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DOKTORA TEZİ

**THE DETERMINATION and APPLICATION of
SUPRASEGMENTAL STRUCTURES in TEACHING ENGLISH
(İNGİLİZCE ÖĞRETİMİNDE PARÇALARÜSTÜ YAPILARIN
SAPTANMASI ve UYGULANMASI)**

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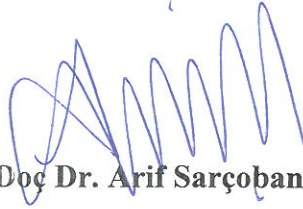
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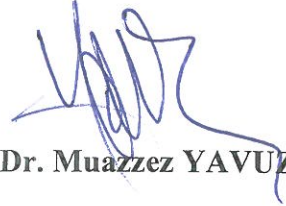
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ÖNSÖZ

Vurgu, tonlama ve durgu terimleriyle adlandırılan ve *ezgi, prozodi ve konuşma melodisi* olarak da bilinen *parçalarüstü yapılar*'ın bugüne kadar sesletim eğitiminde geniş çapta ihmal edilmesinin nedeni bu alanın, *alofonlar, diftonglar, triftonglar* ve *fonotaktikleri* içeren ve parça fonemleri olarak öğrenilip bu isimlerle tanınan özel bir alanın kapsamı dışında bulunmasıdır. Klasik sesletim eğitimi, genelde fonemlerin, uygulamalı ve eğitimsel fonolojinin niteliklerini birleştiriyorsa da seslerle bireysel olarak ilgilenmekten çok daha fazla konularla ilgilenir; *vurgu, deyiş vurgusu, cümle ezgisi, entonasyon ve ulama* özelliklerini taşıyan bu *parçalarüstü faktörlerin* tümü konuşulan dilin melodisini etkiler. İşbu çalışmanın amacı, sözlü iletişimin en önemli unsurlarını içeren parçalarüstü özelliklerin Türkiye'de sesletim müfredatına dahil edilmesine bir ön hazırlık olma amacını taşır. Bu sistemin eğitime dahil edilmesiyle sesletim eğiticilerimiz şimdiye kadar sözcükleri tek tek işleyen monoton sesletim eğitiminden bir adım daha ileriye gitmiş olacaklardır. Bu yeni sistemle sesletim eğitimini uygulayacak olan öğretmenlerimiz, eğer öğrencilerinin kullandıkları sözcüklerin vurgulamalarındaki çeşitli düzeyleri birbirlerinden ayırderebilirlerse o zaman onların artikülasyonlarında büyük bir değişiklik sağlayacaklardır. Öğrenciler ayrıca bileşik sözcüklerde ve özellikle tümcelerde, birincil ve ikincil vurgularında ayrımları belirtirlerse ifadelerinde arzu edilen ritmi yakalayabileceklerdir.

Vurgulama, tonlama ve duraklama denilen ve her dilde mevcut olan *parçalarüstü yapılar*, kişilerin anadillerinde doğal olarak kazanılabildiği için bunları öğrenmede önceden özel bir eğitime ihtiyaç duymazlar. Ancak bunların yabancı bir dili daha anlaşılır bir şekilde konuşabilmede kullanılmasının sağlanması için sadece bunların doğal olarak kullanıldıklarının varsayılması değil doğru biçimde algılanmalarına ve uygulanmalarına odaklanılmak son derece büyük bir önem taşır. Derwing, Munro ve Wieber (1998) adlı araştırmacılar daha önce parçalarüstü yapılar hakkında eğitim almış olan konuşucuların, anlamlarını spontane iletişimlerinde, daha önce bunları tanımamış ve sadece parçalılar (ünlüler ve ünsüzler) düzeyinde eğitim almış olanlara kıyasla daha etkili olduklarını görmüşlerdir. Vurgulamanın ölçülü ve zayıf biçimli entonasyon özelliklerinin etkileşiminin anlaşılabilirlik için son derece önemli olarak görülmesine rağmen parçalarüstü yapıların öğretilmesi ihmal edilmiş bir alan olup yabancı dil öğretimi ile ilgili ders kitaplarında bunlara pek sık rastlanmamaktadır (Jenkins, 1997). Celce-Murcia (2010) etkili iletişim için parçalarüstü yapıların öğretilmesinden söz ederken vurgulama ve entonasyonu eğitim sistemine tam olarak entegre etmede yaşadığı sorunlardan söz etmektedir. Dolayısıyla, hedef dilde yaygın olarak kullanılan bu tür un-

surları tam olarak algılanmayan ve uygun şekilde kullanmayan yabancıların bunları sesletim öğretmenlerinden öğrenmeleri ve kabul edilir bir konuşma performansına ulaşmak için sistematik bir şekilde çalışarak bunları yeterince öğrenmeleri gerekir.

Şurası muhakkaktır ki, çeşitli biçimlerdeki cümlelerin öğeleri arasındaki duraklamalar (duraklar) ve ulamalar ve uygun şekildeki vurgulama ve tonlama örnekleri gereğince kullanılırsa konuşmamız, eğer bunları ihmal edersek asla ulaşamayacağımız bir düzeyde anlaşılır olacaktır. Böylece parçalarüstü yapıların, anlam ve heyecanları aktarmadaki etkisinden haberdar olan İngilizce sesletim öğretmenleri öğrencilerinin pırıl pırıl bir ifadeye kavuşma becerisindeki güçlüklerini aşmada daha büyük avantaja sahip olurlar. İşte bu çalışmanın içeriği ve metodu, öğrencilerin mevcut sisteme böyle bir teknolojiyi kazanması amacını taşımaktadır. Bu yöntemde IPA geniş transkripsiyonların üzerine kuvvetli ve zayıf vurgu işaretleri konur, ulama ve durak, hatta tonlama işaretleri transkripsiyona özenle eklenir ve böylece hedef dildeki doğal ritm ve artikülasyonun konuşmacı tarafından dinleyiciye aktarılması sağlanmış olur. Bu araştırma daha sonra İngilizce'deki parçalarüstü özellikleri keşfetme ve onları sesletim eğitiminde uygulama ve sonra da Türkiyedeki parçalarüstü fonoloji alanında tanıtıcı değerinde bir kurs kitabı olacak yayımlanacaktır. Bu tür bir ders kitabı, Türkiye'de İngilizce'yi öğreten Türk öğretmenlerin ve öğrencilerinin işine yarayacak; onlara sesletim öğretimi ve öğrenimi etkinlikleri sağlayarak kendilerinin daha önce edindikleri parçalı fonetik temellerinin üzerinde destek sağlayacaktır. Böylece bu çalışma gelecek kuşağın İngilizce öğretmenlerinin yetişmesine katkıda bulunma amacıyla, onların sözlü iletişim becerileri ile daha iyi donanmalarını sağlamak için özel olarak tasarlanmıştır.

FOREWORD

The reason that suprasegmentals, namely stress, pitch and juncture, also referred to as *intonation, prosody, or speech melody*, have been largely ignored in pronunciation teaching up to now is because this area stands outside the scope of the better-known and understood area of segmental phonemes which covers *allophones, diphthongs, triphthongs, phonotactics*, etc.. Although classical pronunciation-teaching incorporates the characteristics of phonemes, applied and educational phonology in general deals with far more than individual sounds; such suprasegmental factors as *word stress, phrase stress, sentence stress, intonation* and *word linking* all influence the melody of the spoken language. Thus, the purpose of this study is to attempt to introduce to the pronunciation-curriculum in Turkey covering the most important elements in oral communication, which are the “suprasegmental features”. With this system our pronunciation teachers can go one step further from the flat-sounding individual phonemes in words. There will be a big difference in their students’ articulation if they simply make them distinguish various level stresses in the syllables of those words. And in the case of compound words, and especially sentences, students must be made aware of the primary and secondary stress distinctions that will provide the desired rhythm in the articulation of their speech.

Suprasegmental features such as *stress, pitch* and *juncture* are phonological universals that are uttered naturally by native speakers in their mother tongue without prior training. However, “it is extremely important that their perception and practice be focused on, rather than their being used in teaching a foreign language in order to help its learners speak it more intelligibly.” (Chela-Flores, 2001) Derwing, Munro & Wieber (1998) observe that speakers who had had previous instruction on suprasegmentals could transfer their meaning to a spontaneous production more effectively than those who had received instruction with only segmental content (i.e., vowels and consonants). Although the interaction of certain features of intonation with stress timing and weak forms is considered as crucial for intelligibility, “the teaching of suprasegmentals is a neglected avenue, not often seen in the related course books of foreign language teaching” (Jenkins, 1997). Celce-Murcia (2010) while referring to the teaching of suprasegmentals for communication, remarks that she has problems with fully integrating stress and intonation in her teaching. Therefore, such elements in the target language which are not perceived and appropriately used by non-native speakers need to be taught by pronunciation teachers, and duly studied and adequately learned systematically by students in order to reach an acceptable level of speech performance.

Needless to say, breaks (i.e., *junctions*) of various forms in sentence utterances as well as *linkers*, along with appropriate use of stress and pitch patterns where necessary, make our speech much more understandable than otherwise. Thus, English pronunciation teachers, conscious of the effects of suprasegmentals on conveying emphasis on meanings and emotions, are more advantaged to help their students acquire the difficult skill of producing crystal-clear utterances. Again, the content and methodology of this study is intended to bring to our current system a new technology for training learners by showing them suprasegmental features on IPA broad transcriptions with strong and weak stress markings, carefully adding linkers and junctions and even pitches on them, to feature the natural rhythm and articulation in the target language. This present research aimed to discover various suprasegmental features in English and ways to apply them in pronunciation teaching, and subsequently was also designed to be used as an introductory course book on suprasegmental phonology in Turkey. Such a textbook would serve both non-native teachers of English and their students in this country by providing pronunciation teaching and learning activities to support their segmental phonetics background. Thus, it was designed with the goal of contributing to the education of the next generation of learners of English, enabling them to be better equipped with oral communication skills.

ÖZET

THE DETERMINATION and APPLICATION of SUPRASEGMENTAL STRUCTURES in TEACHING ENGLISH (İNGİLİZCE ÖĞRETİMİNDE PARÇALARÜSTÜ YAPILARIN SAPTANMASI ve UYGULANMASI)

Türkiye’de İngilizce öğrenenlerin en büyük sorunlarından biri konuşurken kendilerini anlaşılır biçimde ifade etme becerisidir. Belirli işlemler, yöntemler ve tekniklerle kazanabilecek - veya aksamaması durumunda düzeltilebilecek ya da önlenebilecek - olan bu sözlü iletişim becerisinin kazanılamaması bir çok konuşmacıda özgüven eksikliğine ve arzulanana başarıya ulaşamama güçlüğüne neden olmaktadır. Türkiye’de İngilizce öğrenenler ve öğretmenler için çözüm bekleyen bu ciddi sorun büyük oranda, İngilizce’de (Türkçe’de ya da birçok Avrupa dilinde olduğu gibi) sağlam ve değişmez kurallara bağlı bir telaffuz ve vurgulama yapısı olmamasından ve bu yüzden de İngilizce öğrenenlerin bu dili ana dillerinin sesletim ve tonlamasıyla konuşmaya çalışmalarından kaynaklanmaktadır. Bu yüzden İngilizce’ye özgü sesletim ve vurgulama düzeninin öğrenilip telaffuz edilmesine yönelik çalışmaların mutlaka dil eğitiminin en başında öğrencilere kazandırılması, bunun için gerekli olanakların sunulması, onların da gerekli çabayı göstermesinin sağlanması gerekmektedir. Aksi takdirde sözlü İngilizce’nin bu özelliğini kazanmadan bu dili konuşmaya çalışacak olan öğrencilerimiz, doğal olarak kendi dillerine özgü ritm, vurgu ve tını yapısını kullanmaya devam edeceklerinden, ana dili İngilizce olan kimselerle sözlü iletişimlerinde karşılıklı anlaşma güçlüğü çekeceklerdir.

İngilizce telaffuzunun temel altyapısına ait özelliklerin kazanılmamış olmasından kaynaklanan bilgi ve beceri eksikliğine, yanlış edinimler de eklenince anlaşılır ve etkileyici bir sesletim ve vurgulama hedefine ulaşmak neredeyse imkansız hale gelmektedir. Sözlü iletişimin işlevselliğini olumsuz etkileyen yanlış edinim aksaklığına sesbilimde kemikleşmiş (fosilleşmiş) sesletim hataları denmektedir. İngilizce telaffuz eğitiminde bugüne kadar genellikle seslerin tek tek öğretilmesine yönelik klasik bir yaklaşım hakimdi. Bu yaklaşımda sadece İngilizce’nin tanınması ve bunların doğru sesletilmesine yönelik çalışmalar üzerinde durulurdu. Oysa son dönemde yapılan araştırmalar göstermiştir ki, sözlü iletişimde anlaşılabilirliği sadece sesbirimlerin (fonemlerin) yan yana sıralanmasından ibaret “parçalar düzeyi” oluşturmamaktadır. Söylenenlerin doğru

anlaşılmasını sağlayan bir o kadar önemli, hatta daha da önemli bir başka frekans daha mevcuttur. Sözlü iletişimi ritme dayalı bir dil olan İngilizce’de kelimelerin veya kelime öbeklerinin kendi içlerindeki birinci ve ikinci derece vurguları, anlam öbekleri arasındaki duraklamalar ya da ulamalar ve söylenen tümcenin tınısını oluşturan ve “parçalar üstü” denilen bu frekans veya özellikler dizisi sözlü olarak aktarılan mesajın anlaşılmasını sağlayan en temel niteliktir.

