Means (1998: 1) and Bowen & Marks (1994: 72) argue that “in learning to speak another language, one needs to learn the rhythm, intonation, and stress in the language, not just vocabulary, pronunciation, grammar, etc. If words and sentences are not spoken with the correct rhythm, intonation, and stress, they may not be comprehensible to a native speaker”. Similarly, Haycraft (1971: 10) states “the wrong stress may confuse or alter the meaning of a sentence, the wrong intonation will convey the wrong mood or attitude, and given the wrong stress and the wrong intonation, a sentence may appear incomprehensible or misleading though the individual sounds and grammatical structure are perfect”. Tench (1981: 1) also argues that “if a learner’s general aim is to talk intelligibly to others in another language, a reasonable pronunciation is important”. Thus, pronunciation plays an important role for a language learner’s speaking to be intelligible.

1.2. What is Pronunciation?

Although the effects of a reasonable pronunciation are evident, teaching pronunciation has not been very popular. The teachability of pronunciation has been debated and as a result, pronunciation teaching was regarded as unimportant. It is believed that only few persons can ever achieve native-like pronunciation in the foreign language, especially those who learn to speak a second language after puberty (Scovel, 1969 cited in Crawford, 1991: 106). According to this group of sceptics “one cannot accomplish good pronunciation whatever s/he practices” (Orion, 1989; cited in Acton, 1997: 1) and as a result, it is believed that it is useless to try to teach pronunciation because “pronunciation practice in class has little effect on the learner’s pronunciation skills and, moreover that the attainment of accurate pronunciation in a second language is a matter substantially beyond the control of educators” (Suter, 1976 and Suter and Purcell, 1980 cited in Otlowski, 1998: 2).

These arguments suggest that the concept of pronunciation is being misinterpreted. Although pronunciation is defined as “the act or way of speaking a word or words correctly” (Merriam-Webster’s Dictionary of Basic English, 2000: 449), it is much more general than this definition. Such an explanation may have led many textbook writers, teachers and students to think that learning the pronunciation of English means learning how to pronounce isolated words. Over the years, learners have been exposed to a great deal of segmental aspects of pronunciation, which consist of isolated sounds as Nunan (1999: 105) also states

“most of its history, the teaching of pronunciation has been biased toward segmental aspects of the sound system”. However pronunciation does not only mean segmental features but suprasegmental features which consist of stress, rhythm, and intonation patterns in the language as well, and these features are more functional than the segmental features. For that reason, there must be a certain distinction among the features of pronunciation. Textbooks on pronunciation typically distinguish between segmental and suprasegmental features of language. According to Nunan (1999: 106), “Segmental phonology has to do with the individual sounds whereas suprasegmental phonology has to do with stress, rhythm, and intonation patterns in the language”, but to understand their functions well, a brief explanation may be helpful. According to Wong (1993: 117)

Pronunciation means only sounds, and on the failure of such a limited focus to affect learners’ overall pronunciation... (On the other hand) the scope of pronunciation is much broader than an inventory and description of sounds. It embraces the elements of rhythm and intonation, which function in the communication process. Thus any learner with a goal of learning English for communicative purposes needs to learn the rhythm and intonation of English.

Similarly, Pennington and Richards (cited in Nunan, 1999: 107) state that, “in favour of a suprasegmental approach on the grounds that ‘teaching isolated forms of sounds and words fails to address the fact that, in communication, many aspects of pronunciation are determined by the positioning of elements within long stretches of speech’” and Nunan (1999: 107) adds that, “faulty stress, rhythm, and intonation patterns cause greater difficulty for hearers than the inaccurate pronunciation of individual sounds”. Similarly, Nolasco & Arthur (1987: 11), report that learners who pronounce individual sounds correctly still might have problems in communication.

There are many foreign students who pronounce the individual sounds and words of English beautifully but who still sound very foreign. The reason is that in English the sound quality of a word, particularly the vowels and certain consonants, changes depending on whether the word is said in isolation or as part of a continuous stream of words.

Moreover, Wong (1993: 115) says “There is much more to the pronunciation of English than its individual sounds. How these sounds are organized plays a greater role in communication than the sounds themselves. And two major organizing structures are rhythm and intonation”. Many researchers underline the importance of the organization of the sounds. According to Halliday (1989: 36), for example, in written language we have some elements to show the manner of the sentences. These are punctuation marks...On the other hand, the importance of prosodic (suprasegmental) features in spoken language is what the punctuation marks mean in written language. Because of their impact on speech intelligibility, a

pronunciation teaching should include suprasegmentals (Wennerstrom, 1999 cited in Miller, 2000: 1; Morley, 1991: 485; Pennington and Richards, 1986 cited in Morley, 1991: 487). If words and sentences are not spoken with the correct rhythm, intonation, and stress, they may not be comprehensible to a native speaker” (Means, 1998: 1). Therefore “ if students are to ‘sound English’, not so much in the sense of a perfect accent, but in the sense of making themselves easily comprehensible, there is a need to work on their pronunciation, stress, rhythm, and intonation” (Nolasco & Arthur, 1987: 66). Research has shown that by working on these factors, a learner can achieve an intelligible pronunciation (Wennerstrom, 1999 cited in Miller, 2000: 1; Grant, 2000: 1).

1.3. Research Question

There are two elements in pronunciation: segments which are isolated sounds, i.e., vowels and consonants, and suprasegmentals which consist of stress, rhythm and intonation. The focus of this study is on suprasegmentals rather than segmentals because suprasegmentals have not received as much attention as segments have, and it has been argued that suprasegmentals affect the intelligibility of speech more than individual sounds. (Nolasco & Arthur, 1987: 11; Wong, 1993: 115; Nunan, 1999: 107).

The aim of this study is two-fold. The first aim is to determine whether Turkish students’ pronunciation is intelligible for native listeners. The second aim is to determine the problematic areas for Turkish speakers of English. At the end of the study, it is hoped that a problems inventory on the elements of speech production of Turkish students will be compiled. An inventory of problems will have implications for pronunciation teaching in Turkey. Thus, the following research questions are asked:

1. How intelligible are Turkish students’ speech as judged by native speakers?
2. With which aspects of suprasegmental properties of English do Turkish learners have problems?

2. REVIEW OF LITERATURE

Over the years, there have been different views about what the focus of pronunciation teaching should be. These views have generally focused on the questions of whether “pronunciation can be taught and if so what should be taught, and how” (Morley, 1991: 481).

For those who were following a traditional approach to language learning, the aim of pronunciation teaching was for students to achieve native-like pronunciation (Morley, 1991: 498). As Celce-Murcia (1987: 6) argues “teaching pronunciation mainly dealt with applying some techniques such as listen and repeat, tongue twisters, minimal pairs, developmental approximation drills, and vowel shifts and stress shifts, and the materials used were unauthentic, artificial and not practical for intelligible pronunciation”. Celce-Murcia (1987: 6) also argues that “with the focus on isolated words and/or sentences, there is little transfer from practice to natural communication. The structured and analytic nature of these drills also makes them extremely unmotivating”. Therefore, lessons in which this type of materials and techniques used did not help learners improve their intelligibility in pronunciation, consequently, teachers of pronunciation came to the conclusion that pronunciation cannot be taught. Furthermore, what the focus of pronunciation teaching was misinterpreted. Yule (1990 cited in Morley 1991: 481) argues that, “the only classroom choice available is one between teaching pronunciation as articulatory phonetics or not teaching pronunciation at all”. Pronunciation teaching should not mean teaching articulatory phonetics where the focus is on the production of isolated sounds because it is now evident that teaching only isolated sounds does not guarantee to speak like a native speaker (Nolasco & Arthur, 1987: 11 ; Nunan, 1999: 107; Pennington and Richards, 1983 cited in Nunan, 1999: 107). Research shows that there are learners who can pronounce the individual sounds perfectly, but who still have problems in communication as Nolasco&Arthur (1987: 11) argue

There are many foreign students who pronounce the individual sounds and words of English beautifully but who still sound very foreign. The reason is that in English the sound quality of a word, particularly the vowels and certain consonants, changes depending on whether the word is said in isolation or as part of a continuous stream of words.

Another misinterpretation about pronunciation teaching has been what the aim of pronunciation classes is. It has been thought that the aim of pronunciation teaching is to have students achieve native-like pronunciation. However, because “only few persons can ever achieve native-like pronunciation in the foreign language.” (Scovel, 1969: 214) pronunciation courses are thought to not fulfill the aim. The aim of pronunciation teaching should be to have students who produce intelligible speech as Morley (1991: 498) argues, “perfect or native-like pronunciation is not a necessary condition for comprehensible communicative output”. Today, language students are considered successful if they can communicate effectively in their second or foreign language (Riggenbach and Lazaraton, 1987: 125). According to this new communicative concept, the goal of speaking component in language classes should be to encourage the acquisition of communication skills and to foster real communication in and out of the classroom (Riggenbach and Lazaraton, 1987: 126). It is possible for some learners to communicate effectively although they make some mistake both in phonology and grammar. As Heaton (1988 cited in Bobda, 1993: 18) argues “People can make numerous errors in both phonology and syntax and yet succeed in expressing themselves fairly clearly”. Learners use long stretches of speech more than isolated sounds in communication and there are many aspects of pronunciation such as stress, rhythm, and intonation which are much more important for a better communication than isolated sounds. Pennington and Richards (1983 cited in Nunan, 1999: 107) state that, “teaching isolated forms of sounds and words fails to address the fact that, in communication, many aspects of pronunciation are determined by the positioning of elements within long stretches of speech”. Therefore it is believed that pronunciation can be taught, but the aim of pronunciation teaching should not be a native-like or perfect pronunciation. It should be an intelligible pronunciation. As Wong (1987: 19) argues “Students and sometimes teachers have an unreasonable goal: to achieve mastery over the pronunciation system. While complete mastery is unrealistic, intelligibility is attainable and desirable”. A similar idea is supported by Crawford (1987: 112), “two goals can serve as general guidelines for all ESL pronunciation classes regardless of individual differences. They are intelligibility and speech awareness...[and] while researchers continue to debate the degree to which L2 learners acquire native-like fluency in L2 pronunciation, intelligibility must be the minimum goal for the classroom”. Similarly, Miller (2000: 1) states, “the primary goals of pronunciation training are intelligible speech and effective communication- not native-like pronunciation”. Thus as Morley (1991: 488) argues, the aim of pronunciation teaching should be to enable students to produce intelligible speech.