İngilizce sözlü iletişimde söylenen sözcüklerin anlaşılabilirliği sorununun kesin olarak giderilmesi, ancak IPA (International Phonetic Association - Uluslararası Sesbilimi Kurumu) tarafından belirlenmiş temel kuralların, işlemlerin, yöntem ve tekniklerin öğrenilmesi ile mümkündür. Bol uygulamalarla öğrencinin ileride yapabileceği pek çok sesletim hatasını en başından önlemek veya yanlış edinilmiş (fosilleşmiş) hataları düzeltmeye çalışarak mümkün olacaktır. Bu yöntemi de ancak temel fonetik kurallarını öğrenmiş ve uygulayabilen fonetik uzmanları uygulayabilecektir. Unutmayalım ki her İngilizce öğretmeni aynı zamanda bir “doğru konuşma modelidir.” Bu nitelik önce eğitici kişiliğimizin ve dil öğretmeni olarak mesleki imajımızın, daha sonra da muhatabımıza göstermemiz gereken saygının ifadesi olarak değerlendirilmektedir. Tıpkı koruyucu hekimliğin birçok hastalığı önceden önleyebildiği gibi, uygulamalı fonetik temeli almış meslektaşlarımızın da doğru sesletimi dil eğitiminin mümkün olduğu kadar başlangıç düzeyde sağlamaları, ileride telafisi belki de imkansız olacak kemikleşmiş ya da fosilleşmiş İngilizce sesletim hatalarının önüne geçilmesi yönünden çok daha pratik olacaktır. Çünkü kendimizi sözlü İngilizce ile ifade ettiğimizde ne dediğimiz kadar onu nasıl söylediğimiz de aynı derecede büyük önem taşımaktadır.

Anahtar Sözcükler: Parçalarüstü Yapılar, Duraklama, Vurgulama, Tını, Ritm, Ezgi

ABSTRACT

THE DETERMINATION and APPLICATION of SUPRASEGMENTAL STRUCTURES in TEACHING ENGLISH

One of the greatest difficulties of those learning English in Turkey is the ability to express themselves intelligibly when they speak it. One reason creating this difficulty is that English is not based on a consistent phonetic structure like many other European languages along with Turkish. Therefore it is necessary to spend special effort to study the intricacies of the spoken English by using relevant procedures.

While trying to speak this language “native-like” it is not sufficient to be able to utter its sounds (phonemes) on a segmental level. English, being a rhythmic language, one needs to learn to adapt its natural flow involving its stress, juncture, linking and pitch characteristics (summed up as its suprasegmental aspect) while learning its grammar and vocabulary.

The dilemma facing both English teachers of Turkish origin and their students is a result of their lack of clear articulation in the target language and their shortcomings in the technical background needed to apply necessary means, procedures and methods to remedy the situation. If such information and skills are not acquired at the basic level of pronunciation learning, the void in the phonetic base both at the segmental and suprasegmental levels could cause great communication problems in the long run. An unprincipled and haphazard way of acquiring pronunciation skills throughout an L2 learner’s training is almost impossible to remedy unless taken care of by a skilled phonetician trained in IPA principles. Wrongly-acquired skills, just like those that are properly acquired, are hard to change once they become “fossilized” in one’s speech.

Up to now, the traditional methodology of English pronunciation teaching has dwelt only on helping learners get to know, acquire and utter individual phonemes. However, recent studies have shown that the most important factor facilitating oral intelligibility is not lining up the sound-units (phonemes) taking place in a statement, but more precisely, using correct patterns of speech rhythm, its melody, its primary and secondary stresses, linkers, and junctures uniting and breaking meaningful thought-groups carrying appropriate pitch to convey our mood to our audience.

In order to solve the problem of any and all pronunciation errors, therefore, it is important first to apply the relevant procedures, methodology and technique (to be discussed in detail in the thesis), namely, to determine segmental and especially suprasegmental errors, form a solid phonetic base and, through necessary exercises, to establish an acceptable level of communication. As preventative medicine is more needed for a healthy society than remedies for the sick, likewise, it is extremely important to provide a necessary background in phonetics (without neglecting the vital suprasegmental issues) for the learners at their preliminary level than trying to correct them (unsuccessfully, in most cases) later on during and after their education. Those having to face the problem of dealing with fossilized pronunciation errors, and those suffering from them, especially ELT teachers and their students in Turkey, are the living witnesses of such an epidemic.

Key Words: Suprasegmentals, Juncture, Stress, Pitch

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CHAPTER ONE: INTRODUCTION

1.1 Modern Approaches of Pronunciation Teaching: *Segmentals vs. Suprasegmentals*

Regarding English pronunciation, teaching segmentals appears to have always had prevalence at the expense of prosody. Vowels and consonants have been the basis of English pronunciation learning and teaching. The teaching has been traditionally involved in “repetitive exercises, i.e., minimal pair drills (e.g. *beat* vs. *bit* and *leave* vs. *live*), spotting the odd one (e.g. *break*, *great*, *steak*, *breath*) or simply repeating words after the teacher” (Kelly, 1969). Brown (1995: 169) challenges the very usefulness of the most widespread type of exercise, the minimal pair drill, which he describes as a “not very meaningful exercise”. The scope of pronunciation teaching employed is all the more reduced as it displays not only an enormous advantage of segments over prosody, but also of vowels over consonants.

The new generation of the Communicative Approach, based on the *International Phonetic Alphabet*, contributed greatly to the acquisition of accepted segmental English structure. As for suprasegmentals, teachers sometimes let learners know about the special rhythm of English as a stress-timed language by giving regular taps on a desk, or by clapping their hands. Yet, until the results of recent research, a regrettable lack of a more thorough teaching of prosody has been widely observable. McNerney and Mendelsohn (1992) point out: “Discussion with ESL teachers and an examination of some traditional pronunciation texts quickly reveal that the norm has been to devote the majority of time and effort to segmentals (individual sounds), and usually vowels.”

The author of this dissertation has observed, based on the findings of many contemporary phoneticians, that suprasegmental features are treated by teachers of English as a Second Language (ESL) as “peripheral frills” and this remark is also applicable to EFL teaching. According to the questionnaire of Burgess and Spencer (2000), for instance, it has been found that “EFL and ESL teachers very often see suprasegmental features as difficult to teach and learn, even if they are aware of their paramount importance.” In fact, many authors and researchers acknowledge that suprasegmentals should be granted a more important status than segmentals in English pronunciation teaching, in as much as they are the basic structures of spoken language. McNerney and Mendelsohn (1992) further allege that “it is the suprasegmentals that control the structure of information”, and that they are “far more important” in communication than segmentals. As a justification for that, they remark that individual sounds can be inferred from the context, whereas suprasegmental errors cannot be helped or lessened by the context. For example, if a learner says “I cooked the meat in a *pen*, rhyming *pen* instead with *pan*”, the con-

text makes it possible to guess the intended word straight-away without too much mental correction from the listener. On the other hand, in response to “he went on holiday”, a rising intonation or misplacement of the nucleus in “where did he go?” unequivocally expresses surprise or the need for confirmation, and not a real question asking for new information.

At any rate, the role that suprasegmentals plays is essential, and its being disregarded in EFL teaching is hardly comprehensible. Brown (1995: 174) concludes that “minimal pairs should not be overemphasized at the expense of other aspects of pronunciation, such as stress, rhythm, intonation, and voice quality”, which means that there is no point in insisting on individual sounds, and prosody deserves more room in EFL teaching.

The need for a re-evaluation of the teaching of suprasegmentals in ESL and EFL contexts has been very much praised. A better place given to rhythm, stress, and other prosodic aspects is believed to make learners improve both their production and perception skills, and our experiment is an attempt at bringing support to that claim, which is very well summarized in McNerney and Mendelsohn (1992).

A short-term pronunciation course should focus first and foremost on suprasegmentals, as they have the greatest impact on the comprehensibility of the learner’s English. We have found that giving priority to the suprasegmental aspects of English not only improves learners’ comprehensibility but also proves less frustrating for students because greater change can be effected.

This view is also supported by Huart (2002), who recommends that “the specific melody of English should be taught to students as early as the very beginning of the L2 learning process, even before vowels and consonants are studied.” Similarly, Hodges (2006) has suggested the following order for the teaching of English pronunciation to non-native speakers: *word-level stress, sentence-level stress, intonation, consonants, vowels*, and finally, *linking*. In the proposed patterns, segments are put in the background and are only attributed a secondary role. In reality, even in English studies at the university level where pronunciation is thoroughly taught, syllabi usually start with articulatory phonetics, the phonemes and the teaching of the *International Phonetic Alphabet* (IPA), then transcription practice, and only at the end is *prosody* taught, with syllable structure and stress in the middle.

According to Ploquin (2009: 78), “it is clear that improvement of students’ production of rhythm must start with the improvement of our understanding, closely followed by a much-needed revision of what teachers are taught”. The origin of the problem here is what teachers themselves are taught, as is also contended by Herry (2001: 5). It is only when teachers have

better knowledge of and training in the role and status of suprasegmental phonology that they will be able to teach what should be primarily taught, and to assign to segmentals a more secondary role. In the competitive examination to qualify as a secondary school teacher of English, candidates' knowledge of phonetics and phonology is not examined at all. This just shows that English teachers are often not trained enough in phonology. One of the major problems that still subsists and is addressed by many researchers is "the lack of integration between research findings and language classes" (Silveira, 2002), i.e., "the need for a collaboration between researchers and teachers" (Burgess & Spencer, 2000; Klein, 1998; Pica, 1994). As is argued by Kelly (1969: 1), that the approach to any discipline should be governed by "theoretical findings in the sciences on which the discipline rests". Herry (2001) also underlines that, "despite the growing research on *prosody* and the acknowledgement of its importance in communication, EFL teaching methods still do not integrate these findings."

Resulting from this overview of English pronunciation teaching, it appears that a revised version of EFL teaching should first and foremost put pronunciation before the teaching of grammar and vocabulary (cf. the "ear before eye" method, but also the very fact that a synonym for "language" is "tongue", i.e., it should primarily be considered as something oral), and definitely *prosody* before *segments*. Further research should investigate these claims in more detail. In addition, such a revision of the teaching of English pronunciation goes hand-in-hand with a close analysis of the recurrent difficulties that Turkish learners come up against, as well as an account of the most frequently encountered errors, thus enabling us to proactively avoid them.

Before proceeding with the awareness and acknowledgement of the *suprasegmental phenomenon* by eminent linguists of later decades, we must first examine how this concept of "segmental vs. suprasegmental contrast" emerged from the basic schools of linguistics and their representatives.

Ferdinand de Saussure was the first linguist to use the term "*phoneme*" in the meaning of "speech sound" differentiating between language and speech. Then, *the Prague Phonological School* (headed by Trubetzkoy), *the London Phonological School* (headed by Daniel Jones) and *the American Phonological School* (headed by Edward Sapir) all led the way for their followers to bring about the notion of *suprasegmentals* after them. But for this emergence of *suprasegmentals*, the credit should go to the Swiss linguist de Saussure (1857-1913) with his *Cours de linguistique générale* (Course in General Linguistics), published posthumously in 1916, who became the forerunner of the *phoneme* theory leading to the *segmental vs. suprasegmental arguments* later in the 20th century.

The Praguean proponents, working on Saussure's views on structuralism, first developed the methods on literary analysis. This approach also had a significant impact on phonological analysis, linguistics and semiotics. The Prague school included Nikolai Trubetzkoy (1890 -1938) and Roman Jakobson (1896 -1982), as outstanding figures who are known for their structuralist theories in phonology. According to them, the important unit of measurement in defining a phoneme was its "function" performed in speech environments. To them, the phoneme was regarded as a minimal unit that could function to distinguish meanings of utterances, and the phoneme was an abstraction based on a theoretical construct on the phonological level.

Trubetzkoy's chief contribution to phonology was in the area of functional phonology. His theory was highly developed for clarifying the distinction between phonetics and phonology, using the criterion of function phonemic analysis by means of minimal pairs and contrastiveness of phonemes in texts. He strongly emphasized the concept of phonological opposition (primary) over phoneme (secondary) so that classifying phonological oppositions could be classifying typologically. Neutralization, uniqueness, acute and grave representations of phonemes, lip rounding, pharyngealization and retroflexion, flatness, and archiphoneme, are all consistent with a functional view of the phoneme, phonemic analysis and the teaching of *suprasegmental phonology*.

The Russian émigré Roman Jakobson of the Prague school developed such concepts as feature, binary opposition, markedness, redundancy, and universals in phonology and language change. He then applied them in phonemic analysis. Nikolai Trubetzkoy and Roman Jakobson followed Saussure's emphasis on the differential function of linguistic elements and attached great importance to the oppositions among sounds as phonemes, rather than to the phonemes themselves. This fact was demonstrated in Jakobson's *Grundzüge der phonologie* (Principles of Phonology). They also initiated modern distinctive feature theory with its notion of component features, which is already implicit in the idea of phonemic opposition in phonemic analysis. The Prague school of phonology is often aligned with the American structural phonemics, even though there are still divergent views on the concept of the phoneme and phonemic analysis, especially on the issue of prosody. Therefore, it must be noted that the study of suprasegmental phonology has benefited more from the applications of the Prague school than from those of any other school.

The American school of phonology, on its part, developed in a very different style from that of Europe, under the leadership of the anthropologist F. Boas (1858–1942). Boas discussed the framework of his linguistic descriptions in 1911 in his *Handbook of American In-*

dian Languages, by giving the analysis and transcriptions of the sounds of American Indian languages. Leonard Bloomfield, Franz Boas, Edmond Sapir, George Trager, Henry Lee Smith, Bernard Bloch, Charles Hockett, Kenneth Pike, Charles Fries, Archibald Hill, Martin Joos, Rulon Wells, and Zellig Harris were the first generation to be employed as professional linguists and claimed to have a uniquely scientific approach to the study of language, based on the empiricist views of contemporary science within distributional methods. They all said that speech sounds could be grouped into distinctive units within a language. These were known as phonemes and were researched by phonemics.

According to Pike (1943: 57), “phonetics gathers raw material, phonemics cooks it.” It is because of this statement that many of the applied phonologists use phonemics and phonology interchangeably. For the phonologists sharing this view, the primary concern is to establish those sounds that belong in the same family. This attitude led to the construction of the phoneme-specifying principles of contrast and complementarity, which were later joined with the principle of free variation. If two sounds occurring in the same environment, when substituted bring about a meaning change, they must be considered as two separate phonemes; for example, the sounds /p/ vs. /b/ in /pɛt/ and /bɛt/, and /t/ vs. /d/ in /bæɪt/ and /bæɪd/. The pair of words containing such sounds is said to be a minimal pair, which has functioned as the testing ground for the presence of phonemes. The American school of phonology matured the principles of phonemic analysis. It is relevant to note that in classical phonemics, three levels of analysis are recognized: “the phonetic level”, “the phonemic level” and “the morphophonemic level”.

The American school additionally looked at the data of phonetic transcriptions of the speech of native speakers. This led them to deduce the nature of the underlying phonemes and the sound inventory of the language. As Sommerstein (1977: 1) puts it, applied phonology has become an “investigation of the phonic features serving the particular language being investigated or capable of serving in natural language, to distinguish utterances.”

Some phonologists objected to a deductive explanatory system based on language universals (like that of the Prague School). Hockett (1955) and Pike (1943) with treatments of phonetics, and Joos (1948), with acoustic analysis in phonetics, were very influential. Phonemic contrastiveness and overlapping, complete overlapping, rule-ordering, bi-uniqueness, and Pike’s (1943) views on juncture phonemes also gained importance in the study of suprasegmental phonemes.

In the classical phonetic and phonemic analysis of Bloomfield, Boas, Sapir, Trager-Smith, Hockett, Pike, Gleason, and Fries, the minimal units can serve the purpose of differentiating

the meaning of the phonemes. The field of phonology deals with studies on how sounds alternate, that is, replace one another in different forms of the same allophones, as well as with the study of *suprasegmentals*, including *syllable structure*, *stress*, *pitch*, *juncture*, *accent*, and *intonation*.

In suprasegmental analysis of utterances in the English language, it is believed that a complete theory of phonology of English should deal with stress placement including word, phrase, clause, and sentence stresses. The placement of stress in a word is partly dependent on whether the word is a noun or a verb; for example, /'rɛbəl/ *n.* vs. /rɪ'bɛl/ *v.*, /'ɪmpɔət/ *n.* vs. /ɪm'pɔət/ *v.*, and /'kɒŋdʌkt/ *n.* vs. /kən'dʌkt/ *v.* In the analysis of phrases, clauses, and sentence stresses, mobility of stress, which is the to and fro movement of primary stress. By addition and subtraction, certain suffixes create vowel reduction or *schwa* formation, which for learners of English in Turkey is very difficult to perceive.

In 1968, Noam Chomsky and Morris Halle published *The Sound Pattern of English* (SPE), the transformational basis for generative phonology. In this view, phonological representations are sequences of segments made up of distinctive features. These features were an expansion of an earlier work by Nikolai Trubetzkoy, Roman Jakobson and Morris Halle. In that study, not the SPE, but classical techniques and methods of structural phonology were followed. After the publication of SPE, it has become customary to distinguish between classical phonology and generative phonology.

David Stampe in 1979 coined the term “*natural phonology*” with specific principles. Phonological processes act on distinctive features within prosodic groups. In 1976, John Goldsmith introduced autosegmental phonology. Autosegmental phonology later evolved into optimality theory, which is predominant in North America today, in the school of American phonology.

The London Phonological School, founded in 1930 by D. Jones (1881-1967), brought a special theoretical and methodological tradition to the study of English phonetics in England. A basic concept of the London school was structuralism. Henry Sweet (1845-1912), along with John Rupert Firth (1890-1960), B. Malinosky (1888-1942) and Halliday (1925-) also belonged to this school. Firth's own theories were concerned mainly with phonology and semantics. A Firthian phonological analysis recognizes a number of ‘systems’ of prosodies operating at various points in structure-like *segmental phonemes* as well as *suprasegmental phonemes*, at the levels of consonant and vowel clusters, clusters of syllables, groups of words and word combinations.

Sweet was also a pioneer in modern scientific phonetics and published works on larger issues of phonetics and grammar in language and the teaching of languages. Sweet is said to have served as the model for Professor Henry Higgins in Shaw's *Pygmalion*. Daniel Jones (1881 - 1967) is the other British phonetician who was involved in the development of the *International Phonetic Alphabet* (IPA) from 1907 and went on to invent the system of consonants and cardinal vowels and produce the *English Pronouncing Dictionary* (1917). As a British structuralist, he took up and extended Sweet's work on phonetics, phonetic training, and types of phonetic and phonemic transcriptions. Daniel Jones (1967: 7) defined the phoneme as "a family of sounds in a given language, consisting of an important sound of the language together with other related sounds." His works were highly influential in the development of phonetics, and his books are still widely used throughout the world. He is the first one who noticed that some phonological properties are not uniquely 'placed' with respect to particular segments in *suprasegmental* and *prosodic* analysis. In addition, he produced the first substantial challenge to the phonetic notion that "division of utterance into phonetic segments provides the essential basis for further analysis, which may proceed exclusively", by assigning properties to segments, thus leading to further studies on suprasegmentals.

John Rupert Firth (1890-1960) was an English linguist. He is said to be the first to turn linguistics proper into a recognised distinct academic subject in Britain. Firth was influenced by the anthropologist B. Malinowski (1884-1942). His theory of prosodic analysis focused on phonetic elements larger than individual sounds, and anticipated some developments in phonology by half a century. Hill (1966: 223) wrote, "Prosodic analysis made its effective debut with J. P. Firth's (1919-1928) *Sounds and Prosodies*". Firthian developments on suprasegmental and prosodic analysis are said to have been contemporaneous with similar developments in the United States (Goldsmith, 1991), especially with the phonological theory of Pike (1966). According to this school, intonation, stress and tone are distributed over larger domains in a language, but segmental phenomena like lotization or labiovelarization can also be treated as suprasegmental. They contend that in analyzing the phonic material of an utterance, prosodic analysis is distinguished at levels, between paradigmatic and syntagmatic relations. The items in paradigmatic relations are systematic, while those in syntagmatic relations are structural. As indicated by de Saussure, there must be successive phonematic units, which can be studied as elements in structure. A typical structural element is a syllable, and the syllable structure of any word or piece is considered prosodic. Firth did not give a clear definition of prosody, but the illustrations he gave include features of stress, length, nasality, palatalization, lotization, labiovelarization, and aspiration. Thus, Firthian prosodic analysis is a theory of representations; moreover, autosegmental, metrical and skeletal phonologies are like prosodic treatments in the structure of prosodic analysis.

The London School of Harry Sweet (1845-1912) and Daniel Jones stressed the practical side of phonetics, and trained its students to perceive, transcribe and reproduce each minute sound distinction very precisely – far more than the American behaviorists, for example, and of course the Chomskians, who are extending models rather than testing them. This phonetic competence was much needed when J.R. Firth (1891-1960) and others at the School of Oriental and African Studies helped plan the national languages and their writing systems for the new Commonwealth countries. Overall, the School has been very far ranging – noting, for example, how stress and tone co-occur with whole syllables, and developing a terminology to cope: a basis for poetic metres. Firthian analysis also finds a place for esthetic considerations and develops a system of mutually-exclusive options, somewhat like Saussure, but more socially and purposively orientated.

The London School of Linguistics stresses the instrumentality of language and prosodic analyses in language studies. This school is also known as the hub of systemic linguistics, linguistic semantics, prosodic phonology and prosodic analysis and functional linguistics not adequately defining prosodic units.

In this doctoral dissertation, the phonemic and allophonic occurrences of juncture, stress, and pitch phonemes are analyzed in terms of suprasegmental analysis with relation to the combined principles, techniques, methods, theories and approaches of the Prague school, American school, and School of London as a basis, and developed further by research into the works of N. Chomsky (*The sound pattern of English*, 1968), D. Abercrombie (*Elements of general phonetics*, 1967), E. Keller (*Fundamentals of phonetic science*, 1994), P. Roach (*Introducing phonetics*, 1992), Lehiste (*Suprasegmentals — Phonetic properties that transcend the segments*, 1970), P. Ladefoged et al. (*A course in phonetics*, 2011), P. Lieberman et al. (*Speech physiology, speech perception and acoustic phonetics*, 1988), Celce-Murcia (*Teaching Pronunciation*, 1996), A. Cutler et al. (*Prosody in the comprehension of spoken language*, 1997), A. Cruttenden (*Intonation*, 1996), D. Crystal (*The Cambridge Encyclopedia of Language*, 1987), C. Gussenhoven (*Suprasegmentals*, 2011), E. Selkirk (*Sentence prosody: Intonation, stress and phrasing*, 1995), and B. Chela-Flores, (*Optimizing the teaching of English suprasegmentals*, 2001).

The applications, teaching techniques and existing rules in relation to correct pronunciation and intonation of such researchers have been carefully studied and applied to the Turkish students' learning methodology of English prosody. Professor Mehmet Demirezen (*Phonemics and Phonology: Theory through Analysis*, 1986), my thesis advisor, is the most prominent lin-

guist in Turkey, and has been dealing specifically with the issue of *teaching suprasegmentals* for almost 40 years. In this dissertation, juncture, stress, and pitch phonemes are considered as integral elements of intonation.

1.2 The Terminology of Suprasegmentals

Phonological features which apply to groups larger than the single segment, such as the syllable or the word, are known as *suprasegmental features* (Pandora, 2011). The study of these features is known as *prosody*. *Prosody* is a general term used to refer to the rhythm, stress and intonation of speech, reflecting various features of the speaker or the utterance: the emotional state of the speaker; the form of the utterance (statement, question, or command); the presence of irony or sarcasm; emphasis, contrast, and focus; or other elements of language that may not be encoded by grammar or choice of vocabulary. If such features are not used in an utterance, “we humans sound like robots, lacking the concise way in which meaning is conveyed” (Lehiste 1991: 98-107).

The elements of *intonation*, namely juncture and pitch, “help break the stream of sound into manageable groups and give additional clues to meaning by either highlighting particular syllables further or by assisting the comprehension of the grammatical or pragmatic function” (Clark & Yallop, 1990). Suprasegmental features are language universals with their own particularities. By *word stress* or *accent* what is meant is a “greater loudness, change of pitch or greater syllable length” (Ridgeway 1999). A distinction here between *word stresses*, *compound word stresses* and *sentence stresses* must be clearly stated in teaching pronunciation because the combination of various levels of stress, such as primary, secondary, tertiary etc., presents special features in *sentence intonation*, where they are expected to coexist harmoniously. For most nouns in English, the stressed syllable appears at the initial position; verbs tend to have their prominent stressed syllables toward the end. In connected speech, secondary stress may occur several times within the intonation unit, both before and after the tonic. As for *pitch*, it is this element that brings the music to *intonation*.

The correct use of *intonation* is an essential feature of communicative competence, and “erroneous intonation leads to communication breakdown” (Gutnecht, 1978). The most obvious prosodic feature in language is the *syllable*. The articulatory definition of “syllable” is the point when the airstream is least obstructed in the vocal tract, which is also called the sonorant peak. The nucleus of a syllable is formed by a sonorant peak. Syllables are groups of sounds that cluster around a sonorant peak; the peak is usually a vowel, although liquids can

also function as a sonorant peak. Thus, syllables are the sound segments of any language which can be perceived by the ear as being roughly divisible into sections. This universality is probably “physiologically based since humans for the most part breathe out while talking, and more air escapes during certain points in the speech act than at others” (Zawadzki, 1994).

Accent, or *stress*, is another suprasegmental feature which is a measure of the relative volume of sound between syllable peaks. In English, the term “stress” is used in reference to the degree of prominence of individual syllables of single words (lexical stress), e.g. “ELEphant” (stressed - unstressed - unstressed) vs. “₁ELe¹PHANTine” (secondary stress - unstressed - stressed - unstressed). IPA symbols for primary stress / ¹ / and secondary stress / ₁ / are placed at the beginning of each syllable (thus, also providing some information about syllable boundaries):

“ELEphant” /¹eləfənt/ and “₁ELe¹PHANTine” /₁elə¹fænti:n/.

According to Ladefoged (1993), as in many introductory phonetics textbooks, “the nature of stress is fairly well understood. Stressed sounds are those on which the speaker expends more muscular energy ... so that there is an additional increase in pitch.” Davenport and Hannahs (1999), similarly, write: “Stressed syllables are produced with more muscular effort, and are louder or longer than unstressed syllables.” Auditorily, we hear an accented syllable of a word as relatively louder than the unaccented syllables. Acoustically, however, this difference can be measured in decibels. Languages differ in how they use stress. In some languages (such as Cambodian), each syllable is equally stressed or unstressed and one syllable in each word is more stressed than the other. We call those languages syllable-timed languages. The place of stress in those languages is fixed on a certain syllable: Finnish, Hungarian and other Finno-Ugric languages use an initial stress pattern, Polish a penultimate stress pattern and French and Turkish a final stress pattern.

In English, which is considered as a *stress-timed* language, the stress is predictable but still random. Usually a middle syllable of a longer word receives the stress. In two-syllable words, stress is random and often renders differences in meaning:

a “¹PROject” /¹prɒdʒɪkt/ vs. “to pro¹JECT” /prə¹dʒɛkt/; “a ¹PROduce” /¹prɒdju:s/ vs “to pro¹DUCE” /prə¹dju:s/ or “an ¹insult” /¹ɪnsʌlt/ vs “to in¹SULT” /ɪn¹sʌlt/.

Longer words in English have more than one stress, namely primary and secondary stress, such as in “₁EDu¹CAtion” /₁ɛdʒə¹keɪʃn/. Some English compounds have phrasal stress on the

first element of the compound. Phrasal stress often distinguishes meaning in adjective/noun combinations:

“WHITE ₁HOUSE” /'waɪt ₁haʊs/ vs. “₁WHITE 'HOUSE” /₁waɪt 'haʊs/;
“GREEN₁HOUSE” /'gri:n₁haʊs/ vs. “₁GREEN 'HOUSE” /₁gri:n 'haʊs/ (Celce-Murcia, 2010).

Another prosodic feature is *pitch*, defined as the frequency of vibration of the vocal cords). *Pitch* refers to the perception of relative frequency (e.g. perceptually high-pitched or low-pitched). *Pitch* is measured in hertz units. Physiologically, “*pitch* tends to be higher in women than in men, and higher before puberty than after puberty” (Pandora, 2011). Also, the *pitch* of women’s voices tends to lower with old age; the pitch of men’s voices tends to get higher with age. Despite these physiological, non-linguistic universals, each language uses *pitch* distinctions for linguistically meaningful purposes. If *pitch* varies over an entire phrase or sentence, we call the different *pitch* curves by the term intonation. Celce-Murcia et al. (2010) explain that “normal conversation moves between middle and high pitch, with low pitch typically signaling the end of an utterance.” The extra high level is generally used to express a strong emotion such as surprise, great enthusiasm or disbelief, and it is the pitch level which often used in contrastive or emphatic stress.