With the communicative approach to language teaching, researchers who think pronunciation can be taught have dealt with two other questions: what and how to teach pronunciation; and they have underlined the importance of knowing students' problem areas in pronunciation to be able to offer possible solutions. By knowing the problem areas of the students, it is possible to determine what should be taught in pronunciation. Therefore, the native language has been taken into consideration because it was believed that the native language of the learner has a negative effect on learning the target language. As Demircan (1993: 71) argues "though it has been rejected by many error analysts, the learner's native language is among the most important sources of errors in L2. This negative effect must have been recognized ever since the beginning of foreign language teaching". From that belief, many material producers, and coursebook writers tried to create new materials which utilized a comparative method with the view that "as the aim of the materials producer or the coursebook writer must be to avoid learners' errors, the grading of the language features would best be achieved through such a comparison"(Demircan, 1993: 71). According to Fries (1945 cited in Demircan, 1993: 71) "The most efficient materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner". A similar view was reported by some other researchers. According to these researchers since different nationalities will clearly have different problems in producing the same target language, a comparison between the students' mother tongue and the target language is necessary in planning a pronunciation teaching (Rodriguez, 1981: 116; Browne and Huckin, 1987: 46; Wong, 1987: 17; Hycraft, 1991: 3); Bobda, 1991: 107; Jones and Evans, 1995 cited in Stibbard, 1996: 1; Dalton, 1997: 1; Makarova, 1997: 1; Means, 1998: 1 ; Doff, 1998: 113).

Norris (1998: 1), for example, compared English and Japanese and concluded that Japanese students would have problems in comprehending the conversations with native speakers and he listed four reasons for the incomprehension: (a) certain English sounds do not exist in Japanese, (b) students are not accustomed to the patterns of stress and intonation, (c) they would like to understand whatever they hear, and (d) reduced forms of English. Bobda (1991: 107) investigated different dialects in Africa and found that there are innumerable deviations from native norms at the levels of grammar, vocabulary, and pronunciation and of all the levels, pronunciation exhibits the highest number of such deviations. Tiffen (1974, cited in Bobda, 1991: 108) found that lexical and syntactic errors constitute only 8.8% of the causes of intelligibility failure in Nigerian English, while pronunciation accounts for as much as 91.2%. Factors which affect intelligibility in pronunciation are rhythmic and stress errors

(38.2%), segmental errors (33%) and phonotactic errors (20%). Rodriguez (1981: 117), on the other hand, compared English and Spanish in terms of rhythm and found that “there are two basic problems in teaching rhythm: (a) the learner cannot concentrate on the rhythm without also paying attention to other pronunciation features, and (b) the rhythmic patterns cannot be presented with near equivalents in the language (i.e. as minimal pairs), making the auditory discrimination of the patterns more difficult”.

Researchers have generally defined the sound system of English as a hierarchy of units (Prator, 1971 cited in Crawford, 1987: 113; Browne and Huckin, 1987: 46; Catford, 1987: 88; Doff, 1998: 113). Among these researchers, Doff (1998: 113) listed the problems of non-native speakers as follows: difficulty in pronouncing sounds which do not exist in the student's own language, confusing similar sounds, use of vowels instead of diphthongs, difficulty in pronouncing consonant clusters, and tendency to give all syllables equal stress, and a flat intonation. Similarly Browne and Huckin (1987: 46) identified four major problem areas in spoken English in a research with a group of technical professionals. These problems are (a) articulation of vowel sounds in stressed syllables, (b) articulation and linking of consonant sounds, (c) use of determiners and inflected endings, and (d) use of rhythm, stress, and intonation for discourse focus. Similarly Catford (1988: 88) compared the similarities and differences of some languages and found that “apart from very minor anatomical differences, all human beings have the same vocal apparatus. Consequently, all human beings are capable of producing the same sounds” and he defined the sound system of English as a hierarchy of units at four ranks. They are, from the largest or most inclusive unit: (a) intonation/tone group, (b) rhythm/foot, (c) syllable, (d) phoneme. For him a possible arrangement of an English pronunciation course might be as (a) rhythm, stress, and intonation; (b) consonants: syllable openings and closings; (c) consonants: open transition; and (d) vowels and diphthongs. Similarly Prator, 1971 cited in Crawford, 1987: 115) gives another hierarchy of pronunciation items from highest to lowest as (a) suprasegmental phonemes, (b) segmental phonemes, (c) allophones in complementary distribution, (d) allophones in free alternation

Depending on the characteristics of their own language, it is said that there are mainly two problem areas in pronunciation for non-native students. They are segmental (i.e., individual sounds) and suprasegmental features (i.e., stress, rhythm, intonation) of pronunciation. These features are generally the focus of much research. Although they have been considered to be more important in pronunciation books and inevitably in pronunciation lessons, the individual sounds are not as effective in the intelligibility of the speech as it was

assumed. According to Haycraft (1971: 2) "Sounds have an essential role in pronunciation, but in teaching their importance tends to be exaggerated at the expense of stress and intonation". In fact, suprasegmental features have much more important function than segmental features in speech. Catford (1988: 172) gives this notion, as "Speech sounds have been analysed as isolated phonemes. In reality, of course, spoken sounds occur strung together, one after the other. More precisely, speech is a continuum; a continuous flux of initiatory, phonatory, and articulatory states and movements, constantly changing, often overlapping and interpenetrating and influencing each other". A number of EFL specialists state "faulty stress, rhythm, and intonation patterns cause greater difficulty for hearers than the inaccurate pronunciation of individual sounds" (Prator, 1971 cited in Crawford, 1987: 115; Wilkins, 1975 cited in Rodriguez, 1981: 117; Brown, 1977 cited in Rodriguez, 1981: 117, and Nunan, 1999: 107). Moreover, it was believed that pronunciation can be taught if the priorities are given to suprasegmental features of pronunciation (i.e., stress, rhythm, intonation). Acton (1997: 2) argues that pronunciation instruction can be accelerated considerably if suprasegmental features of pronunciation such as stress, rhythm, and intonation adapted to pronunciation teaching. If these features are not used in the speech properly, the listener finds it unintelligible. According to Means (1998: 1) "In learning to speak another language, one needs to learn the rhythm, intonation, and stress in the language, if words and sentences are not spoken with the correct rhythm, intonation, and stress, they may not be comprehensible to a native speaker".

For that reason, those who think pronunciation can be taught believe that a pronunciation lesson must include suprasegmental elements because of their impact on overall intelligibility. As Wennerstrom (1999 cited in Miller, 2000: 1) reports "Pronunciation teaching should include suprasegmentals (i.e., stress, rhythm, and intonation) because of their impact on speech intelligibility". Therefore, a well-organized pronunciation lesson should include suprasegmental features along with segmental features of pronunciation. According to Stibbard (1996: 1) "It is now widely accepted that pronunciation teaching involves attention not just to the segmental level but to the suprasegmental level as well which includes those features which spans across the phonemes and operate at sentence, discourse or language level". Dalton (1997: 1), argues that "if the English sound is not clearly received, the brain of the learner converts it into the closest sound in their own language". So, he insists on placing emphasis on listening as a way into releasing appropriate pronunciation. Miller (2000: 1); Gilbert, (1991: 33) and Wong (1987: 23) reported that both pronunciation and listening skills can be improved by teaching suprasegmental features of pronunciation.

How to teach pronunciation communicatively is another question of the researchers in the field. In language teaching it is not always easy or desirable to separate one skill from another. Some researchers report that there is a relationship between learner's listening ability and his/her spoken English (Gilbert, 1991: 33; Miller, 2000: 1; and Wong, 1987: 23) and they conclude that both pronunciation and listening skills can be improved by teaching suprasegmental features of pronunciation. Therefore, teachers should arrange times for listening activities to help students with their pronunciation problems. For Doğuelli (1993: 31)

if we want to develop our learners' spoken English, then listening is an integral part of this activity. We cannot interact orally if we do not understand what is being said to us. Listening is an essential feature of any language-teaching programme. And not just understanding isolated words or segments of language but longer stretches of spontaneous connected speech, including that of native speakers.

Celce-Murcia (1987: 11), underlines the importance of communicative activities such as role playing, problem solving, and games for teaching pronunciation and she reports that "her students' pronunciation improves far more from doing these kinds of communicative activities than it ever did while they were doing only the old techniques". Graham (1978: 470) and Means (1998: 2) used music and poetry in teaching pronunciation, and they demonstrated that learning suprasegmentals by using music and poetry chants have a positive effect in becoming understandable by a native speaker.

Some researchers have used speech analysis programs to teach suprasegmental features of English pronunciation (Morley, 1975 cited in Crawford, 1987: 113; Morley, 1991: 505 ; Leather, 1983 cited in Stibbard, 1996: 1) because pronunciation is considered as a physical aspect of language. As Underhill (1996: 1) states "pronunciation (and articulation generally) represents the physical aspect of language because it is the muscular amplification of a minute impulse in the brain into a spoken utterance that vibrates the air" and he came to a conclusion that rather than the symbols of the sounds, students can learn sounds by this physical pronunciation work. Therefore, letting the students know how to produce the sounds by using different techniques is another fact for students. According to Morley (1975 cited in Crawford, 1987: 117) "students are made aware how to monitor speech production by manageable bits of information about speech production and with specific techniques (visual, auditory, tactile, and moto-kinesthetic". Depending on Morley's assumption, Stibbard (1996: 2), for example, used a pilot self-access programme in higher education in Hong Kong by using a computer assisted pitch analyser and found that teaching pitch through computer can

play a valuable role in enhancing learner autonomy in an area of English pronunciation which causes particular difficulty to Cantonese learners.

Although there are studies on communicative pronunciation teaching in the field, studies on the problems of Turkish students are limited. Among these studies, Demircan's (1993) comparison between Turkish and English can be mentioned. However, his study is not on pronunciation, but on a contrastive analysis of the two languages in general. Apart from this, although there are many studies on Turkish language, unfortunately there are a limited number of studies on Turkish pronunciation and especially on suprasegmental features of Turkish pronunciation. Özkan (2001: 119-139), for example reports that "there is not too much difference between stressed and unstressed syllables in Turkish" and "each language has different intonation patterns, and Turkish intonation patterns are very different from those of the other languages". So, before deciding whether pronunciation can be taught and planning a pronunciation lesson, there is a need for a clear identification of the problematic areas in pronunciation for Turkish students. Unless the students' problematic areas in pronunciation are considered, one cannot evaluate pronunciation teaching in Turkey.

3. METHODOLOGY

3.1. Subjects

The subjects of this study were freshman students of English Teaching Department at Anadolu University. There were 14 female and 6 male subjects between the ages of 17 and 24.