Pitch is the most complex of the suprasegmental elements applying to utterances. There are a number of different patterns to consider as well as the relationship between different types of clauses and punctuation. *Intonation* conveys the speaker’s attitude or feelings. In other words, intonation has a deictic function in discourse: questions, or a connotative function, indicating anger, sarcasm, or various emotions. Intonation can also convey purely syntactic information, as when it marks where a sentence ends. “If the pitch of a single syllable or word has the effect of influencing the denotative meaning of the word, we call the different pitch distributions by the term tone” (Pandora, 2011).

Every language uses pitch as *intonation*, but only some languages use it as tone. There are two basic types of tones in tone languages. *Register tones* are measured by contrasts in the absolute pitch of different syllables. Register tones may be high, mid, or low. *Contour tones* are tones involving a pitch shift upward or downward on a single syllable. Many languages of East and Southeast Asia use contour tones, the best known being Mandarin Chinese. *Tone* refers to significant (i.e., meaningful, phonemic) contrasts between words signalled by pitch differences. Most *tone languages* use a combination of height and contour to create their

tones. The only European languages that use pitch in the form of tones are Serbo-Croatian, Lithuanian, Latvian, and Swedish. “Tone languages also have intonation, a gradual increase or decrease in pitch over an utterance, as well as an increase in the general volume of sound on various parts of the utterance to indicate emotion” (Al-Sibai, 2004).

Duration or *length* is another prosodic feature in syllables, and is transcribed in length marks / : / such as in “FATHER” /'fa:ðə/. Many durational differences in English are purely allophonic or regional i.e. the British pronunciation of “I 'CAN'T” /,ɪ 'ka:nt/.

Intonation refers to the rise and fall of voice pitch over entire phrases and sentences, even in non-tone languages, such as English:

“,ɪAT my 'LECTures they're 'ALways ,GRUMbling.” /,ɪæt maɪ 'lɛktʃəz → ,ðe:ə
'rɔ:lwəz ,grʌmblɪŋ\

Juncture is the suprasegmental feature that indicates the borders of words and groups of words in speech. The Prague school referred to such elements as *boundary signals*, neatly summarizing their role. Juncture is a sound quality signaling a pause or pauses. Junctures are defined as “perceptible differences in word segmentation.” Celce-Murcia et al. (2010) and Lieberman (1967) mention that “Bloch and Trager (1942) first introduced the plus juncture and open internal juncture to indicate a word boundary”, and that later, “Trager and Smith (1951) added three varieties of juncture to describe pauses in speech accompanied by particular pitch changes.” Pause junctures were characterized by Calvert (1986) as the intervals between words and phrases or clauses shown as commas and colons or semicolons indicating shorter or longer pauses. Demirezen (1986, 2009) pointed out that punctuation marks do give out indications of which junctures should be used for which “punctuation mark, namely, a falling juncture sign / \ / would correspond to (.), a rising juncture sign / / to (?) and a sustained juncture sign / → / or / → / to (, ; , : , ...).” Although many teachers consider the pronunciation of individual phonemes as being of utmost importance, “some of them ignore emphasis on the prosodic elements” (Cutler et al., 1997:141-201).

Connected speech is a form of spoken language used in a continuous sequence, as in normal conversations. There is often a significant difference between the way words are pronounced in isolation and the way they are pronounced in the context of connected speech. The pronunciation of a word will change depending on the words around it. Such changes in pronunciation within and across word boundaries include changes to individual sounds and new

sounds inserted in between. Learners have to become aware of these changes in order to understand authentic speech and to improve their own pronunciation. Here are some of the features of connected speech:

In *assimilation*, a universal feature of spoken language, one sound adapts to the characteristics of a neighboring sound or becomes more like it. At the end of a syllable, sounds made on the ridge just behind the teeth are affected by sounds produced with the lips. In technical terms the alveolar consonants (/t/, /p/ and /n/) become bilabial (/d/, /b/ and /m/) as in these examples:

“GROUND+₁PLAN” /'graʊm₁plæn/, “ACtion+₁PLANNing” /'ækʃəm₁plænɪŋ/,
“BROWN+₁BEAR” /'braʊm₁be:ə/, “COMMon+₁MARket” /'kɒmə₁mɑ:kit/,
“BEND+₁BACK” /'bɛm₁bæk/, “TEN+₁GIRLS” /'tɛm₁gɜ:lz/.

Voicing can also be affected when the voiced consonant /v/ becomes its unvoiced equivalent /f/ when followed by the unvoiced /t/:

“₁HAVE to 'GO” /hæftə'gou/.”

The plosive /d/ and /j/ can coalesce (i.e., fuse) becoming much less plosive, and in fact, becoming the affricate /dʒ/:

“₁HOW d'you 'DO?” /haʊdʒə'du:/, ₁WOULD+'YOU /wʊ'dʒu/.

Similarly, the plosive /t/ and semi-vowel /j/ can coalesce to become the affricate /tʃ/:

“₁DON'T y'KNOW?” /dɒntʃə'no:ʊ/.

/t/ turns to /p/:

/t/ in “THAT+₁MAN” /'ðæp₁mæn/ and

/s/, so /ʃ/ before that sound as in these examples:

“THIS+₁SHOP” /'ðɪʃɒp/, “BUS+₁SHELter” /'bʌʃfeltə/ (Laroy, 1995).

Deletion appears in the form of elision and aphaesis in RP. We can see this in such examples as “WEST ₁CENTral Ana'TOLia” /'wɛs₁sɛntrəl₁ɛænə'tɒliə/ and “CHOColate” /'tʃɒklət/ where *elision* occurs, and *aphesis* occurs with the omission of initial /e/ in “Excuse me!”

Apart from those prosodic features defined and explained above, there are many others which can be cited in literature such as: *manner of articulation* (i.e., initial consonant mutation, e.g. in Welsh), *degree of stricture* (e.g. spirantization of final stops as a boundary feature), *voicing* (i.e., voicing assimilation at word-junctures and in initial mutation), *retroflexion* (e.g. Sanskrit), *frontness and backness* (e.g. umlaut, vowel harmony), *openness and closeness* (e.g. vowel harmony), *centrality and peripherality* (i.e., English stress), *aspiration, whisper* (i.e., Sanskrit stress pattern), *nasality, glottality* (e.g. in vowel-initial words in English, German and Danish), *lip-rounding* (vowel harmony) (Underhill, 1994).

Elision is the complete disappearance of one or more sounds in a word or phrase, making the word or phrase easier for the speaker to pronounce. One of the most common elisions in spoken English is that of the /t/ and /d/:

“NEXT ₁PLEASE” /ˈnɛks₁pli:z/, “I ₁DON’T ₁KNOW” /aɪˈdɒn₁ˈnoʊ/, “POST the ₁LETter” /ˈpɒst₁dʒəˌletə/, “OLD ₁MAN” /ˈoʊl₁mæn/, “YOU ₁and ₁ME” /juːn₁miː/, “UP and ₁DOWN” /ʌp₁n₁ˌdaʊn/ and “STAND ₁THERE” /ˈstænd₁ðeːə/.

If we try to say those word pairs without eliding the /t/ or /d/ respectively then we will discover how natural or unnatural they sound. Apostrophes that mark the missing parts of words in writing signal elision. In these examples we see that some sounds are totally omitted:

“COMfortable” /ˈkʌmfətəbəl/, FIFth /fɪθ/, TEMperature /ˈtempətʃə/.

Although some native speakers would argue that they never elide their speech and might even go on to state that elision is a sign of, at best, lazy, and at worst, sloppy and or degenerate speech. Should you wish to challenge their view, ask them how they might prefer to pronounce the following, without any elision:

“WORCEster” /ˈwɜːstə/ or “LEICEster,SHIRE” /ˈleɪstəˌʃɪə/.

Elision occurs when the articulatory organs literally cut corners in connected speech, mainly at word boundaries. Speakers who do not elide may sound over-meticulous and overly-formal and it may not be possible for them to take advantage of the natural rhythm patterns and intonation that come with fluency (Widin, 1992).

Liaison, or *linking*, is an intrusion or insertion of a sound between two others. In English, the most common sounds that are inserted between two words are: /r/, /j/ and /w/. Examples:

“‘HERE –r– and ,THERE” /'hɪə r ən ,ðe:ə/, “‘GET to_w_ɪT” /'gɛt tʊ_w_ɪt/;
'HAPy –j– or ,SAD” /'hæpi_j_ə ,sæd/.

Speakers of languages that do not have these *semi-consonants* will either not make the liaison, or substitute another sound from their language to make the link.

English is a *stress-timed language*. In a *stress-timed language*, syllables may last different amounts of time, but there is a constant amount of time (on average) between two consecutive stressed syllables. Like English, German and Dutch are also typical stress-timed languages. When spoken faster, a stress-timed language usually shortens, obscures, or drops vowels in order to carry more syllables between two stresses without noticeably changing its rhythm. Alternatively, in a *syllable-timed language*, every syllable is thought to take up roughly the same amount of time when pronounced, though the actual length of time of a syllable depends on the situation. Spanish and French are commonly noted as being examples of syllable-timed languages. This type of rhythm was originally metaphorically referred to as *machine-gun rhythm* because each underlying rhythmical unit is of the same duration, similar to the transient bullet noise of a machine-gun (Avery-Ehrlich, 1992).

Vowel reduction is a feature of *stress timing* and it is related with the way vowels are reduced when they are not stressed. A simplified version of vowel reduction would be to say that unstressed vowels are reduced to schwa. We can understand this by trying this experiment. Now say the following sentences, putting the stress on the underlined syllables:

“‘YOU and ,ME” /'jʊ_ən_ɪ_mɪ/, “I ,WISH you would 'TELL me” /aɪ ,wɪʃ jʊ wəd 'tɛl_ɪ_mɪ/.

In the first sentence, the you and me are given full stress – but what happens to the you and me in the second sentence? They are reduced to the unstressed status, which we refer to as “schwa”. The unstressed vowels in connected speech are characterized by a reduction in length and a change in quality. By change in quality, we mean that most monophthongs (single vowels) are reduced to schwa, or at the very least, move towards schwa:

“‘TWO 'or' /'tu:_ə/, three /,θri:/”, “a 'BIT_of' /ə 'bɪt_əv/ ,TIME /,taɪm/” (Kaufmann, 2002).

Linking is a form of connected speech that joins words to each other. When words are connected to one another they are so united that they no longer sound the same way as when they are said individually. Then they have their own unique, distinct characteristic meanings that are recognizable as such by the native users of that language. When two related words are linked to one another naturally, two things occur: First, the listener understands the speaker more easily; second, the speaker makes himself better understood by the listener.

There are basically two types of linking that occur in oral communication. The first is the *consonant + vowel combination* (a word ending with a consonant phoneme and linked to a vowel phoneme at the beginning of the next word). Examples of such a combination are the most common of all:

“You 'NEED to ,STOP it 'RIGHT ,NOW.” /jə: ,ni:d tə 'stɒp_ɪt → 'raɪt ,na:ʊ\./
 I 'NEED_ɪt 'MORE than ,YOU do. /aɪ 'ni:d_ɪt → 'mɔ:ə ,ðæn → 'ju: ,du:\./
 “'PLAY_a ,SONG for us ,ON your gui'TAR!” /,ple:ɪ_ə 'sɒŋ → fə ,r_ʌs → ,ɒn jə
 gɪ'ta:ə\./
 “,READ_a 'BOOK for ,ME, 'MOMmy. /,ri:d_ə 'bʊk → ,fɔ: 'mi → → 'mʌmi\./

In the second type of speech connection, known as the *vowel+vowel combination* (a word ending with a vowel phoneme and linked to another vowel phoneme at the beginning of the word that follows it), an extra /w/ or /j/ sound is introduced in between, as in these examples:

“too(w)often” /'tu: ,w_ɒfən/, “do(w)all” /,du: ,w_ɔ:l/, “'WHO(w),IS”
 /'hu: ,w_ɪz/, “I(y),AM” /a:ɪ 'j_æm/, “,THE(Y)END” /,ðe:ɪ ,j_ɛnd/, “,SHE
 (y)ASKED” /ʃi ,j_ɑ:skt/ (Roach, 1991).

Some linguists also enter into this category those “consonant+consonant” combinations involving the assimilation of the final element of the first word with the initial consonant of the following one. There, the repetition of the same consonant is avoided by fusing the break in between, and the resulting final sound is either lengthened or held strongly. Here are some of the examples of that type:

“'BEST ,TIME” /'best ,tʰaɪm/ → /'bɛs ,tʰaɪm/, “'GOOD ,DAY” /'gʊd ,de:ɪ/ →
 /'gʊ ,de:ɪ/ and “SIT ,DOWN” /'sɪt ,daʊn/ → /'sɪ ,daʊn/.

Such assimilation or fusion often occurs in daily speech to keep the flow of conversation (Miller, 2005).

1.3 The Importance of Suprasegmentals in Teaching Pronunciation

Much recent research in the teaching of English pronunciation as a second and foreign language (ESL/EFL) has emphasized the significance of *suprasegmental* features (i.e., *stress, rhythm, intonation and juncture*) in the comprehension and production of the language. From a pedagogical point of view, it has also been found (Derwing, Munro, & Wieber, 1998) that “speakers who had had previous instruction on suprasegmentals could transfer their meaning to a spontaneous production more effectively than those who had received instruction with only segmental content (i.e., vowels and consonants).” “As there is more emphasis placed on the segmental aspects of the language, the teaching of suprasegmentals is not a priority in most EFL/ESL programs or in instructional materials” (Chela-Flores, 2001: 85-101).

The neglect in teaching suprasegmentals does not seem to be due to those extensive gaps that generally exist between theoretical investigations and pedagogical materials based on those investigations. Both teachers and material designers have highlighted “the need to concentrate more on rhythm and intonation than on any other aspect of pronunciation because of their importance in communicating meaning” (Gilbert, 1993; Morley, 1987: Preface). This lack of attention seems to result more from the difficulty found in teaching some features of rhythm and intonation. Celce-Murcia (2010), referring to the teaching of pronunciation for communication, remarked that the one glaring omission in her current approach was that she had problems with “fully integrating stress and intonation in her teaching.” Roach (1991) warns us that “the complexity of the total set of sequential and prosodic components of intonation makes it a very difficult thing to teach”.

Dalton and Seidlhofer (1994) have also remarked that “features of intonation such as *prominence, tones* and *key* are particularly important in discourse, but at the same time they are particularly difficult to teach.” Chela-Flores (2001: 85-101) observes that with individual sound segments, it is the other way round, meaning they are “relatively easy to teach, but also relatively less important for communication.” In order to facilitate the instruction of suprasegmentals, pedagogical priorities should be established, mainly through the choice of features that are more relevant for the learner’s intelligibility in spoken English. Roach (1996: 45-58) emphasizes the need to distinguish between “what English speakers do” and “what learners of English need to learn”.

Chela-Flores (2001: 85-101), in the light of relevant research, a pedagogical experience, and an understanding of the native speaker competence, “examines basic issues of English rhythm

and intonation which are important to communicate meaning.” She observes that “such features serve to determine a basic system for use as a starting point in the instruction.” Making a specific examination of the rhythm and intonation of English, with special reference to declarative sentences in marked and unmarked utterances, she concludes that “*nuclear placement, pitch height, nuclear accent mobility and syllable length* are taken as the most important features of the speaker’s intended meaning” (Chela-Flores, 2001). This interaction of intonational configurations and rhythm has been recognized as decisive in the identification of nuclear accents by native speakers of English. The interaction of certain features of intonation with stress timing and weak forms has also been considered as crucial for intelligibility (Jenkins, 1997: 15-26) since they highlight “the most salient part of the message and indicate where the listener should pay particular attention.”

Currie and Yule (1991: 270-275) refer to a basic model of English intonation with a basic contour system which derives its primary unit from the rhythm of English. Intonation, being the melody of speech, changes in the pitch of the voice during the articulation of an utterance. “The overall behavior of the pitch is referred to as tone.” (Chela-Flores, 2001: 85-101). Thus, a falling tone is one which descends from a higher to a lower pitch, whereas a rising tone is a movement from a lower pitch to a higher one. These tonal events can be better appreciated in one-syllable utterances where the meaning is made clear, not by grammatical means or additional lexis, but by the direction of the pitch movement at the end of the utterance, as in the following examples sentence “I found it!”

“I found IT.” – “WHAT did you find?” – “I found my WATCH.” –
“I ₁SAID I ₁FOUND it.”

The functions of intonation that are commonly highlighted in English programs are those that indicate the distinction of sentence types, that is, questions versus statements and the expressions of the speaker’s attitudes: excitement, pleasure, annoyance, etc. However, Ohala (1983: 1-18) has found that “features such as high or rising pitch to mark questions, low or falling pitch to mark non-questions, high pitch to signal politeness, low pitch to signal assertiveness, etc. are remarkably similar across languages and cultures and should consequently not cause difficulty to second-language learners.” McNerney and Mendelsohn (1992) believe that “the traditional approach to teaching pronunciation gives priority to the wrong aspects of pronunciation.” This stems from a failure to grasp the importance of suprasegmentals – “those features of speech which extend over more than one segment, such as intonation and stress” (Crystal, 1980). McNerney and Mendelsohn (1992) think that

“suprasegmentals are extremely important in the communication of meaning in spoken language because it is the suprasegmentals that control the structure of information.” Furthermore, being able to comprehend or to convey the intended attitude in English hinges on the mastery of suprasegmentals. They claim that suprasegmental features such as stress and intonation are often treated by ESL teachers as “peripheral frills” and not as central to the conveyance of meaning. The truth, they say, is that they are far more important and central to communication than accurate production of the individual sounds, because individual sounds can usually be inferred from the context. They give this example for clarification: If a student says “*I cooked the meat in a pen*” (meaning ‘pan’), it is very simple to interpret the correct meaning (McNerney & Mendelsohn, 1992).

If on the other hand, a student in response to hearing the statement:

“He ₁WENT₂ ON 'HOLIDAY” /hi ₁wɛnt₂ ɒn → 'hɒlɪ,deɪ\ / says the words: “WHERE did he ₁GO₂? /we:ə → did hi 'gɔ:ʊ /

with rising intonation, although his/her intention was to find out the location of the holiday (which calls for rising-falling intonation /ʌ\ /), this will be processed by native speakers as expressing surprise or requiring confirmation that he had indeed gone on holiday. Gilbert (1984) claims that “*linking* and *pausing* (juncture) can convey different sentence structures as in the following sentences:”

“JOHN, ₁SAID the pro'FESSor, is ₁DISorga'NIZED.”
 /'dʒɒn → ₁sɛd ðə prə'fɛsə → ɪz 'dɪsɔ:gə,naɪzd\ /
 or John said,
 “The pro'FESSor is ₁DISorga'NIZED.”
 /'dʒɒn → ₁sɛd ðə prə'fɛsə ₁ɪz 'dɪsɔ:gə,naɪzd\ /.

“The difference in structure and meaning of these two sentences is clearly indicated by the different location of the pauses” (Avery, 1992).

When no pauses (junctures) occur between words, the words are said to be linked. In sentences where linking is required, students must not pronounce words as separate entities, but make the words flow smoothly together. Linking should be introduced to students, not only as a natural aspect of connected speech, but also as a necessary one for comprehensibility. McNerney and Mendelsohn (1992) state that “Differences in linking and pausing can convey

different sentence structure.” Gilbert (1984) presents a comparison of two sentence structures, “indicating a meaning change by different pause locations:”

“'JOHN, said the pro'FESSor, is ,DISorga'NIZED” vs. “John said the pro'FESSor is disorganized'.”

He states that “when no pauses occur between words, we say that the words are linked” (Gilbert, 1984). In sentences where linking is required, students must not pronounce words as separate entities, but make the words flow smoothly together.

Linking should be introduced to students, not only as a natural aspect of connected speech, but also as a necessary one for comprehensibility. There are times when a potentially ambiguous sentence can only be disambiguated when the appropriate linking (combined with the appropriate stress and intonation pattern) is used. Consider the example below, where the meaning changes depending on whether the pronoun ‘him’ is linked to the preceding verb ‘hit’. Gilbert (1984) also gives this striking example to point out the importance of linking and pause (juncture):

“'Alfred', said the Boss, 'is stupid.'” /'ælfɾəd → ,sɛd ðə 'bɒs → ,ɪz 'stju:pɪd\ /
vs. “Alfred said, 'The Boss is stupid.'” /'ælfɾəd ,sɛd → ðə 'bɒs_ɪz ,stju:pɪd\ /
“He sold his house, boat, and trailer.” /hi 'sould hɪz ,haʊs → 'bɔʊt → ,ænd
'treɪlə\ / vs. “He sold his houseboat and trailer.” /hi 'sould hɪz_ɪ →
'haʊs_bɔʊt_ən 'treɪlə\ /.

These could well be used for student work activities. Janet Anderso-Hsieh (2002) and many others use electronic visual feedback for teaching suprasegmentals to international teaching assistants. To conclude, we can quote Wong’s (1987) observation that “The goal of pronunciation teaching is to foster communicative effectiveness somehow.”

1.4 The Teaching Methodology of Suprasegmentals

In current language teaching methodology, “suprasegmentals (stress, rhythm, and intonation) are given very high priority in the pronunciation curriculum” (Gilbert, 1984, 1987; Pennington & Richards, 1986; Wong, 1987; McNerney & Mendelson, 1987; Chun, 1988; Dickerson, 1989). This is because “suprasegmentals provide the ‘backbone’ of utterances” (Cruttenden, 1986); they “highlight the information speakers regard as important, while at the same time

revealing their feelings” (Bolinger, 1986) and “they are important in communicating discourse meaning” (Brazil, Coulthard & Johns, 1980). It has been found that suprasegmentals can be most effectively taught through the use of equipment which extracts pitch and intensity from the speech signal and presents the information both on transcription and on a video screen in real time, providing instantaneous visual feedback on stress, rhythm, and intonation.

A dual display allows the native speaker target to be presented on the upper half of the screen and the learner’s attempts at replicating the target on the lower half. “The effectiveness of such equipment has been demonstrated experimentally” (James, 1976:227-243; DeBot, 1983). It has been shown that visual feedback combined with the auditory feedback available to normal-hearing individuals through the conduction of sound through air and bone is more effective than auditory feedback alone.

Recently, hardware and software for microcomputers have been developed so that visual feedback as a tool for teaching suprasegmentals is now more accessible to language teachers. Chun (1989:21-47) discusses some of the ways in which “such hardware and software can be used to teach suprasegmentals.” She also discusses the equipment and software in light of their functions, their manageability (or ‘user friendliness’), and their cost, and she makes recommendations for the development of courseware for teaching suprasegmentals. Electronic visual feedback as an aid for teaching suprasegmentals is already being used in English as a Second Language (ESL) programs throughout the United States, and the ways in which it is being used have been discussed at professional conferences and in scholarly publications over the past few years as in (Lane, Mitchell, Molholt, Pennington, Perdreau, Cesaris & Fisher, 1988; Molholt, 1988; Pennington, 1989; Anderson-Hsieh, 1990, 1991, 1992.

In order to teach suprasegmentals most effectively through electronic visual feedback, the teacher must use phonetic material that clearly and unambiguously illustrates the patterns being taught. This is not always easily achieved, “due to the fact that the relationship between the acoustic signal and the ways in which it is perceived auditorily is not a simple one” (Anderson-Shieh, 2010). Spaai and Hermes (1992:19-30) have addressed this problem by developing a visual intonation display system – *the Intonation Meter* – that more closely represents the way in which intonation is perceived. Instead of displaying the unaltered pitch contour with all of its interruptions due to voiceless sounds, the Intonation Meter fills in the interruptions with dotted lines so that the signal is continuous. Because this better matches the way in which intonation is perceived, it is felt that “students should have an easier time learning intonation with the Intonation Meter” (Anderson-Shieh, 2010).

After stress, the most important factor affecting syllable duration is the position of a syllable in an utterance. “Syllables that occur before pauses tend to be longer than they are in other positions, whether they are stressed or not” (Clark & Yallop, 1990). For exercises involving the identification of syllables, the principle of “one syllable – one major intensity peak” should be observed as much as possible, especially in the early stages of instruction. Also, when introducing intonation contours to the students, phonetic material should be selected that will provide relatively uninterrupted intonation contours, especially in accented syllables. It is advisable for the teacher to experiment with the material selected for practice with visual feedback well in advance of teaching so that he/she can identify any problems with the visual representations of speech.

McNerney and Mendelsohn (1992) state that “the students should be made aware from the outset that unstress is not a sign of slovenly, careless, or degenerate speech, but, rather, it is essential to the appropriate rhythm of English.” A very important equation that learners must grasp is that generally, stressed words = content (meaning-carrying) words, and unstressed words = function (grammatical) words. They give these two examples where the content words are stressed and the function words are unstressed:

/I 'WANT ,YOU to 'TAKE the ,DOG for a 'WALK ,NEAR the ,PARK./ And
/The 'WOMan with the ,GUN in her 'HAND is a 'HOSpital ,PATient./

Connected Speeches, Proverbs and Dialogues are excellent contextualized practice materials for manipulating major sentence stress.

Gilbert (1984) presents extensive materials to be used for sentence stress. Some of her dialogues below show the relation of major stress to the information structure of a longer stretch of speech:

A: /'WHERE are you ,GOing?/

B: /Europe./

A: /'WHERE in ,Europe? To the 'NORTH or to the ,SOUTH?/

B: /,NEITHER. I've al'READY ,BEEN 'NORTH and ,SOUTH. I'm ,GOING 'EAST./

X: /'WHAT've you been ,DOing?/

Y: /I've been 'STUDying./

X: /,STUDying 'WHAT? 'MATH or ,English?/

Y: /'NEither. I'm 'SICK of ,MATH and English. I'm 'STUDying ,NUTrition,
be,CAUSE I'm 'ALways ,HUNgry./

The teacher uses such activities where he/she reads sentences with the major sentence stress located in different positions, thus requiring the students to paraphrase them to indicate an understanding of the focused information:

Teacher: /The 'CHAIR in the ,GARDen is 'BROKEn./

Student: /It's the ,CHAIR in the 'GARden, not the ,ONE 'ELSEwhere, ,THAT'S 'BROKEn./

Teacher: /Well, I 'LIKED the ,MOVie./

Student: /'SOMEone ,ELSE may 'HAVE dis,LIKED the movie, ,BUT I 'LIKED it./

Teachers may use the “multiple choice” technique by reading the sentence aloud, “placing the major sentence stress in a position that makes one of the following choices appropriate” (McNerney & Mendelsohn, 1992).

An oscilloscope is used to give an oscillograph of speech or *the tone*, which is the rise and fall of the voice, in other words, the tune/pitch variation. The frequency will be shown by the closeness of the waves (high frequency by waves which are closer together). *The volume* (strength of signal) will also be shown by the height of the waves. The height of the note depends on the speed of opening and closing of the vocal cords. More vibrations of the larynx (up to 800 per s) show as more compact waves. The first thing that researchers (Daniel Jones, Kindom, Pike) looked at was ‘pitch variation.’ Crude rules (Wh Qs fall; Yes/No Qs rise) were based on introspection (what do I say?) rather than data. Those who have collected data have come up with interesting findings: Does intonation tell us what speech function is? Many authors of intonation practice books (e.g. O’Connor & Arnold in “Intonation of Colloquial English” (1961) or Cook in “Active Intonation” (1979) and “Using Intonation” (1981) provide exercises where speech functions such as polite requests or confirmation questions dictate the intonation patterns which listeners should expect or speakers should employ.

Many linguists and teachers suggest that the focus should be on teaching STRESS rather than RISE & FALL since “there is a massive difference between how one person and another may perceive an utterance” (London Style, 2010).

In spoken language, “intonation is used to mark gender, number, quantity, tense or time, modality, pace (in some languages), word order, punctuation and boundary features” (Ted Power, 2011).

While teaching English rhythm and stress patterns, the use of weak forms, stress placement and timing, the movement of pitch is heard on stressed syllables. In English, intonation and

stress patterns are closely linked. A Pronouncing Dictionary is recommended as a reference source to check where syllable stress occurs within words. Practising placement of stress within sentences is also essential if learners are to become good listeners and communicators, since the same sentence can take on different meanings depending on where the speaker chooses to place the primary stress:

Example Sentence (A): 'I'M ,not ,going, /'a:ɪ_æm ,nɒt ,gouɪŋ! / meaning “Not ME, but perhaps YOU, SHE or HE.” But in /,a:ɪ_æm 'nɒt ,gouɪŋ\ / it is 'I re'FUSe to go.” Whereas in /,a:ɪ_æm nɒt 'go:ʊɪŋ / the meaning is 'I'm ,not 'GOing I am 'COMING ,back!