The subjects of this study had taken a proficiency test before they were accepted as freshman students. Moreover, the speech samples were collected at the end of the subjects' first year and during the two semesters, the subjects had a course in which four skills were taught. Thus, the proficiency level of the students are assumed to be similar at the time of the study. This was important because students' proficiency level have an effect on their speech as all features of language such as grammar and vocabulary as well as other elements involved in speaking (Bygate, 1987: 3) and the ability to produce correct sentences to achieve a communicative purpose (Widdowson, 1978) affect intelligibility.

3.2. Informants

In the study, 10 native speakers of English who are giving conversation and speaking courses in different schools in Istanbul were employed as informants. The speech samples collected from students were evaluated by these 10 native speakers of English. Four of the ten native speakers were British, and six of them were American. These informants were chosen among teachers of English because it was assumed that all the informants had at least a general knowledge about evaluating students' speech so that there would not be a misunderstanding in evaluation. All the informants have English teaching certificates and/or diplomas.

All ten informants were paid for the time they spent on training and evaluation.

3.2. Data Collection

The method of this study depends on evaluation of each subject's spontaneous speech. In evaluation of each subject's speech, the duration was considered to be an important factor because each subject's speech had to be long enough to be evaluated. The minimum time requirement for the speech sample was at least 3 minutes. To ensure that each subject spoke for 3 minutes, students were given a variety of topics they can talk about. There were 12 different topics and the subjects chose some topics among the examples. In order not to create 'simple question and answer' type of dialogue or rehearsed biographical comments, the speech topics were taken from impromptu speech samples (Morley, 1992: XV). Some of the topics were taken from Morley's speech topics such as "what do you want to be doing in five years?, what makes your life interesting?, and what makes a happy life?". Others included "I have a friend..., As soon as I finish the university..., and If I get married..." to offer a wide variety of speech topics (Appendix B) on which they feel comfortable to talk about. These topics were thought to be related to the students' lives. The topics were given five minutes before the actual speech to enable the students to think about the topic and organize their thoughts. This would also eliminate the possibility of hesitations and/or unwanted pauses in the speech. The subjects' speech were recorded.

3.3. Procedure

The study was conducted in the subjects' class hour and they were asked to speak about as many topics as possible and they were told that they were going to be recorded during their speech. The subjects were highly involved and interested in the study.

The informants were given the Speech Intelligibility Index and the Check List of Errors of the Accent Inventory together with a cassette in which the subjects' speech were recorded. Before listening to the students' speech, it was explained that they would listen to the speech two times and then evaluate them according to the outlines of the given index and inventory. The informants were trained on how to use the Index and Inventory before the actual evaluation. They listened to a sample speech which was not included in the results and they used both the Index and Inventory. After the training part, each informant evaluated all

20 students' speech independently. They were explained that the results of the study would underline Turkish students' specific problems of prosodic features of pronunciation. They were highly involved and interested in the study.

3.4. Data analysis

The evaluation of the speech samples were based on Speech Intelligibility Index (Appendix C) by Morley (1992: XV) and Check List of Errors of the Accent Inventory (Appendix D) by Prator (1957: 4). Each informant rated each subject's intelligibility by using the Index by Morley (1992: XV). Each informant gave a score from 1 to 6 for each subject's speech sample. The scores were given based on the following criteria

- 1 for basically unintelligible,
- 2 for largely unintelligible,
- 3 for reasonably intelligible,
- 4 for largely intelligible,
- 5 for fully intelligible,
- 6 for near native speech

For each subject, the scores given by the 10 informants were tabulated and the average was calculated.

The Check List of Errors of the Accent Inventory (Prator, 1957: 4) has six parts, but in this study the parts concerning "Individual Vowels", "Individual Consonants", "Vowels and Consonants Combinations" and "General Comments" were omitted. To assess the problems in pronunciation, a reading passage referred to as Diagnostic Passage is suggested. In this study Diagnostic Passage was not used because reading would have possibly yielded unnatural speech. Prator (1957: 4) himself agrees that spontaneous speech is more desirable for the assessment of pronunciation problems "somewhat more revealing results might be achieved if the analysis could be based on a large volume of spontaneous conversational material, rather than on a few sentences to be read".

As the aim of this study was to identify problematic areas concerning suprasegmental features, the Inventory used in this study included of Check List of Errors only on "Stress and Rhythm", and "Intonation". The statements in these parts are used to have certain definitions of pronunciation problems in stress, rhythm, and intonation.

The informants listened to the speech samples again to note the main problematic areas of each speaker by using Prator's (1957: 4) Check List of Errors. Although Prator used the term "error" for defining the problems of the speakers, this term is not used in the study because there is not a perfect pronunciation model (Morley, 1991: 498). Thus, the term "problem" is preferred in the study. The informants identified the main problems a student had. (Appendix C). By this way, a list of problems of Turkish students was gathered.

4. RESULTS

The reliability of the informants who graded the speakers was tested via two different correlation tests: Kendall's Correlation and Pearson's Correlation (Appendix A), and it was found that only the second informant showed a mismatch with the other informants' ratings. However, as this mismatch did not affect the overall reliability, the second informant was not omitted from the study. There is a high level of reliability between the informants' ratings.

4.1. Intelligibility Index

Based on the scores defined in the Index (Morley, 1992: XV), the informants rated each subject from 1 to 6 as follows:

- 1 for basically unintelligible
- 2 for largely unintelligible
- 3 for reasonably intelligible
- 4 for largely intelligible
- 5 for fully intelligible
- 6 for near native speech

The scores given by the 10 informants were tabulated and the average level for each subject was calculated. If the average scores were not whole numbers, the integers were rounded off to the nearest whole number. The scores for each subject given by each informant, averages, and levels are given in Table 4.1.

Table 4.1
Speech Intelligibility Index scores

Speaker	INFORMANT										Average	Level
	Inf1	Inf2	Inf3	Inf4	Inf5	Inf6	Inf7	Inf8	Inf9	Inf10		
1	4	5	4	5	4	4	5	5	5	4	4.5	5
2	3	3	3	4	3	3	3	4	3	3	3.2	3
3	3	3	3	3	3	3	4	3	3	3	3.1	3
4	4	2	3	3	3	4	3	3	4	3	3.2	3
5	4	2	2	3	2	3	2	2	2	3	2.5	3
6	3	2	3	4	3	3	3	4	3	3	3.1	3
7	3	3	3	3	3	4	3	3	3	4	3.2	3
8	2	2	2	2	3	2	2	2	2	2	2.1	2
9	3	3	4	4	4	4	4	3	3	3	3.5	4
10	4	5	4	4	4	4	4	4	5	4	4.2	4
11	3	2	2	4	3	2	2	3	3	3	2.7	3
12	3	4	4	3	3	4	3	4	4	4	3.6	4
13	4	5	5	5	5	4	5	4	5	5	4.7	5
14	3	3	3	4	3	3	4	3	3	3	3.2	3
15	3	4	4	4	4	5	3	5	3	3	3.8	4
16	3	4	4	4	3	4	3	5	5	3	3.8	4
17	2	4	4	4	4	3	4	3	2	4	3.4	3
18	3	4	3	5	3	5	5	4	3	5	4.0	4
19	3	4	3	4	4	3	3	4	4	3	3.5	4
20	5	5	5	4	5	4	5	5	5	5	4.8	5

As seen in the table, the average scores ranged from 2 to 5. None of the subjects were rated as either 1 (basically unintelligible) or 6 (near native speech). Based on the averages, the subjects in this study fall into 4 levels. 1 student (5%) was judged to be largely unintelligible (average 2.1), 9 students (45%) were judged to be reasonably intelligible (averages 2.5 to 3.4), 7 students (35%) were judged to be largely intelligible (averages 3.5 to 4.2), and 3 students (15%) were rated as fully intelligible (averages 4.5 to 4.8). Table 4.2 shows the four levels and the students' averages.

Table 4.2**The number and the average of each student for four levels****FULLY INTELLIGIBLE**

Speaker	Average	Level
20	4.8	5
13	4.7	5
1	4.5	5

LARGELY INTELLIGIBLE

Speaker	Average	Level
10	4.2	4
18	4.0	4
15	3.8	4
16	3.8	4
12	3.6	4
9	3.5	4
19	3.5	4

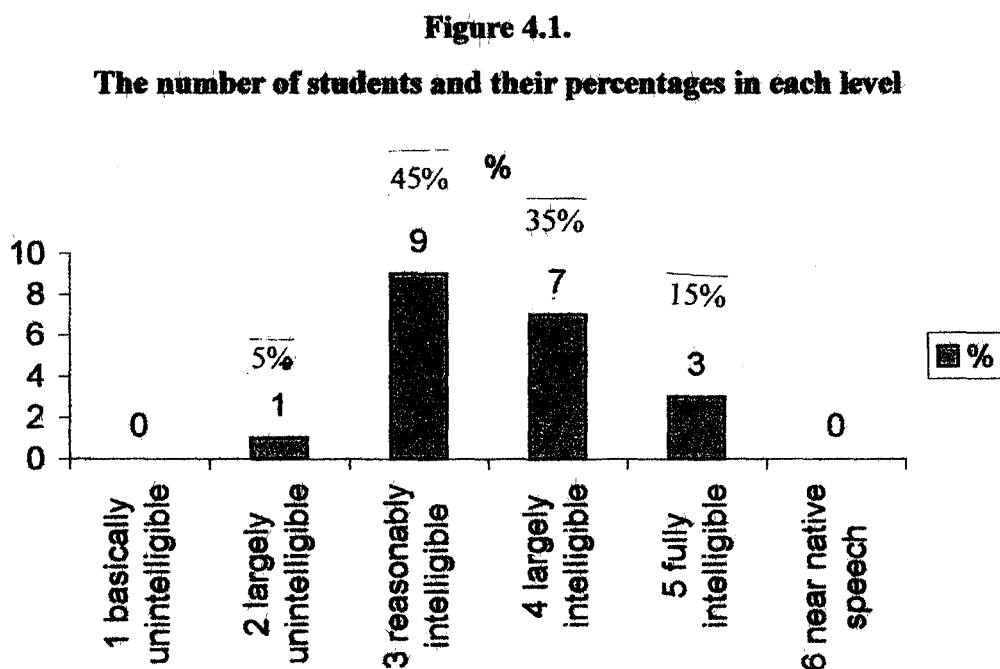
REASONABLY INTELLIGIBLE

Speaker	Average	Level
17	3.4	3
2	3.2	3
4	3.2	3
7	3.2	3
14	3.2	3
3	3.1	3
6	3.1	3
11	2.7	3
5	2.5	3

LARGELY UNINTELLIGIBLE

Speaker	Average	Level
8	2.1	2

The number of students and their percentages in each level for the Index are presented in Figure 4.1.