“Sentence stress can also be illustrated and practised by writing on the board a long sentence which can be made to carry many different meanings or points of emphasis” (Ted Power, 2011).

Here is an example sentence: “Janet’s going to Brighton tomorrow afternoon to buy herself a pair of red, leather shoes.” Practicing of sentence stress is achieved by cueing the learners with questions while requiring them to use the whole sentence in reply. The second time this is done, the learners can discard the parts of the sentence which do not contain the important element of the answer in order to form a more natural response. The teacher provides cues such as:

“Is John going to Brighton...?”

“Is Janet going to London..?”

“Is Janet going away from Brighton...?”

“Is Janet coming from Brighton...?”

“Is Janet going to sell her mother a pair of red, leather shoes?”

“Is Janet going to buy herself three pairs...?”

“Is Janet going to buy herself a pair of blue suede shoes / red leather sandals?”

It will become clear to learners that there are many variations of sentence stress which will decide the meaning of their responses.

At the heart of many cross-cultural misunderstandings lie problems associated with intonation features of learner English. “Failure to make use of the appropriate pragmatic discourse features of English intonation may result in serious communication breakdowns between native and non-native speakers with even advanced levels of proficiency” (Clennel, 1997: 117-125).

The successful use of discourse intonation could well be the key to effective cross-cultural communication. It seems that “discourse intonation is a comparatively neglected field in ELT, although there has been evidence of a growing interest in this area in recent years” (Thompson, 1995:235-42; Chun, 1988:61-77; Bradford, 1988; Kenworthy, 1987).

“Intonation is particularly problematic for EAP learners, and demonstrates three crucial reasons why the lack of prosodic skills may jeopardize effective communication in ‘on campus’ contexts, in relation to propositional content, illocutionary force, and inter-speaker co-operation and conversational management.” (Clennel, 1997:117-125).

The role of intonation in conveying discourse relationships in auditory sentence comprehension was investigated in two experiments (Cutler, 1974). Using the simple comprehension time paradigm, it is found that sentences with accented new information were understood faster than sentences with a neutral intonation contour and that the presence of accent in context sentences facilitated comprehension of subsequent targets. Both experiments showed faster comprehension times in conditions in which accent placement was appropriate for the information structure of the sentence.

Here the comprehension times were faster when the accent fell on the information focus than when it fell elsewhere in the sentence. However faster times resulted when new information was accented and given information was not, compared to conditions in which this accent pattern was reversed. This effect held for both active and passive sentences, and whether the new information occurred in the subject or object position. In contrast with the semantic, syntactic, and lexical aspects of language, effects of the prosodic features of utterances on comprehension have received relatively little attention. An utterance’s intonation can, however, have a profound impact on its interpretation: Given the proper stress pattern, a sentence such as “That was a thrilling experience” can mean that the experience was quite the opposite of thrilling (Cutler, 1976). Intonation also carries a “heavy burden in conveying the information structure of an utterance, marking different components as given or new” (Chafe, 1974; Cutler & Isard, 1980). Appropriate intonation may therefore “facilitate the hearer’s understanding of the relationship between a particular sentence and its discourse context” (*Memory and Cognition*, 1983).

In particular, the placement of the primary emphasis or the accent (Bolinger, 1961: 135-136) within a sentence often seems to be determined by the location of the new information that the sentence contains. Information that is novel in the context of prior discourse is accented, whereas old, given, or background information is not. Although there are other ways in which

given and new information can be marked, intonation may be the principal means for indicating the distinction in English. “Compared to certain other languages, English relies more on stress patterns and less on devices such as word order for information structure cues” (MacWhinney & Bates, 1978).

Some evidence for the importance of intonation in conveying information structure comes from the observation that children acquiring English appear to employ intonation appropriately very early to mark new or salient information. Wieman (1976), in a sample of five children between the ages of 21 and 29 months of age, found that “when their two-word utterances departed from certain canonical stress patterns, the deviations were attributable to the accenting of the word in the utterance that carried new information.” In more controlled tasks, “children as young as 3 years display adult levels of competence in using stress to mark new information” (Hornby & Hass, 1970; MacWhinney & Bates, 1978). “Stress also seems to be children’s preferred way of marking information” (Psychonomic Society, Inc., 1983).

“It ain’t what you say but the way you say it.” This familiar comment, immortalized in song, is the time-honored way of briefly indicating what suprasegmental analysis is all about. The *segments* of spoken language are the vowels and the consonants, which combine to produce syllables, words, and sentences. But at the same time as we articulate these segments, our pronunciation varies in other respects. We make use of a wide range of tones of voice, which change the meaning of what we say in a variety of different ways. *Suprasegmental features* operate over longer stretches of speech, such as rhythm and voice quality, as opposed to segmental features, which are the individual sounds. “Students of language and those who plan careers in language teaching, coaching, therapy, acting, and speaking will benefit greatly from understanding how they can influence meaning by things like length, intonation, stress, tone and other suprasegmental features” (Hurley, 1996).

Length refers to the amount of time it takes to produce a sound. Some sounds are longer than others, such as “beat” vs. “bead” If you were to pronounce both words with longer vowels, the pronunciation might seem strange, but the meaning is not lost. In other words, the meaning of *beat* and *beat* are the same. In English, you can express your emotions by lengthening certain sounds in sentences. By varying the tempo of words (such as lengthening specific sounds) you can communicate your feelings. Such as “Should I leave now?” “Ye-e-e-e-s-s-s (implies thoughtfulness)” In the case of “m-ooo-m”. which could be termed as a “three syllable word”, one gets the feeling that a child is requesting something from its mother. *In-*

tonation refers to the rising and falling of the voice (pitch) over a stretch of sentence. If pitch varies over an entire phrase or sentence, we call the different pitch curves by the term *intonation*. Intonation conveys the speaker's attitude or feelings. In other words, intonation can convey anger, sarcasm, or various emotions.

How do these sentences - with the exact same words – mean very different things with different intonation? John told me to leave. (normal intonation); /'JOHN ,TOLD me to ,LEAVE./ (emphasis on John: John, not Mike); /,JOHN 'TOLD me to ,LEAVE./ (emphasis on told: told, not asked nicely); /,JOHN ,TOLD 'ME to ,LEAVE./ (emphasis on ME; ME, not you or Mary); /,JOHN ,TOLD me to 'LEAVE./ (emphasis on LEAVE: leave, not stay) (Hurley, 1996).

Stress (tense or lax syllables) and Juncture (pauses within sentences to separate words and meaning):

In English, the stress you place on a syllable can change the meaning of a word such as the /'WHITE ,HOUSE/ (the US President's house); /a ,WHITE 'HOUSE/ (a house that's white); /'NIT,RATE → ,NIGHT 'RATE/; /'RECORD/ (noun) → /re'CORD/ (verb); /'A,DRESS/ (noun) /ad'DRESS/ (verb);

When combined with pausing after certain words, the meaning of the whole sentence can completely change. Sometimes the resulting change of meaning is funny, as in examples 1 and 2 below:

Example 1: A /'TIGHT-,ROPE walker/ is an acrobat. A /,TIGHT'ROPE walker/ is a drunk ropewalker.



Example 2: /'LIGHT → ,HOUSE,KEEPing/ means chores such as sweeping, mopping and cleaning windows. /'LIGHT,HOUSE → ,KEEPing/ is running lighthouse operations.



Example 3: The following is a true-life example demonstrating stress and juncture that is not funny. This poor waitress thought she was being rewarded for her hard work with a new car, a /To'YOta/. I wonder if the man who thought it would be funny to give her a /'TOY → ,Yoda/, a character from the Star Wars movies, instead, is still employed at Hooters:

Former Hooters Waitress Settles Toy Yoda Lawsuit - PANAMA CITY, Fla. (AP) - A former waitress has settled a lawsuit against Hooters, which she said promised to award her a new Toyota but instead gave her a toy Yoda. An attorney for Jodee Berry said Wednesday that he could not immediately disclose the settlement's details. "She's satisfied with it," said the attorney, David Noll. He did say that Berry can now go to a local car dealership and "pick out whatever type of Toyota she wants." Berry, 27, won a beer sales contest last May at the Panama City Beach Hooters. She believed she had won a new Toyota car. She was blindfolded and led to the restaurant parking lot, but when the blindfold was removed, she found she was the winner of a toy Yoda (Star Wars doll). Berry quit the restaurant a week later and filed a lawsuit in August against Gulf Coast Wings, Inc., the corporate owner of the local Hooters, alleging breach of contract and fraudulent misrepresentation. The restaurant's manager, Jared Blair, has said the whole contest was an April Fools' joke. This settlement is unusual in that Hooters did not ask for a sweeping confidentiality agreement, Noll said. "I think that's a recognition of the fact that there's been such an amazing amount of attention focused on this case," he said. "There's not a whole lot of reason to try to hide its existence."¹¹⁸ (The Associated Press, 05/09, 2002).

JIMI HENDRIX and MISUNDERSTOOD LYRICS:

Purple haze all in my brain. / Lately things just don't seem the same. / Actin' funny, but I don't know why 'scuse me while: /I 'KISS the ,SKY vs. ,KISS this 'GUY?/ (Hurley, 1996).

1.5 The Broad Transcription of English Proverbs

One efficient way of teaching suprasegmental features would be to use proverbs in their broad transcription with primary and secondary stress markings, junctures and linkers between words. IPA transcriptions are most convenient means to show distinctly where word groups and speech connections are made and the correlation between the modifiers and those modified are clearly emphasized. In the following listing of famous English proverbs, suprasegmental features are marked in detail. The intonational prominence in a sentence partition broken by junctures are shown by the primary stress sign / ' / and the lesser prominences by the sign of secondary stress / , / for the modifying factor and that of the modified.

Linking /_ / is provided to link the final phoneme of the preceding word to the initial phoneme of the following item. As for junctures the falling juncture / \ / pinpoints the end utterance, the rising juncture / ^ / the question utterance and the pause juncture a sustained terminal juncture or a level juncture / → /. The repetitive juncture sign / → → / has been used to show a longer period of pause between utterances, where a period a colon or exclamation mark represents in writing.

"A twig must be bent while it's green."

/ə ,twɪg → 'mʌst bi ,bent → → ,waɪl_ɪts 'gri:n \ /

In the former part of the sentence, "twig" is separated from the rest of the sentence by a short pause juncture; the group "must be bent" is preserved intact as a meaningful group connected to one another, the primary stress on "must" is in the prominent modifying position for "bent" to qualify it, and between the first and the second part of the sentence there is a sustained juncture. "While" and "it's" portions in the latter part of the sentence are connected with a linker where "green" is in the modifying position for the preceding while, thus correlating with one another though reverse order, compared to the former part of the sentence; the final falling juncture indicates the ending of the sentence. Here are some other examples for further reference:

"Women must have their wills while they live; because they make none when they die."

/ˈwɪmɪn → ˈmʌst ˌhæv → ˈðeɪə ˌwɪlz → ˌwaɪl ðeɪ ˈlɪv → bɪˌkɒz ðeɪ ˌmeɪk
ˈnʌn → wən ˌðeɪ ˈdaɪ \\/

"You are never too old to learn."

/jʊˌɑːə → ˈnevə ˌtuː ˌoʊld tə ˈlɜːn \\/

"A bird in the hand is worth two in the bush."

/ə ˈbɜːd ɪn ðə ˌhænd → ɪz ˌwɜːθ → ˈtuː ɪn ðə ˌbʊʃ \\/

"A fool may ask more questions in an hour than a wise man can answer in seven years."

/ə ˈfuːl meɪ ˌɑːsk → ˈmɔːə ˌkwɛstʃənz ɪn ə ˈn_aːʊə → ˌðæn ə ˈwaɪz →
ˌmæn kən ˌɑːnsə ˌr ɪn ˈsevən ˌjɪəz \\/

"He who would the daughter win, must with the mother first begin."

/ˈhi → hʊ ˌwʊd ðə ˈdɔːtə ˌwɪn → məst ˌwɪθ ðə ˈmʌðə → ˈfɜːst bɪˌɡɪn \\/

"A woman's most potent weapon is her tongue, and she never lets it rust."

/ə ˈwʊmənz → ˈmɒst ˌpəʊtənt ˌwepən → ɪz hɜː ˈtʌŋ ˌɪ → ˌæn ʃɪ ˈnevə
ˌlets ɪt → ˈrʌst \\/

"The pleasure of what we enjoy is lost by coveting more."

/ðə ˈpleʒə → r_əv ˌwɒt wɪː ɪn ˈdʒɔːɪ → ɪz ˈlɒst → baɪ ˈkʌvətɪŋ ˌmɔːə \\/

"Your son is your son till he gets himself a wife, but your daughter is your daughter throughout her life."

/jə ˈsʌn ɪz jə ˌsʌn → ˌtɪl hi ˈɡets hɪm ˌself ə ˈwaɪf ˌɪ → ˌbʌt jə ˈdɔːtə r_ɪz jə
ˌdɔːtə → θruː ˈaʊt hɜː ˌlaɪf \\/

"You may lead a horse to the water, but you cannot make him drink of it."