As seen in Table 4.2 and Figure 4.1, the majority of students (16) are either reasonably or largely intelligible. Although there was only one unintelligible subject, the number of students who were fully intelligible was 3. This suggests that there are problems in the speech of these subjects. To determine the problematic areas, the informants defined each subject's main problems using the Accent Inventory by Prator (1957: 4).

4.2. Results of the Accent Inventory

The evaluation of each informant for each subject is presented separately. The evaluation of speaker 1 by the 10 informants is presented in Table 4.3.

Table 4.3
Main Problems of the Speaker 1

Speaker 1 PROBLEMS	INFORMANTS										TOTAL	%	
	1	2	3	4	5	6	7	8	9	10			
IA. Stress on wrong syllable of words of more than one syllable				1								1	10%
B. Improper sentence stress												0	0%
C. Improper division of sentences into thought groups												0	0%
D. Failure to blend well, to make smooth transitions between words or syllables	1		1		1	1			1	1		6	60%
IIA. Unnatural intonation at the end of statements			1		1	1				1		4	40%
B. In special questions												0	0%
C. In general questions					1					1		2	20%
D. In general questions with two alternatives												0	0%
E. In direct address												0	0%
F. In tag questions	NOT APPLICABLE												
G. In series	NOT APPLICABLE												
H. In other cases	NOT APPLICABLE												

The first speaker is regarded by the informants as fully intelligible. According to the evaluation, none of the informants rated the first speaker as having any problems with improper sentence stress (IB), improper division of sentences into thought groups (IC), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the first student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The first speaker is rated as having problems in the following areas. Stress on the wrong syllable of words of more than one syllable (by 10% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 60% of the informants), Unnatural intonation at the end of statements (by 40% of the informants), and Unnatural intonation in general questions (by 20% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on wrong syllable of words of more than one syllable was regarded as a problem area by 10% of the informant, Failure to blend well to make smooth transitions between words and syllables was judged as a problem by 60% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (60%)

Unnatural intonation at end of statements (40%)

Unnatural intonation in general questions (20%)

Stress on wrong syllable of words of more than one syllable (10%)

Table 4.4
Main Problems of the Speaker 2

Speaker 2 PROBLEMS	INFORMANTS										TOTAL	%
	1	2	3	4	5	6	7	8	9	10		
IA. Stress on wrong syllable of words of more than one syllable	1	1	1		1					1	5	50%
B. Improper sentence stress											0	0%
C. Improper division of sentences into thought groups											0	0%
D. Failure to blend well, to make smooth transitions between words or syllables	1	1	1	1	1	1	1	1	1	1	10	100%
IIA. Unnatural intonation at the end of statements		1			1		1		1		4	40%
B. In special questions											0	0%
C. In general questions			1				1		1		3	30%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The second speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the second speaker as having any problems with improper sentence stress (IB), improper division of sentences into thought groups (IC), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the second student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The second speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 50% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 100% of the informants), Unnatural intonation at end of statements (by 40% of the informants), and Unnatural intonation in general questions (by 30% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while unnatural intonation in general questions was regarded as a problem area by 30% of the informants, Failure to blend well to make smooth transitions between words and syllables was judged as a problem by 100% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (100%)

Stress on wrong syllable of words of more than one syllable (50%)

Unnatural intonation at end of statements (40%)

Unnatural intonation in general questions (30%)

Table 4.5
Main Problems of the Speaker 3

Speaker 3	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable						1					1	10%
B. Improper sentence stress	1				1				1	1	4	40%
C. Improper division of sentences into thought groups				1							1	10%
D. Failure to blend well, to make smooth transitions between words or syllables	1	1	1	1	1	1	1	1	1	1	10	100%
IIA. Unnatural intonation at the end of statements				1	1	1		1			4	40%
B. In special questions											0	0%
C. In general questions				1	1			1			3	30%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The third speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the third speaker as having any problems with unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the third student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The third speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 10% of the informants), Improper sentence stress (by 40% of the informants), Improper division of sentences into thought groups (by 10% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 100% of the informants), Unnatural intonation at end of statements (by 40% of the informants), and Unnatural intonation in general questions (by 30% of the informants).

The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 10% of the informant, Failure to blend well to make smooth transitions between words and syllables was judged as a problem by 100% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (100%)

Improper sentence stress (40%)

Unnatural intonation at end of statements (40%)

Unnatural intonation in general questions (30%)

Stress on wrong syllable of words of more than one syllable (10%)

Improper division of sentences into thought groups (10%)

Table 4.6
Main Problems of the Speaker 4

Speaker 4 PROBLEMS	INFORMANTS										TOTAL	%
	1	2	3	4	5	6	7	8	9	10		
IA. Stress on wrong syllable of words of more than one syllable		1	1				1	1			4	40%
B.Improper sentence stress											0	0%
C.Improper division of sentences into thought groups	1	1	1	1	1	1				1	7	70%
D.Failure to blend well, to make smooth transitions between words or syllables				1	1		1	1	1		5	50%
IIA. Unnatural intonation at the end of statements		1						1	1		3	30%
B. In special questions											0	0%
C. In general questions				1						1	2	20%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The fourth speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the fourth speaker as having any problems with

improper sentence stress (IB), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the fourth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The fourth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 40% of the informants), Improper division of sentences into thought groups (by 70% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 50% of the informants), Unnatural intonation at end of statements (by 30% of the informants), and Unnatural intonation in general questions (by 20% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while Improper division of sentences into thought groups was regarded as a problem area by 70% of the informants, Unnatural intonation in general questions was judged as a problem by 20% of the informants. Thus, the problematic areas from most to least is listed below.

Improper division of sentences into thought groups (70%)

Failure to blend well, to make smooth transitions between words or syllables (50%)

Stress on wrong syllable of words of more than one syllable (40%)

Unnatural intonation at end of statements (30%)

Unnatural intonation in general questions (20%)

Table 4.7
Main Problems of the Speaker 5

Speaker 5	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable	1	1	1		1	1	1	1			7	70%
B.Improper sentence stress	1					1				1	3	30%
C.Improper division of sentences into thought groups			1	1		1			1	1	5	50%
D.Failure to blend well, to make smooth transitions between words or syllables	1	1	1	1	1	1	1	1	1	1	9	90%
IIA. Unnatural intonation at the end of statements		1	1		1	1		1	1		6	60%
B. In special questions											0	0%
C. In general questions		1		1			1	1		1	5	50%
D. In general questions with two alternatives											0	0%
E. In direct adress											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The fifth speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the fifth speaker as having any problems with unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the fifth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The fifth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 70% of the informants), Improper sentence stress (by 30% of the informants), Improper division of sentences into thought groups (by 50%

of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 90% of the informants), Unnatural intonation at end of statements (by 60% of the informants), and Unnatural intonation in general questions (by 50% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while failure to blend well to make smooth transitions between words and syllables was judged as a problem by 90% of the informants, improper sentence stress was regarded as a problem area by 30% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (90%)

Stress on wrong syllable of words of more than one syllable (70%)

Unnatural intonation at end of statements (60%)

Improper division of sentences into thought groups (50%)

Unnatural intonation in general questions (50%)

Improper sentence stress (30%)

Table 4.8
Main Problems of the Speaker 6

Speaker 6	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable			1		1	1	1			1	5	50%
B.Improper sentence stress											0	0%
C.Improper division of sentences into thought groups									1		1	10%
D.Failure to blend well, to make smooth transitions between words or syllables	1	1	1	1	1		1	1	1		8	80%
IIA. Unnatural intonation at the end of statements	1							1	1	1	4	40%
B. In special questions											0	0%
C. In general questions	1	1			1	1					4	40%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The sixth speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the sixth speaker as having any problems with improper sentence stress (IB), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the sixth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The sixth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 50% of the informants), Improper division of sentences into thought groups (by 10% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 80% of the informants), Unnatural intonation at end of statements (by 40% of the informants), and Unnatural intonation in general questions (by 40% of the informants), and Improper division of sentences into thought groups (by 10% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while Improper division of sentences into thought groups was regarded as a problem area by 10% of the informants, Failure to blend well to make smooth transitions between words and syllables was judged as a problem by 80% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (80%)

Stress on wrong syllable of words of more than one syllable (50%)

Unnatural intonation at end of statements (40%)

Unnatural intonation in general questions (40%)

Improper division of sentences into thought groups (10%)

Table 4.9
Main Problems of the Speaker 7

Speaker 7 PROBLEMS	INFORMANTS										TOTAL	%
	1	2	3	4	5	6	7	8	9	10		
IA. Stress on wrong syllable of words of more than one syllable										1	1	10%
B. Improper sentence stress											0	0%
C. Improper division of sentences into thought groups				1	1			1	1		4	40%
D. Failure to blend well, to make smooth transitions between words or syllables	1	1	1	1		1	1	1	1	1	9	90%
IIA. Unnatural intonation at the end of statements				1							1	10%
B. In special questions											0	0%
C. In general questions				1							1	10%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The seventh speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the seventh speaker as having any problems with improper sentence stress (IB), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the seventh student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The seventh speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 10% of the informants), Improper division of sentences into thought groups (by 40% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 90% of the informants), Unnatural intonation at end of statements (by 10% of the informants), and Unnatural intonation in general questions (by 10% of the informants). The increase in the number of informants who

rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 10% of the informant, Failure to blend well to make smooth transitions between words and syllables was judged as a problem by 90% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (90%)

Improper division of sentences into thought groups (40%)

Stress on wrong syllable of words of more than one syllable (10%)

Unnatural intonation at end of statements (10%)

Unnatural intonation in general questions (10%)

Table 4.10
Main Problems of the Speaker 8

Speaker 8	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable	1	1	1		1	1	1	1	1	1	9	90%
B.Improper sentence stress		1		1	1			1			4	40%
C.Improper division of sentences into thought groups						1		1			2	20%
D.Failure to blend well, to make smooth transitions between words or syllables	1	1	1	1	1	1	1	1	1	1	10	100%
IIA. Unnatural intonation at the end of statements	1	1	1		1	1	1	1	1	1	9	90%
B. In special questions											0	0%
C. In general questions				1							1	10%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The eighth speaker is regarded by the informants as largely unintelligible. According to the evaluation, none of the informants rated the first speaker as having any problems with

unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the eighth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The eighth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 90% of the informants), Improper sentence stress (by 40% of the informants), Improper division of sentences into thought groups (by 20% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 100% of the informants), Unnatural intonation at end of statements (by 90% of the informants), and Unnatural intonation in general questions (by 10% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while failure to blend well to make smooth transitions between words and syllables was judged as a problem by 100% of the informants, Unnatural intonation in general questions was regarded as a problem area by 10% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (100%)

Stress on wrong syllable of words of more than one syllable (90%)

Unnatural intonation at end of statements (90%)

Improper sentence stress (40%)

Improper division of sentences into thought groups (20%)

Unnatural intonation in general questions (10%)

Table 4.11
Main Problems of the Speaker 9

Speaker 9	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable	1	1			1	1	1	1	1	1	8	80%
B. Improper sentence stress									1		1	10%
C. Improper division of sentences into thought groups											0	0%
D. Failure to blend well, to make smooth transitions between words or syllables		1		1		1		1	1	1	6	60%
IIA. Unnatural intonation at the end of statements	1	1	1				1	1	1	1	7	70%
B. In special questions											0	0%
C. In general questions	1			1						1	3	30%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The ninth speaker is regarded by the informants as largely intelligible. According to the evaluation, none of the informants rated the ninth speaker as having any problems with improper division of sentences into thought groups (IC), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the ninth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The ninth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 80% of the informants), Improper sentence stress (by 10% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 60% of the informants), Unnatural intonation at end of statements (by 70% of the informants), and Unnatural intonation in general questions (by 30%

of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 80% of the informants, Improper sentence stress was judged as a problem by 10% of the informants. Thus, the problematic areas from most to least is listed below.