/jə ˌmeɪ ˈliːd ə ˌhɔːs → ˌtʊ ðə ˈwɔːtə → ˌbʌt jə ˈkænət ˌmeɪk hɪm →
ˈdrɪŋk ə ˌv_ɪt \\/

1.6 The Oscillographs Showing The Tune/Pitch Variation of these Proverbs

In the analysis of the following proverbs, the acoustic nature of the human voice in relation to the pitch variations during the pronunciation and articulation can be illustrated as follows:



0 /sə'm_ɪŋɡlɪf ,prɒvɜbz/



1 /ə ,twɪɡ → 'mʌst bi ,bent →→ ,waɪl_ɪts 'ɡri:n\



2 /'wɪzɪm → 'mʌst ,hæv → ,ðe:ə 'wɪlz ,waɪl ðe:ɪ 'lɪv →→ bɪ,kɒz ðeɪ ,meɪk 'hʌn → ,wen
,ðe:ɪ 'da:ɪ\



3 /jʊ_ɑ:ə → 'nevə ,tu:ɔʊld →→ tʊ 'lɜ:n\



4 /ə 'bɜ:d_ɪn ðə ,hænd → ɪz ,wɜ:θ 'tu: →→ ,ɪn ðə 'bʊf\



5 /ə 'fu:l me:ɪ_a:sk → 'mɔ:ə ,kwɛstʃənz_ɪn_ə'n_a:ʊə →→ ,ðæn_ə 'waɪz ,mæn kə'n_a:nsə
→ r_ɪn 'sevən ,jɪəz\



6 /hi hu ,wud → ðə 'dɔ:tə ,wɪn → → məst ,wɪθ ðə 'mʌðə → 'fɜ:st bɪ,gɪn\



7 /ə 'wʊmənz → 'mʊst ,pʊtənt ,wepən → ,ɪz hɜ:~'tʌŋ → → ,æn fɪ 'nevə ,lets_ɪt → 'rʌst\



8 /ðə 'plezə r_əv ,wɒt wi:~ɪn'dʒɔ:ɪ → ,ɪz 'lɒst → → baɪ 'kʌvətɪŋ ,mɔ:ə\



9 /jə 'sʌn_ɪz jə ,sʌn → ,ɪl hi 'gets hɪm ,self_ə 'waɪf_ → → jə 'dɔ:tə r_ɪz jə ,dɔ:tə → θru: 'aʊt hə ,laɪf\



10 /jʊ ,me:ɪ 'li:d_ə ,hɔ:s → ,tʊ ðə 'wɔ:tə → → ,bʌt jə 'kænət ,meɪk hɪm → 'drɪŋk_ə_ɪt\

These visual pitch variations have been created by the technique called DAW Steinberg Cubase6 in a local sound-recording studio in İstanbul by the writer of this dissertation and have been uploaded in YouTube at this address: http://www.youtube.com/watch?v=E5S8OUJpy_s.

To close this long introduction, we must remember that the suprasegmental features of English (stress, juncture and pitch) extending beyond a single sound segment (vowels, consonants diphthongs and approximants) and collectively forming intonation, is the most difficult part of the language teaching process and thus, the most neglected one. This is mainly due to the unpredictable nature of the English sound system and its difference from the rhythm pat-

tern of the learner's own language. However, this challenge should be met, and suprasegmentals of English must be learned to achieve an acceptable and proper speech-training technique. Many linguists agree that speakers who have had instruction emphasizing suprasegmentals can apparently transfer their learning to spontaneous production more effectively than those who have received instruction with only segmental content. Therefore, pronunciation programs could be improved in order to guarantee more accurate aural comprehension and native-like fluency if more time were dedicated to training the student to "hear" correctly, in addition to implementing the deliberate study of the features of stress, rhythm and intonation as a separate unit. While planning pronunciation lessons, there should be a presentation of suprasegmentals as well as segmentals during drilling. The accuracy of the students' auditory perception of suprasegmentals can be improved by means of phonetic transcriptions of phrases, sentences, dialogues, etc., including the necessary features of primary stress, secondary stress, juncture and linkers. Such practices, along with a sufficient amount of materials and time, will allow students to acquire the desired performance of acceptable articulation.

CHAPTER TWO: LITERATURE REVIEW

In this dissertation involving *Juncture*, *Stress* and *Pitch phonemes*, commonly known as *Suprasegmentals*, I have dealt with their nature, the importance in oral communication and their role in the pronunciation of English. Teaching pronunciation, being part of the teacher training colleges' curriculum, has been the focus of my research. Along with investigating ways of helping students acquire such phonemes, I have also tried to find ways to remedy their fossilized forms to bring them to acceptable norms. And the results of my research has shown that I have reached the anticipated goal.

2.1. JUNCTURE PHONEMES

2.1.1 What is Juncture?

“Juncture refers to the suprasegmental feature that indicates the borders of most words and groups of words in speech” (Collier, 2011), or “any phonetic feature whose presence signals the existence of a grammatical boundary” (Trask, 1996). In more general terms, it means the boundary between two syllables, e.g. “great eyes” vs. “gray ties”. Both phrases have the same segmental phonemic (segmental) representation /grɛ:tɑ:ɪz/ but the meaning changes when used with individual word boundaries, namely /'grɛt → ɹɑ:ɪz/ and /'grɛ:tɪ → ɹɑ:ɪz/ with suprasegmental additions. Understanding connected speech demands that the listener identify where words begin and end, but in fluent speech, there is no obligatory gap between words to signal where they begin and end. However, “people usually have no problem understanding speech and discerning individual words using subtle cues in the speech signal” (Peggy, 2009, 2010).

The most obvious junctural feature in speech is *silence*, but there may be other features which mark the beginnings and endings of grammatical units in connected speech. For instance, word divisions may be signaled by a complex of stress, pitch, length and other features, as in the potential contrast between that stuff /'ðæt ɹtʌf/ and that's tough /ðæts → ɹtʌf/, or ice cream /'aɪs ɹkri:m/ and I scream /a:ɪ → ɹskri:m/.

“Terminal juncture refers to how an utterance ends. Internal juncture refers to the relative closeness with which syllables follow each other within the words or phrases of an utterance” (Achary, 1991).

The concept of juncture has received renewed interest cross-linguistically in the last six decades. Considerable work has been done to investigate the nature and the status of juncture, sometimes sparking remarkable debates. “A handful of definitions for juncture have been provided, with some enclosing its broader aspects and others restricting the reference of the term *juncture* to one of its types” (Moulton, 1947:220; Roberts, 1956; Hockett, 1958; Bloomfield & Newmark, 1965; Robins, 1967; Hughes, 1969; Gimson, 1994:25-64; among others). In what follows, a closer look will be given to some of these definitions:

Juncture is generally viewed as “a type of suprasegmental area having mostly to do with segmental phonemes” (Gramley & Patzold, 1992). This term is used in phonology to refer to the “phonetic boundary features that may demarcate grammatical units such as a morpheme, word, or clause” (Crystal, 2003:248). In other words, it is “a phonologically manifested boundary between linguistic units” (Lehiste, 1964). The most obvious realization of a junctural feature is “a *pause* or *silence*” (West, 1975:104; Al-Hamash, 1979:124; Crystal, 2003:248), although Bičan (2006) does not consider every interruption of speech to be “functional.” “The term ‘juncture’ was first used by the American school” (Hughes, 1969:69). “Many other definitions of the term can be found in the literature” (Robins, 1967:146f; Davis, 1973; Anderson & Stageberg, 1975:196; Roach, 2000: 144).

For some linguists, juncture is primarily a lengthening of a sound after which it, i.e., a boundary, occurs (Hill, 1955:533-534). There is a dependency on other correlates to identify word-boundaries, viz. boundary signals. These are of a segmental and suprasegmental nature (Lehiste, 1964:196-200; Hughes, 1969:254). They include the occurrence of certain phonemes adjacent to word-boundaries which abide by the phonotactics of the language and modifications of phonotary patterns such as the insertion of glottal stops, modifications of suprasegmental patterns of fundamental frequency, duration, intensity, lengthening of phonemes in onsets and coda and other modifications (Keating et al., 1999:171f; Weber, 1999).

There are several types of juncture proposed in the literature. “The most convenient distinction describes three types: close juncture, internal open juncture, and external open juncture” (Ukashah, 2005:53, Roach, 2000:144). For example, in the phrase “my train” /maɪ 'treɪn/, the relationship that holds between /m/ and /aɪ/ in /maɪ/, /t/ and /r/, /r/ and /eɪ/, and finally /eɪ/ and /n/ in /treɪn/ is described as a close juncture. The relationship that holds between /aɪ/ of /maɪ/ and /t/ of /treɪn/ is described as inter-

nal open juncture, whereas the relationship between /m/ of /maɪ/ and /n/ of /treɪn/ is described as external open juncture. The chief interest of this study is in the perception of the allophonic variation across word boundaries.

“Speakers can make a pause in the middle of a word if they are used to taking a breath” (Zellner, 1994: 44; Crystal, 2003:341).

There are two distinct views with respect to juncture or word boundary identification. Some scholars hold the view that “the phonetic and prosodic features at word boundaries do not provide enough acoustic cues to identify the word boundaries and that misperception is expected, especially in rapid speech” (Hockett, 1958:59; Bloomfield & Newmark, 1965:78f; West, 1975:104; Ohlander, 1976; Austin & Carter, 1988:21-41; Gimson, 1994:256; Vroomen & van Zon, 1996:744-755; Weber, 1999:1; Prieto, 2006:18f; Davis et al., 2007). Other scholars, however, hold the view that “the presence of phonetic cues at word boundaries is an important issue for word recognition and for phonotactic learning” (Lehiste, 1960, 1964; Hoard, 1966:96-109; Shimizu & Dantsuji, 1980; Gow et al., 1996; Keating et al., 2001; Shafran et al., 2001; Katsika, 2007:929-932). This is stated rather plainly by Shimizu and Dantsuji (1980): “We usually hear the difference between two phrases, even out of context, and, there must be some perceptual cues to distinguish them” (Saeed, 2011).

The structural linguist recognizes three types of breaks between words – junctures – that can serve us -for instance- in the scanning of a poem. There is fading juncture /↘/, rising juncture /↗/ and sustained juncture /→/. Fading juncture is what we have when the voice falls at the ends of most indicative sentences; rising juncture is what we have at the ends of most questions; sustained juncture occurs when a voice breaks into momentary silence without having risen or fallen perceptibly in pitch previous to the silence. For instance:

/I 'KNOW_a PLACE → → ID 'LIKE to → 'TAKE you TO↘ → → DO you 'WANT
to GO↗/ (Miller, 1986).

Obviously, fading juncture creates little if any expectation, sustained pitch creates a moderate degree, and rising juncture creates a great deal. The silences in a poem are an important part of what makes the poem work; they account in large measure for the

tensions that give the poem much of its energy. We need to understand these silences if we are to understand the mechanics of poetry, the kind of silence, for instance, that Brooks and Warren call “the hovering effect” – as in the third line of Yeats’s “After Long Silence”: “Unfriendly lamplight hid under its shade.” They use the term in *Understanding Poetry* (1950) to describe what happens between “light” and “hid”; the structural linguist describes it as sustained pitch: “light hid.” The application of structural linguistics to this line is discussed by Ronald Sutherland (1958) in “Structural Linguistics and English Prosody”.

Here are two lines from Roethke’s poem, marked for juncture:

/,I 'KNEW_a ,WOMan → 'LOVEly_in her ,BONES\`/
 /When 'SMALL ,BIRDS ,SIGHED → ,SHE would 'SIGH ,BACK → ,AT 'THEM\`/

“In this way we not only distinguish between the kinds of silences found in the lines, but we recognize that there are important silences at the ends of the lines. The type of juncture at the end of a line helps us to understand the beginning of the next line, since there is a tendency to accent the syllable following a rising juncture more than following a falling juncture. This tendency is not a rule, but it also helps explain the stress on “she” in line 2, with the reverse foot” (Miller, 1986).

Several varieties of juncture are used to describe pauses in speech that accompany particular pitch changes. Junctures or pauses between statements in a sentence can affect the listener’s ability to identify a suitable place to interrupt a conversation. Shorter pauses usually indicate a continuing topic, either immediately following or after an interrupting clause, and may coincide with a comma as well as possibly occurring at a number of other optional sites in an utterance.

There are word junctures /A+dog+is+a+man's+best+friend\`/ and pause junctures /'LISten ,BOY → → ,I 'SAID → ,I 'WANTed → a 'GLASS_of ,TEA\`/. Junctures may be short or long to separate meaningful groups in clauses and sentences. “Natives normally distinguish the word juncture in contrastive twins of word pairs such as “play nice” /,ple:ɪ → 'nais/ and “plain+ice” /'ple:ɪ,n_ais/, but L2 learners must be trained to pay attention to such intonation items in order to be better understood” (Nakatani, 1976:4-5).

Because speech is spontaneous and often quite rapid, it is sometimes necessary to use extra pauses. These pauses can either be empty (or silent) pauses (long or short) or

filled pauses. “As far as filled pauses are concerned, two kinds of fillers can be used, i.e., non-lexical fillers and lexical fillers. Typical non-lexical fillers in English are: *err*, *erm*, *um*, *mm*, *hm*. Typical lexical fillers are: *I mean*, *I say*, *you know*, *anyway*, *really*, *of course*, *well*, *look*, *I suppose*, *kind of*, *sort of*, *as you say*, *off the record*, *God knows*, *obviously*, *as I said before*, *what I wanted to say*, *as a matter of fact*, *mind you*, *you see*, *the trouble is*, *to put it another way*, *what’s more*” (Dretzke, 1998). “The branch of linguistics that deals with pauses is *pausology*” (Dechert, 1980).

2.1.2 Junctures as Phonemes

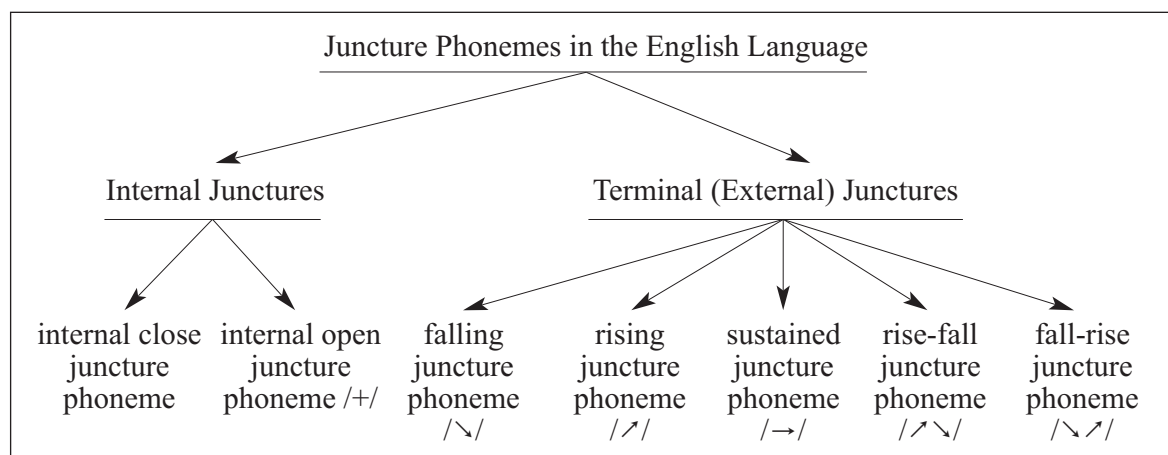
Junctures are phonemes in that they are able to change the meaning of words; thus, they are called suprasegmental phonemes, types of which can be seen in the following cases:

2.1.3 The Types of Junctures

The two types of internal junctures are: (1) open juncture (marked by +) and (2) close juncture (unmarked). In open juncture (+) there is a slight pause (+) between the syllables. In close juncture (unmarked), the syllables follow one upon the other closely with no perceptual pause between them.