Stress on wrong syllable of words of more than one syllable (80%)

Unnatural intonation at end of statements (70%)

Failure to blend well, to make smooth transitions between words or syllables (60%)

Unnatural intonation in general questions (30%)

Improper sentence stress (10%)

Table 4.12
Main Problems of the Speaker 10

Speaker 10 PROBLEMS	INFORMANTS										TOTAL	%
	1	2	3	4	5	6	7	8	9	10		
IA. Stress on wrong syllable of words of more than one syllable	1	1	1		1	1	1	1		1	8	80%
B. Improper sentence stress		1			1					1	3	30%
C. Improper division of sentences into thought groups				1			1				2	20%
D. Failure to blend well, to make smooth transitions between words or syllables	1		1	1	1	1	1	1	1	1	9	90%
IIA. Unnatural intonation at the end of statements			1	1							2	20%
B. In special questions											0	0%
C. In general questions	1			1		1		1		1	5	50%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The tenth speaker is regarded by the informants as largely intelligible. According to the evaluation, none of the informants rated the tenth speaker as having any problems with unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the tenth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The tenth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 80% of the informants), Improper sentence stress (by 30% of the informants), Improper division of sentences into thought groups (by 20% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 90% of the informants), Unnatural intonation at end of statements (by 20% of the informants), and Unnatural intonation in general questions (by 50% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 80% of the informants, Improper sentence stress was judged as a problem by 30% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (90%)

Stress on wrong syllable of words of more than one syllable (80%)

Unnatural intonation in general questions (50%)

Improper sentence stress (30%)

Improper division of sentences into thought groups (20%)

Unnatural intonation at end of statements (20%)

Table 4.13
Main Problems of the Speaker 11

Speaker 11	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable	1	1	1	1	1	1	1	1	1	1	10	100%
B.Improper sentence stress	1	1									2	20%
C.Improper division of sentences into thought groups							1		1		2	20%
D.Failure to blend well, to make smooth transitions between words or syllables		1	1		1	1	1	1	1	1	8	80%
IIA. Unnatural intonation at the end of statements	1	1	1		1		1	1	1	1	8	80%
B. In special questions											0	0%
C. In general questions		1					1		1		3	30%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The eleventh speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the eleventh speaker as having any problems with unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the eleventh student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The eleventh speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 100% of the informants), Improper sentence stress (by 20% of the informants), Improper division of sentences into thought groups (by 20% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 80% of the informants), Unnatural intonation at end of statements (by 80% of the informants), and Unnatural intonation in general questions (by 30% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong

syllable of words of more than one syllable was regarded as a problem area by 100% of the informants, Improper sentence stress was judged as a problem by 20% of the informants. Thus, the problematic areas from most to least is listed below.

Stress on wrong syllable of words of more than one syllable (100%)

Failure to blend well, to make smooth transitions between words or syllables (80%)

Unnatural intonation at end of statements (80%)

Unnatural intonation in general questions (30%)

Improper sentence stress (20%)

Improper division of sentences into thought groups (20%)

Table 4.14
Main Problems of the Speaker 12

Speaker 12	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable	1	1		1	1	1	1	1	1	1	9	90%
B.Improper sentence stress	1										1	10%
C.Improper division of sentences into thought groups	1			1				1		1	4	40%
D.Failure to blend well, to make smooth transitions between words or syllables	1	1	1	1	1		1	1		1	8	80%
IIA. Unnatural intonation at the end of statements		1		1	1	1	1	1	1	1	8	80%
B. In special questions											0	0%
C. In general questions		1	1		1			1		1	5	50%
D. In general questions with two alternatives											0	0%
E. In direct adress											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The twelfth speaker is regarded by the informants as largely intelligible. According to the evaluation, none of the informants rated the twelfth speaker as having any problems with unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the twelfth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The twelfth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 90% of the informants), Improper sentence stress (by 10% of the informants), Improper division of sentences into thought groups (by 40% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 80% of the informants), Unnatural intonation at end of statements (by 80% of the informants), and Unnatural intonation in general questions (by 50% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 90% of the informants, Improper sentence stress was judged as a problem by 10% of the informants. Thus, the problematic areas from most to least is listed below.

Stress on wrong syllable of words of more than one syllable (90%)

Failure to blend well, to make smooth transitions between words or syllables (80%)

Unnatural intonation at end of statements (80%)

Unnatural intonation in general questions (50%)

Improper division of sentences into thought groups (40%)

Improper sentence stress (10%)

Table 4.15
Main Problems of the Speaker 13

Speaker 13	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable						1		1			2	20%
B.Improper sentence stress											0	0%
C.Improper division of sentences into thought groups				1							1	10%
D.Failure to blend well, to make smooth transitions between words or syllables	1					1		1			3	30%
IIA. Unnatural intonation at the end of statements						1		1			2	20%
B. In special questions	1										1	10%
C. In general questions											0	0%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The thirteenth speaker is regarded by the informants as fully intelligible. According to the evaluation, none of the informants rated the thirteenth speaker as having any problems with improper sentence stress (IB), unnatural intonation in general questions (IIC), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the thirteenth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The thirteenth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 20% of the informants), Improper division of sentences into thought groups (by 10% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 30 of the informants), Unnatural intonation at end of statements (by 20% of the informants), and Unnatural intonation in special questions (by 10% of the informants). The increase in the number of informants who

rated an area as problematic is indicative of a more serious problem for that speaker. For example, while unnatural intonation in special questions was regarded as a problem area by 10% of the informants, failure to blend well to make smooth transitions between words and syllables was judged as a problem by 30% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (30%)

Stress on wrong syllable of words of more than one syllable (20%)

Unnatural intonation at end of statements (20%)

Improper division of sentences into thought groups (10%)

Unnatural intonation in special questions (10%)

Table 4.16
Main Problems of the Speaker 14

Speaker 14 PROBLEMS	INFORMANTS										TOTAL	%
	1	2	3	4	5	6	7	8	9	10		
IA. Stress on wrong syllable of words of more than one syllable	1	1	1	1	1	1	1	1	1	1	10	100%
B. Improper sentence stress											0	0%
C. Improper division of sentences into thought groups											0	0%
D. Failure to blend well, to make smooth transitions between words or syllables	1		1		1	1			1		5	50%
IIA. Unnatural intonation at the end of statements	1	1	1		1	1	1	1	1	1	9	90%
B. In special questions											0	0%
C. In general questions	1				1			1			3	30%
D. In general questions with two alternatives											0	0%
E. In direct address			1								1	10%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The fourteenth speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the fourteenth speaker as having any problems with improper sentence stress (IB), improper division of sentences into thought

groups (IC), unnatural intonation in special questions (IIB), and unnatural intonation in general questions with two alternatives (IID)

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the fourteenth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The fourteenth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 100% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 50% of the informants), Unnatural intonation at end of statements (by 90% of the informants), Unnatural intonation in general questions (by 30% of the informants), and Unnatural intonation in direct address (by 10% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 100% of the informants, Unnatural intonation in direct address was judged as a problem by 10% of the informants. Thus, the problematic areas from most to least is listed below.

Stress on wrong syllable of words of more than one syllable (100%)

Unnatural intonation at end of statements (90%)

Failure to blend well, to make smooth transitions between words or syllables (50%)

Unnatural intonation in general questions (30%)

Unnatural intonation in direct address (10%)

Table 4.17
Main Problems of the Speaker 15

Speaker 15	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable		1	1		1			1	1	1	6	60%
B. Improper sentence stress		1		1			1				3	30%
C. Improper division of sentences into thought groups		1		1							2	20%
D. Failure to blend well, to make smooth transitions between words or syllables	1		1		1	1			1	1	6	60%
IIA. Unnatural intonation at the end of statements	1				1	1	1		1	1	6	60%
B. In special questions											0	0%
C. In general questions											0	0%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The fifteenth speaker is regarded by the informants as largely intelligible. According to the evaluation, none of the informants rated the fifteenth speaker as having any problems with unnatural intonation in special questions (IIB), unnatural intonation in general questions (IIC), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the fifteenth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The fifteenth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 60% of the informants), Improper sentence stress (by 30% of the informants), Improper division of sentences into thought groups (by 20% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 60% of the informants), and Unnatural intonation at end of statements (by 60% of the informants). The increase in the number of informants who rated an area as

problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 60% of the informants, Improper sentence stress was judged as a problem by 30% of the informants. Thus, the problematic areas from most to least is listed below.

Stress on wrong syllable of words of more than one syllable (60%)

Failure to blend well, to make smooth transitions between words or syllables (60%)

Unnatural intonation at end of statements (60%)

Improper sentence stress (30%)

Improper division of sentences into thought groups (20%)

Table 4.18
Main Problems of the Speaker 16

Speaker 16	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable	1	1	1		1	1	1		1	1	8	80%
B.Improper sentence stress											0	0%
C.Improper division of sentences into thought groups							1				1	10%
D.Failure to blend well, to make smooth transitions between words or syllables	1	1		1	1						4	40%
IIA. Unnatural intonation at the end of statements	1	1		1	1	1				1	6	60%
B. In special questions											0	0%
C. In general questions	1			1							2	20%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The sixteenth speaker is regarded by the informants as largely intelligible. According to the evaluation, none of the informants rated the sixteenth speaker as having any problems with improper sentence stress (IB), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the sixteenth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The sixteenth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 80% of the informants), Improper division of sentences into thought groups (by 10% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 40% of the informants), Unnatural intonation at end of statements (by 60% of the informants), and Unnatural intonation in general questions (by 20% of the informants) The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 80% of the informants, Improper division of sentences into thought groups was judged as a problem by 10% of the informants. Thus, the problematic areas from most to least is listed below.

Stress on wrong syllable of words of more than one syllable (80%)

Unnatural intonation at end of statements (60%)

Failure to blend well, to make smooth transitions between words or syllables (40%)

Unnatural intonation in general questions (20%)

Improper division of sentences into thought groups (10%)

Table 4.19
Main Problems of the Speaker 17

Speaker 17	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable	1	1	1	1	1	1		1	1	1	9	90%
B. Improper sentence stress											0	0%
C. Improper division of sentences into thought groups											0	0%
D. Failure to blend well, to make smooth transitions between words or syllables			1	1	1		1	1	1	1	7	70%
IIA. Unnatural intonation at the end of statements	1		1			1		1	1	1	6	60%
B. In special questions											0	0%
C. In general questions			1	1		1	1	1	1		6	60%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The seventeenth speaker is regarded by the informants as reasonably intelligible. According to the evaluation, none of the informants rated the seventeenth speaker as having any problems with improper sentence stress (IB), improper division of sentences into thought groups (IC), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the seventeenth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The seventeenth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 90% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 70% of the informants), Unnatural intonation at end of statements (by 60% of the informants), and Unnatural intonation in general questions (by 60% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious

problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 90% of the informants, Failure to blend well to make smooth transitions between words and syllables was judged as a problem by 70% of the informants. Thus, the problematic areas from most to least is listed below.

Stress on wrong syllable of words of more than one syllable (90%)

Failure to blend well, to make smooth transitions between words or syllables (70%)

Unnatural intonation at end of statements (60%)

Unnatural intonation in general questions (60%)

Table 4.20
Main Problems of the Speaker 18

Speaker 18 PROBLEMS	INFORMANTS										TOTAL	%
	1	2	3	4	5	6	7	8	9	10		
IA. Stress on wrong syllable of words of more than one syllable		1	1	1		1		1	1		6	60%
B.Improper sentence stress					1			1	1		3	30%
C.Improper division of sentences into thought groups											0	0%
D.Failure to blend well, to make smooth transitions between words or syllables	1	1	1				1	1	1		6	60%
IIA. Unnatural intonation at the end of statements	1		1		1		1	1	1	1	7	70%
B. In special questions											0	0%
C. In general questions											0	0%
D. In general questions with two alternatives											0	0%
E. In direct adress											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The eighteenth speaker is regarded by the informants as largely intelligible. According to the evaluation, none of the informants rated the eighteenth speaker as having any problems with improper division of sentences into thought groups (IC), unnatural intonation in special questions (IIB), unnatural intonation in general questions (IIC), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the eighteenth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The eighteenth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 60% of the informants), Improper sentence stress (by 30% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 60% of the informants), Unnatural intonation at end of statements (by 70% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 60% of the informants, Improper sentence stress was judged as a problem by 30% of the informants. Thus, the problematic areas from most to least is listed below.

Unnatural intonation at end of statements (70%)

Stress on wrong syllable of words of more than one syllable (60%)

Failure to blend well, to make smooth transitions between words or syllables (60%)

Improper sentence stress (30%)

Table 4.21
Main Problems of the Speaker 19

Speaker 19	INFORMANTS											
PROBLEMS	1	2	3	4	5	6	7	8	9	10	TOTAL	%
IA. Stress on wrong syllable of words of more than one syllable	1				1		1			1	4	40%
B.Improper sentence stress											0	0%
C.Improper division of sentences into thought groups											0	0%
D.Failure to blend well, to make smooth transitions between words or syllables	1		1	1	1	1	1	1	1	1	9	90%
IIA. Unnatural intonation at the end of statements	1		1	1		1	1	1	1	1	8	80%
B. In special questions											0	0%
C. In general questions			1	1			1				3	30%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The nineteenth speaker is regarded by the informants as largely intelligible. According to the evaluation, none of the informants rated the nineteenth speaker as having any problems with improper sentence stress (IB), improper division of sentences into thought groups (IC), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the nineteenth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The nineteenth speaker is rated as having problems in the following areas Stress on wrong syllable of words of more than one syllable (by 40% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 90% of the informants), Unnatural intonation at end of statements (by 80% of the informants), and Unnatural intonation in general questions (by 30% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious

problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 40% of the informants, Failure to blend well to make smooth transitions between words and syllables was judged as a problem by 90% of the informants. Thus, the problematic areas from most to least is listed below.

Failure to blend well, to make smooth transitions between words or syllables (90%)

Unnatural intonation at end of statements (80%)

Stress on wrong syllable of words of more than one syllable (40%)

Unnatural intonation in general questions (30%)

Table 4.22
Main Problems of the Speaker 20

Speaker 20 PROBLEMS	INFORMANTS										TOTAL	%
	1	2	3	4	5	6	7	8	9	10		
IA. Stress on wrong syllable of words of more than one syllable		1		1					1		3	30%
B. Improper sentence stress								1			1	10%
C. Improper division of sentences into thought groups											0	0%
D. Failure to blend well, to make smooth transitions between words or syllables				1				1		1	3	30%
IIA. Unnatural intonation at the end of statements				1	1				1	1	4	40%
B. In special questions											0	0%
C. In general questions								1			1	10%
D. In general questions with two alternatives											0	0%
E. In direct address											0	0%
F. In tag questions	NOT APPLICABLE											
G. In series	NOT APPLICABLE											
H. In other cases	NOT APPLICABLE											

The twentieth speaker is regarded by the informants as fully intelligible. According to the evaluation, none of the informants rated the twentieth speaker as having any problems with improper division of sentences into thought groups (IC), unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE).

Because there were no instances of unnatural intonation in tag questions (IIF), unnatural intonation in series (IIG), and unnatural intonation in other cases (IIH) in the twentieth student's speech sample, we do not know whether the speaker has any problems with these sentence types. Thus, for these items, rating is not applicable.

The twentieth speaker is rated as having problems in the following areas. Stress on wrong syllable of words of more than one syllable (by 30% of the informants), Improper sentence stress (by 10% of the informants), Failure to blend well, to make smooth transitions between words or syllables (by 30% of the informants), Unnatural intonation at end of statements (by 40% of the informants), and Unnatural intonation in general questions (by 10% of the informants). The increase in the number of informants who rated an area as problematic is indicative of a more serious problem for that speaker. For example, while stress on the wrong syllable of words of more than one syllable was regarded as a problem area by 30% of the informants, Improper sentence stress was judged as a problem by 10% of the informant. Thus, the problematic areas from most to least is listed below.

Unnatural intonation at end of statements (40%)

Stress on wrong syllable of words of more than one syllable (30%)

Failure to blend well, to make smooth transitions between words or syllables (30%)

Improper sentence stress (10%)

Unnatural intonation in general questions(10%)

4.3. Summary

Each subject has a variety of problems. The informants reported different problems for each speaker. When the problems of the all subjects are considered, the percentages of the problems are as following. Table 4.23 summarizes the evaluation of each speaker. In the table, the percentage of informants who identified a given area as problematic is presented.

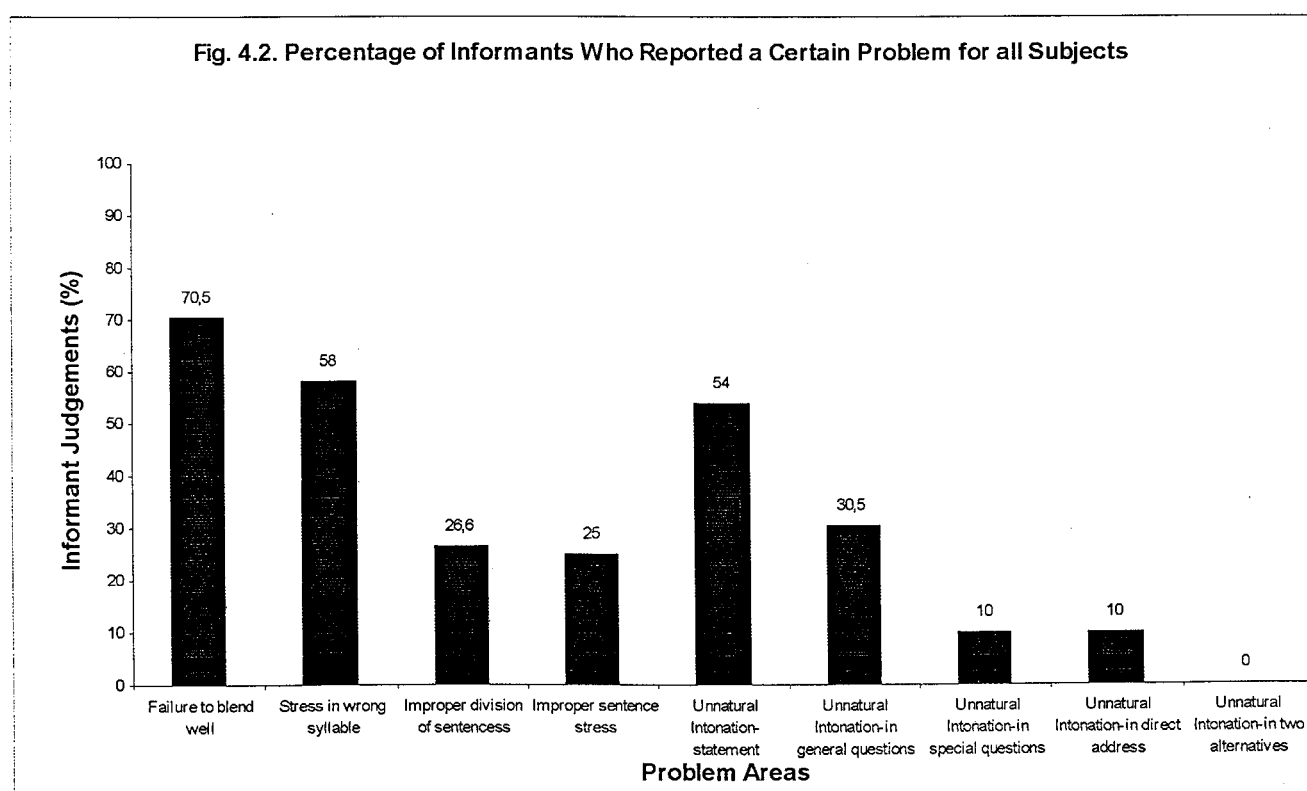
Table 4. 23
Percentage of Speakers' Problems

Speaker	PROBLEMS								
	1A%	1B%	1C%	1D%	2A%	2B%	2C%	2D%	2E%
1	10	-	-	60	40	-	20	-	-
2	50	-	-	100	40	-	30	-	-
3	10	40	10	100	40	-	30	-	-
4	40	-	70	50	30	-	20	-	-
5	70	30	50	90	60	-	50	-	-
6	50	-	10	80	40	-	40	-	-
7	10	-	40	90	10	-	10	-	-
8	90	40	20	100	90	-	10	-	-
9	80	10	-	60	70	-	30	-	-
10	80	30	20	90	20	-	50	-	-
11	100	20	20	80	80	-	30	-	-
12	90	10	40	80	80	-	50	-	-
13	20	-	10	30	20	10	-	-	-
14	100	-	-	50	90	-	30	-	10
15	60	30	20	60	60	-	-	-	-
16	80	-	10	40	60	-	20	-	-
17	90	-	-	70	60	-	60	-	-
18	60	30	-	60	70	-	-	-	-
19	40	-	-	90	80	-	30	-	-
20	30	10	-	30	40	-	10	-	-
Total%	58	25	26.6	70.5	54	10	30.5	0	10

As seen in Table 4.23, all 20 subjects (100%) are judged to have problems with word stress (IA), failure to blend well, to make smooth transitions between words or syllables (ID), and unnatural intonation at the end of statements (IIA) by one or more informants. 17 of the 20 subjects (85%) are rated as having problems with the intonation of general questions (IIC), 12 subjects (60%) are reported as having problems with improper division of sentences into thought groups (IC), 10 subjects (50%) are reported to have problems with Improper sentence stress (IB).

Only one subject (5%) is reported to have a problem with unnatural intonation at the end of special questions (IIB-subject13), and unnatural intonation in direct address (IIE-subject 14) only by one informant. None of the subjects are rated as having problems with unnatural intonation in general questions with two alternatives (IID) by any of the informants. Thus, unnatural intonation in special questions (IIB), unnatural intonation in general questions with two alternatives (IID), and unnatural intonation in direct address (IIE) are not problematic for these students.

In some cases, there are only one or two informants who reported a problem in a given area for any speaker. Thus, the percent of informants for each area in the Inventory was calculated and the total percentage in Table 4.23 shows these percentages. Based on these results, stress on wrong syllable of words of more than one syllable (IA) is rated as problematic by 58% of the informants. Improper sentence stress (IB) is rated as problematic by 25% of the informants. Improper division of sentences into thought groups (IC) is rated as problematic by 26.6% of the informants. Failure to blend well, to make smooth transitions between words or syllables (ID) is rated as problematic by 70.5% of the informants. Unnatural intonation at the end of statements (IIA) is rated as problematic by 54% of the informants. Unnatural intonation in special questions (IIB) is rated as problematic by 10% of the informants. Unnatural intonation in general questions (IIC) is rated as problematic by 30.5% of the informants, and Unnatural intonation in direct address (IIE) is rated as problematic by 10% of the informants. Figure 4.2 represents the percentage of the informants who reported a certain problem for all subjects.



Failure to blend well, to make smooth transitions between words or syllables (ID) is rated as problematic by 70.5% of the informants. Stress on wrong syllable of words of more than one syllable (IA) is rated as problematic by 58% of the informants. Unnatural intonation at the end of statements (IIA) is rated as problematic by 54% of the informants. Unnatural intonation in general questions (IIC) is rated as problematic by 30.5% of the informants. Improper division of sentences into thought groups (IC) is rated as problematic by 26.6% of the informants. Improper sentence stress (IB) is rated as problematic by 25% of the informants, and Unnatural intonation in special questions (IIB) and Unnatural intonation in direct address (IIE) are rated as problematic by 10% of the informants.

5. DISCUSSIONS AND CONCLUSIONS

5.1 Discussion

Speaking is a skill which deserves attention in both first and second language. Since it is the most widely used skill in daily life, it has a great importance in communication. Therefore, if a learner wants to be understood by the listeners when s/he speaks, s/he must have an intelligible pronunciation. Although a great deal of lessons have been given in the name of pronunciation, students still have the same problems. In fact, unless factors affecting pronunciation are analysed by both teachers and students, we cannot talk about an effective pronunciation lesson. It is, therefore, "necessary to examine the factors which are significant for the speaker and for the listener in producing the communicated effect of prominence" (Gimson, 1970: 223). Since different nationalities will have different problems in producing English, a comparison between the students' mother tongue and English will help teachers to be successful in their lessons. (Haycraft, 1971: 2). Thus, a diagnostic research will be a great help for both teachers and students. According to Catford (1988: 1) "the teacher of English as a second language, must be able to diagnose the pronunciation errors made by students, and to devise means of correcting them".

Though the concept of pronunciation is a wide subject, textbooks on pronunciation typically distinguish between segmental and suprasegmental features of language. Segmental features are simply the individual sounds whereas suprasegmentals are the stress, rhythm, and intonation of the language. Many students and teachers think that learning the pronunciation of English means learning how to pronounce some sounds, but the fact is very different. "There are many foreign students who pronounce the individual sounds and words of English beautifully but who still sound very foreign. The reason is that in English the sound quality of a word, particularly the vowels and certain consonants, changes depending on whether the word is said in isolation or as part of a continuous stream of words" (Nolasco & Arthur, 1987: 11). Therefore, a teacher who wants to diagnose the pronunciation problems should begin with the suprasegmentals of pronunciation because they are more important than individual sounds

in communication. According to Wong (1993:) “any learner with a goal of learning English for communicative purposes needs to learn the rhythm and intonation of English”.

Thus, the present study aimed to examine whether Turkish students’ speech are intelligible for the native speakers or not, and to identify which suprasegmental features are problematic for these students. The result showed that none of the Turkish students were rated as either basically unintelligible or near native. Turkish students in this study fall into 4 levels. 1 student (5%) is largely unintelligible (average 2.1), 9 students (45%) are reasonably intelligible (averages 2.5 to 3.4), 7 students (35%) are largely intelligible (averages 3.5 to 4.2), and 3 students (15) are fully intelligible (averages 4.5 to 4.8). For that reason, as a second and diagnostic purpose, it was hoped to analyse the prosodic features affecting intelligibility of Turkish students’ speech.

It was reported that in pronunciation teaching a priority must be given to the suprasegmental features of pronunciation (i.e., stress, rhythm, and intonation in general) because there is a hierarchy of units in pronunciation and suprasegmentals are the most important fetures in this hierarchy and, also they are much more functional for the speech than the segmantal features (Prator, 1957, Wilkins, 1975 and Brown, 1977 cited in Rodriguez, 1981: 116; Catford, 1987: 88; Catford, 1988: 172; and Nunan, 1999: 107 and). However, it is not clear which elements of these suprasegmental features cause problems for the learners in intelligibility. The findings of this study show that there is a hierarcy of units in pronunciation for Turkish students which is similar to the findings reported in other studies (Prator, 1957; Browne and Huckin, 1987: 47; Catford, 1987: 88; Catford, 1988: 172; Rodriguez, 1981: 116; and Doff, 1998: 113).

Factors affecting the intelligibility of Turkish students were failure to blend well (70.5%), stress in wrong syllable (58%), unnatural intonation at the end of statements (54%), unnatural intonation in general questions (30.5%), improper division of sentences (26.6%), improper sentence stress (25%), unnatural intonation in special questions (10%), and unnatural intonation in direct adress (10%). According to these findings, there are mainly four specific problems for Turkish students within stress and rhythm, and intonation.

Stress and Rhythm

Stress on wrong syllable of words of more than one syllable(58%)

Improper sentence stress(25%),

Improper division of sentences into thought groups(26.6%)

Failure to blend well, to make smooth transitions between words and syllables(70.5)

Intonation

Unnatural intonation at the end of statements(54%)

Unnatural intonation in general questions(30.5%)

Unnatural intonation in special questions(10%)

Unnatural intonation in direct address(10%)

Unlike Catford's study (1988), stress and rhythm are found to be more problematic than intonation for Turkish students.

There are some researchers such as Rodriguez (1981: 117), Browne and Huckin (1987: 46), Wong (1987: 17), Hycraft (1991: 3), Bobda (1991: 108), Demircan (1993: 71), Jones and Evans (1995 cited in Stibbard, 1996: 1) Dalton (1997: 1), Makarova (1997:3); Means (1998: 1), Doff (1998: 113) who report native language as the main reason for the problems in pronunciation. According to Demircan (1993: 71) "Though it has been rejected by many error analysts, the learner's native language is among the most important sources of errors in L2". Although there are some implications of the negative effects of Turkish language on English (Demircan, 1993: 71; and Özkan, 2001), the possible reasons for these problems for Turkish students need to be explained in details.

5.2 Conclusion

Although many of the speakers have had a pronunciation lesson in their language learning process, they may not be able to speak the language understandably. Even English Teaching students who have average to academic standards of English have the same problem. As a conclusion, it is necessary to assess the speaker's pronunciation to learn his/her limitations in pronunciation. The assessment allows us to evaluate various aspects of the speaker's speech including production of speech sounds, stress, rhythm and intonation patterns. The purpose of assesment is to quantify these limitations and to identify the limitations responsible for the loss in intelligibility. For that reason, before planning a pronunciation lesson, teachers must learn the problems of their students and must take those problems into consideration when they assess their pronunciation.

In the study, the informants evaluated Turkish students' speech whether as intelligible or not. According to the evaluation of their speech, none of the students were regarded as unintelligible. However, there is no student regarded by the informants as near native. 15% of

the students were regarded as **fully intelligible**, 35% of the students were regarded as **largely intelligible**, 45% of the students were regarded as **reasonably intelligible**, and 5% of the students were regarded as **largely unintelligible**.

As a second step, the informants were asked to identify the features with which these students had problems. This in turn would provide information on the features, which affect intelligibility. The problems identified by the informants were **Failure to blend well** (70.5%), **Stress in wrong syllable** (58%), **Unnatural intonation at the end of statements** (54%), **Unnatural intonation in general questions** (30.5%), **Improper division of sentences** (26.6%), **Improper sentence stress** (25%), **Unnatural intonation in special questions** (10%), and **Unnatural intonation in direct address** (10%).

As it is evident from the study that the suprasegmentals have an impact on intelligibility. Therefore, a pronunciation teaching should include suprasegmentals. It is argued by many other researchers that faulty stress, rhythm, and intonation patterns cause greater difficulty for hearers than the inaccurate pronunciation of individual sounds (Tibbits, 1967; Prator, 1971; Wilkins, 1975; and Brown, 1977 cited in Rodriguez, 1981: 116; Nunan, 1999: 107; Morley, 1991: 493). If these features are not used in the speech properly, the listener finds it unintelligible (Means, 1998: 2). Therefore “ if students are to ‘sound English’, not so much in the sense of a perfect accent, but in the sense of making themselves easily comprehensible, there is a need to work on their pronunciation, stress, rhythm, and intonation” (Nolasco & Arthur, 1987: 66).

It is argued that pronunciation can be taught if the priorities are given to suprasegmental features of pronunciation (i.e., stress, rhythm, and intonation), and as Acton (1997: 2) states “pronunciation instruction can be accelerated considerably if suprasegmental features of pronunciation such as stress, rhythm, and intonation adopted to pronunciation teaching”.

5.3.Suggestions for further studies

This study aimed to investigate whether Turkish students’ speech is intelligible for native speakers, and which features of spoken language have an impact on intelligibility. The study was conducted with 20 freshman students of English Teaching Department at Anadolu University. In a further study, the number of students could be increased to determine whether the problems identified in this study can be generalized to all Turkish students learning

English. Also, students from different levels (i.e., 2nd, 3rd, 4th year) can be analysed to see if there is a difference related to the levels in their intelligibility.

The examples of the subjects' sentences in the study based on spontaneous speech sample because, as admitted by Prator (1957), Diagnostic Passage has limitations in it. However because of the nature of the spontaneous speech, the subjects could not use some of the sentence types in the study including intonation patterns in tag questions, in series, and in other cases. As a result, these patterns could not be tested by the informants. Therefore, it can be possible to take each sentence type by using both of them in the same study.

It was aimed in the study to learn the impact of suprasegmental features of pronunciation on intelligibility because it was argued that suprasegmental features are more functional for intelligibility than segmental features. In fact, it was found in the study that Turkish students' intelligibility is affected by these suprasegmental features, but a study on the effects of both suprasegmental and segmental features of pronunciation on intelligibility can give a detailed analysis of problems in pronunciation.

Such studies would contribute to syllabus design by identifying the students' problems responsible for the loss in intelligibility.

Appendix A
Kendall's and Pearson's Correlations

Correlations

			VAR00002	VAR00003	VAR00004	VAR00005	VAR00006	VAR00007	VAR00008	VAR00009	VAR00010	VAR00011
Kendall's tau_b	Correlation Coefficient	VAR00002	1,000	,301	,305	,204	,241	,353	,307	,301	,609**	,392
		VAR00003	,301	1,000	,777**	,541**	,691**	,508**	,637**	,649**	,607**	,660**
		VAR00004	,305	,777**	1,000	,433*	,752**	,575**	,622**	,604**	,589**	,580**
		VAR00005	,204	,541**	,433*	1,000	,506*	,316	,598**	,549**	,362	,443*
		VAR00006	,241	,691**	,752**	,506*	1,000	,320	,583**	,455*	,453*	,448*
		VAR00007	,353	,508**	,575**	,316	,320	1,000	,446*	,522**	,439*	,538**
		VAR00008	,307	,637**	,622**	,598**	,583**	,446*	1,000	,359	,392*	,659**
		VAR00009	,301	,649**	,604**	,549**	,455*	,522**	,359	1,000	,660**	,381
		VAR00010	,609**	,607**	,589**	,362	,453*	,439*	,392*	,660**	1,000	,416*
		VAR00011	,392	,660**	,580**	,443*	,448*	,538**	,659**	,381	,416*	1,000
		Sig. (2-tailed)	VAR00002		,	,132	,133	,321	,245	,084	,127	,136
VAR00003			,132	,	,000	,006	,001	,010	,001	,001	,002	,001
VAR00004			,133	,000	,	,032	,000	,004	,002	,002	,003	,004
VAR00005			,321	,006	,032	,	,014	,119	,003	,006	,071	,030
VAR00006			,245	,001	,000	,014	,	,117	,004	,024	,025	,029
VAR00007			,084	,010	,004	,119	,117	,	,025	,009	,028	,008
VAR00008			,127	,001	,002	,003	,004	,025	,	,067	,046	,001
VAR00009			,136	,001	,002	,006	,024	,009	,067	,	,001	,057
VAR00010			,003	,002	,003	,071	,025	,028	,046	,001	,	,038
VAR00011			,057	,001	,004	,030	,029	,008	,001	,057	,038	,
N	VAR00002			20	20	20	20	20	20	20	20	20
	VAR00003		20	20	20	20	20	20	20	20	20	20
	VAR00004		20	20	20	20	20	20	20	20	20	20
	VAR00005		20	20	20	20	20	20	20	20	20	20
	VAR00006		20	20	20	20	20	20	20	20	20	20
	VAR00007		20	20	20	20	20	20	20	20	20	20
	VAR00008		20	20	20	20	20	20	20	20	20	20
	VAR00009		20	20	20	20	20	20	20	20	20	20
	VAR00010		20	20	20	20	20	20	20	20	20	20
	VAR00011		20	20	20	20	20	20	20	20	20	20

** . Correlation is significant at the .01 level (2-tailed).

* . Correlation is significant at the .05 level (2-tailed).

Correlations

		VAR00002	VAR00003	VAR00004	VAR00005	VAR00006	VAR00007	VAR00008	VAR00009	VAR00010	VAR00011
Pearson Correlation	VAR00002	1,000	,384	,416	,287	,363	,378	,404	,374	,664**	,489*
	VAR00003	,384	1,000	,836**	,611**	,754**	,583**	,742**	,726**	,706**	,724**
	VAR00004	,416	,836**	1,000	,513*	,817**	,621**	,716**	,690**	,681**	,649**
	VAR00005	,287	,611**	,513*	1,000	,524*	,432	,686**	,632**	,456*	,580**
	VAR00006	,363	,754**	,817**	,524*	1,000	,340	,659**	,531*	,561*	,545*
	VAR00007	,378	,583**	,621**	,432	,340	1,000	,542*	,605**	,455*	,578**
	VAR00008	,404	,742**	,716**	,686**	,659**	,542*	1,000	,479*	,501*	,764**
	VAR00009	,374	,726**	,690**	,632**	,531*	,605**	,479*	1,000	,724**	,443
	VAR00010	,664**	,706**	,681**	,456*	,561*	,455*	,501*	,724**	1,000	,484*
	VAR00011	,489*	,724**	,649**	,580**	,545*	,578**	,764**	,443	,484*	1,000
	Sig. (2-tailed)	VAR00002	,	,094	,068	,220	,116	,100	,077	,104	,001
VAR00003		,094	,	,000	,004	,000	,007	,000	,000	,001	,000
VAR00004		,068	,000	,	,021	,000	,003	,000	,001	,001	,002
VAR00005		,220	,004	,021	,	,018	,057	,001	,003	,043	,007
VAR00006		,116	,000	,000	,018	,	,142	,002	,016	,010	,013
VAR00007		,100	,007	,003	,057	,142	,	,014	,005	,044	,008
VAR00008		,077	,000	,000	,001	,002	,014	,	,032	,025	,000
VAR00009		,104	,000	,001	,003	,016	,005	,032	,	,000	,050
VAR00010		,001	,001	,001	,043	,010	,044	,025	,000	,	,031
VAR00011		,029	,000	,002	,007	,013	,008	,000	,050	,031	,
N		VAR00002	20	20	20	20	20	20	20	20	20
	VAR00003	20	20	20	20	20	20	20	20	20	20
	VAR00004	20	20	20	20	20	20	20	20	20	20
	VAR00005	20	20	20	20	20	20	20	20	20	20
	VAR00006	20	20	20	20	20	20	20	20	20	20
	VAR00007	20	20	20	20	20	20	20	20	20	20
	VAR00008	20	20	20	20	20	20	20	20	20	20
	VAR00009	20	20	20	20	20	20	20	20	20	20
	VAR00010	20	20	20	20	20	20	20	20	20	20
	VAR00011	20	20	20	20	20	20	20	20	20	20

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

* Correlation is significant at the 0.05 level (2-tailed).

APPENDIX B
TOPICS FOR SPEECH

A. Answer the following questions

1. What do you want doing in 5 years of time?
2. What makes your life interesting?
3. What makes a happy life?

B. Complete the following sentences

1. I have a friend called.....
2. As soon as I finish the university.....
3. If I get married.....
4. My mother/father is.....

C. What do you think about the following topics?

1. University
2. Home
3. Friendship
4. Teachers
5. Exams

APPENDIX C

SPEECH INTELLIGIBILITY INDEX

Speech Intelligibility Index: Evaluation of Student Communicability

Level	Description	Impact on communication
1	Speech is basically unintelligible; only an occasional word/phrase can be recognized.	Accent precludes functional oral communication
2	Speech is largely unintelligible; great listener effort is required; constant repetitions and verifications are necessary.	Accent causes severe interference with oral communication
Communicative Threshold A		
3	Speech is reasonably intelligible; but significant listener effort is required due to speaker's pronunciation/grammatical errors, which impede communication and cause listener distraction; there is an ongoing need for repetitions and verifications.	Accent causes frequent interference with communication through the combined effect of individual features of mispronunciation and the global impact of the variant speech pattern.
4	Speech is largely intelligible; while sound and prosodic variances from native-speaker norm are obvious, listeners can understand if they concentrate on the message	Accent causes interference primarily at the distraction level; listener's attention is often diverted from the content to focus instead on the novelty of the speech pattern.

APPENDIX D

CHECK LIST OF ERRORS

Although Prator used the term “error” for defining the problems of the speakers, this term is not used in the study because there is not a perfect pronunciation model (Morley, 1991 498). Thus, the term “problem” is preferred in the study.

I. STRESS AND RHYTHM

- A. Stress on wrong syllable of more than one syllable.
- B. Improper sentence stress.
- C. Improper division of sentences into thought groups.
- D. Failure to blend well, to make smooth transitions between words or syllables.

II. INTONATION

- A. Unnatural intonation at end of statements.
- B. In special questions.
- C. In general questions
- D. In general questions with two alternatives
- E. In direct address.
- F. In tag questions.
- G. In series
- H. In other cases

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