“There are word-structure junctures, like open and close junctures and terminal junctures, which are known as sustained, falling, rising, rising-falling, and falling-rising junctures, each of which is able to change the meaning of utterances, and thus can be called a phoneme” (Demirezen, 2013e; Roach, 1988, 2000; Brazil, 1975).

“The following chart illustrates the types of juncture phonemes in English” (Demirezen 2013m):



2.1.3.1 Internal Juncture Phonemes

Internal junctures occur in words, compound words, and phrases. They are mostly known in the forms of internal close junctures and internal open junctures. Generally speaking, junctures, as suprasegmental phonemes, signify transition between the segmental phones of words, phrases and clauses. That is the reason for the common belief in prosodic analysis that junctures are considered as phonemes strictly on the basis of pronunciation and not on the basis of writing. There are two ways in getting from one speech sound to another. In other words, there are two types of transitions between speech sounds.

2.1.3.2 Open Internal Juncture Phonemes /+/

The first type is called “close transition” or “normal transition” wherein there is a smooth or unbroken transition in the flow of the segmental phonemes as seen in the word. The second type, on the other hand, exhibits a break in the form of a pause between words, as seen in the word “night rate”, but not in “nitrate”. The latter is called the “plus juncture” or “open juncture” and is symbolized by /+/, but the former has no a symbol since it is not demonstrated in the word. Here are some examples for open and close junctures. We should remember that “a syllable border is also a potential place for an open juncture” (Demirezen, 1986). The absence of a juncture creates a change in the meaning of the word, as in the examples below:

Open juncture

a bout /ə+'baʊt/
a board /ə+'bɔ:d/
sin tax /'sɪn+ ,tæks/
a name /ə+'neɪm/
a shore train /ə 'ʃɔ: + ,treɪn/

Close Juncture

about /ə'baʊt/
aboard /ə'brɔ:d/
syntax /'sɪn,tæks/
an aim /ə'n+eɪm/
a short rain /ə'ʃɔ:t + ,reɪn/

The absence of a juncture in the above examples obviously creates changes in the meanings of the words, and because of this, junctures are accepted as suprasegmental phonemes in English. The open juncture, indicated by a sign /+/, denotes grammatical boundaries within an utterance, and does not involve a change in the pitch of an utterance as seen in:

a name /ə+'neɪm/ vs. an aim /ən+'eɪm/ and short train /'ʃɔ:t + ,treɪn/ vs.
a short rain /ə 'ʃɔ:t ,reɪn/.

The sounds which occur before /+/ are said to be in a prejunctional position and are realized in various allophonic occurrences. In post-junctional positions, all segmental phonemes also exhibit special allophones. For instance, “in the prejunctional position, stops are ‘unreleased’” (Demirezen, 1984) and “vowels – glides – continuants” are prolonged. It must also be borne in mind that “/+/ is a feature of pronunciation which occurs between the secondary and primary stresses” (Demirezen, 1986).

2.1.3.3 Open Juncture /+/

This is a transition between successive sounds marked by a break in articulatory continuity, as by a pause or the modification of a preceding or following sound, and often indicating a division between words; this can be referred to as the presence of juncture, and also as a “plus-juncture”.

2.1.3.3.1 Junctures Minimal Pair Test

The following words differ in meaning due to the existence of an open juncture, as seen in:

Compound word

sweetheart /'swi:t,haət/

heartburn /'haət,bɜ:n/

meatball /'mi:t,bɔ:l/

Phrase

sweet heart /,swi:t+'haət/

heart burn /,haət'bɜ:n/

meat ball /,mi:t'bɔ:l/

While the compound word “sweetheart” means “darling”, a phrase like sweet heart indicates “a heart which is sweet”. Likewise, the compound word “heartburn” /'haət,bɜ:n/ means a slightly painful burning feeling in your stomach or chest caused by indigestion, the phrase “heart burn” /,haət'bɜ:n/ means burning a heart; a “meatball” /'mi:t,bɔ:l/ is a small ball formed of ground meat, whereas “meat ball” /,mi:t'bɔ:l/ refers to a ball that is made from meat. The pause in between these phrases marks the presence of an *open juncture phoneme* in English.

Thus, the cause of the change of meaning in these words is the existence of *open juncture /+/,* otherwise called the *plus juncture* phoneme.

This juncture also takes place in phrases, and “a plus sign (+) is utilized to represent it” (Crystal, 1976). Here are some examples:

calm+down	baby+boy	data+processing	crash+landing
deep+freeze	definite+article	forget+me+not	founding+father
free+enterprise	cream+cheese	garbage+disposal	give+and+take

2.1.3.4 Close Juncture

There is no symbol assigned to show the close juncture phoneme. This juncture indicates a continuity in the articulation of two successive sounds, syllables, or words. No sign is used to represent them because they take place in the structure of words. The following examples represent close juncture:

/ˈbʊk,ki:pər/	/ˈlɒŋ,ʃo:emən/	/ˌneɪvəˈleɪs/	/ˌweɪəˈɑːs/
/ˌæbsent-ˈmɪndəd/	/əˌseptəˈbɪləti/	/əˌkɒmˌmɒˈdeɪʃən/	/əˌkaʊntəˈbɪləti/
/ˌkaʊntərˈækt/	/əˌknɒwˈledʒmənt/	/ˈkɔː-ˌwɜːkər/	/ˌkaʊntərˈklɒkwɪz/
/ˈkrɑːftsmən,ʃɪp/	/ˌdæɪəˈdevɪl/	/ˈdɔːŋhtər-ɪn-ˌlɔː/	/ˈdeɪˌdri:m/
/deˈkæfeɪˌneɪtəd/	/ˈbʊtərˌflaɪ/	/ˈsʌmˌweɪə/	/ˈɛniˌθɪŋ/

2.1.3.5 Terminal Juncture Phonemes

Terminal juncture phonemes show up in between, among, and at the end of phrases, clauses, and sentences. In English, “the terminal juncture phonemes are five in number” (Roach, 1988, 2000), (Brazil, 1985) and (Demirezen, 2013m). The pitch height of the voice is heard at the conclusion of the group of syllables or words. Dretzke (1988:93), Crystal (1969:225), Quirk et al. (1964) give the following percentages in relation to their occurrences: The rise-to-fall juncture as intonation contour can be encountered in 20% of all utterances in English; fall-to-rise 16.2%.

2.1.3.6 Falling Terminal Juncture /↘/

The falling terminal juncture is denoted by the sign /↘/. This juncture is also known as “double-cross juncture” in classical phonology and is shown as /↘/. The sign /↘/ which is called a “falling arrow” denotes a drop in pitch while the voice fades off into silence. In other words, falling terminal juncture is audible at the end of sentences, including single words heard in isolation. Since it shows up at the end of the sentences where there is an audible drop of pitch into silence, that’s why a name such as “fading juncture or external juncture” was given to it due to its word-final occurrence. The examples below represent the falling juncture:

“I love you.” /aɪ 'lʌv jʊ\

“The world is round.” /ðə 'wɜːldɪz → 'raʊnd\ vs. /ðə 'wɜːldɪz → 'raʊnd\

“He earned a degree in history at Columbia.” /hiː'zændə dɪgri: → 'ɪn 'hɪstəri
→ → 'ɪn kə'lʌmbiə\

“The Earth moves around the sun.” /ðə 'zəθ 'mu:vz → ə'raʊnd ðə → 'sʌn\

“It’s the highest mountain on earth.” /ɪts ðə 'ha:ɪəst 'maʊntən → 'ɒn 'zəθ\

During the articulation of the falling juncture phoneme, the pitches fade off on the relevant syllable or word. In other words, the pitch height of the voice comes at the termination of the group of syllables. The falling juncture phoneme, therefore, indicates the finishing of utterances as in:

/ɪ 'lɪke 'bʊks\

/ə 'skwɛr hɪz → 'fɔːr 'saɪdɪz\

/weɪl 'dʒʌst 'teɪkə → 'kæb 'həʊm\

/'lɪfɪz 'ʃɔːt\

/ɪ 'bɔːhtə 'kɪd tə'deɪ\

/'eɪt → 'teɪkə 'weɪ 'tuːz 'sɪks\

/'rɪk wəz ə'n 'stjuːdnt\

/ɪ wəz 'teɪkə 'bæk → 'baɪ hɜːr 'krɪtɪsɪzəm\

/tɛn dɪ'vɪdɪd baɪ 'tuː 'iːkwəlz 'fɪv\

A falling juncture / \ / is found after statements and questions with question words.

/'wɛrə dɪz 'dʒɔːn 'lɪv\

/hɛ 'lɪvɪz 'ɪn 'ɔːstɪn\

A rising juncture / ˀ / is found after questions without question words.

/'ɪz 'dʒɔːn → ɪn 'ɔːstɪn 'nəʊ ˀ

/'hɛz 'hɛr\

2.1.3.7 Rising Terminal Juncture /↗/

The rising juncture phoneme indicates the escalation of the rise of the pitch of the voice on the related syllables or words, wherein the rising voice dies off. The pitch height of the voice is heard high up on the related tonic syllables or words in a fading tone as in:

/,DO you ,LIKE 'TEA↗/
/,HAVE you 'BRUSHED → your 'TEETH ,YET↗/
/,ARE you 'HAPpy↗/
/,DID you 'CALL your ,MOTHer → 'YESTer,DAY↗/
/'ARE ,YOU → ,CALLing me a 'LIAR↗/
/,HAVE you 'BEEN → 'COOKing for 'US↗/
/,CAN_I → 'CALL you ,BACK → 'LATer↗/
/You 'DON'T ,SPEAK → 'CHINESE → 'DO ,YOU↗/

As it is seen, this type of juncture is indicated by the symbol /↗/. A prior name to this term was “*double bar juncture*” and was indicated by a symbol like / || /. This kind of juncture points to the rising of the pitch just before a pause with little bit less sharp cessation of voice. Rising terminal juncture is audible when we count things and list things one after the other, except the last number of items:

/One↘ two↘ three↘ four↘ and five↘/

It is also used at the end of the question: /Are you still eating↗/ Now, one might ask, is this juncture phonemic, too? This juncture is indeed phonemic, as demonstrated by the following two sentences which constitute a minimal pair:

One is a question asked by intonation, the other is a normal sentence.

The phonemic opposition of such sentences can even be more extended:

She + went + shopping ↘ (statement)
She + went shopping↗ (question)
She + went + shopping → (unfinished sentences)

As it is very obvious in the above examples, the intonation changes the meanings of words. In other words, without any morphological and syntactic change, it is possible to alter the meaning of utterances via junctures, which indicate “the fact that the means whereby the flow of speech is interrupted momentarily for the sake of morphological and syntactic clarity” (Nist, 1970:46).

Further examples for rising juncture (with questions not answerable by “yes” or “no” but answerable by simple sentences or statements)

1. /₁WHAT do you ₁MEAN ↗ →→ I ₁MEAN → ₁YOU'RE 'VERY ₁KIND ↘/
2. /₁WHAT'S the 'BRAND → of your ₁PEN ↗ →→ The 'BRAND_of my ₁PEN → is 'BIC ↘/
3. /₁WHAT'S your 'SISter's ₁NAME ↗ →→ My 'SISter's ₁NAME is → 'EMily ↘/
4. /'WHAT ₁STATE → ₁DO you 'LIVE_'IN ↗ →→ I ₁LIVE_in 'FLORida ↘/
5. /₁WHERE do you 'WORK ↗ →→ I ₁WORK_in_an_'OFFice ↘/
6. /₁WHAT'S your 'NAME ↗ →→ My 'NAME_is → ₁JOHN ↘/
7. /'WHAT ₁TIME → ₁DID you 'WAKE_up → ₁THIS 'MORNING ↗ ₁I 'WOKE_up → at_'EIGHT_'O'CLOCK ↘/
8. /'HOW ₁DID you →→ 'MANage ₁THAT ↗ →→ ₁IT was → 'EASY ↘/
9. /'WHERE did you ₁MEET him ↗ →→ ₁AT the_'OFFice ↘/
10. /'HOW will you ₁FIX_it ↗ →→ ₁IT'S → my 'JOB ↘/

2.1.3.8 Sustained Terminal Juncture /→/

The first type of terminal juncture is called “sustained terminal junctures” (also known as single-bar juncture) and is either indicated by a symbol like / || / or /→/. This type of juncture is heard on both sides of the appositive phrases which give extra information on the subject of the sentence to which it belongs:

juncture phonemes

“Mrs. Brown, the deputy, went out.”

/Miss ₁BROWN → the 'DEPuty →→ 'WENT_ ₁OUT ↘/

“Mr Jones, the teacher is ill.”

/Mr ₁JONES → the 'TEACHer →→ is ₁ILL ↘/

"After weeks at sea, the sailors saw land."

/,AFTer 'WEEKS_uat ,SEA → the 'SAILors ,SAW → 'LAND_\/

So this juncture is heard when the pitch of the voice rises very slightly or when it is sustained, as it is very audible as in the two sentences above, at the beginning and end of the appositive phrases "the deputy" and "the teacher". Unlike the other terminal juncture, /→/ may occur both within and at the end of the utterances. "In between the sentences below, both a sustained and a falling terminal juncture occur: John went home → Mary went to school. → The /→/ between "home" and "Mary" represents a sustained pitch" (Buchanan, 1963:250). Obviously, in the above sentence the transition between the words "home" and "Mary" indicates a slight pause, "had there been a longer duration, a falling terminal juncture would have been expected, as seen in the following sentence" (Demirezen, 1986).

/,JOHN 'WENT ,HOME → ,MARY 'WENT to ,SCHOOL_\/

2.1.3.9 Sustained Juncture as a Pause Juncture

"A *sustained juncture* /→/ is found between "thought groups" within a sentence, indicating BRIEF level pauses" (Klein, 2003).

/'JOHN ,LIVES → in_u'AUSTIN → → 'NOT ,FAR → from ,HERE_\/
/,THIS_uis 'MARY → who ,PLAYS 'TENnis → at the 'HIGH ,SCHOOL_\/

The students of linguistics must bear in mind that /→/ occur both within and at the end of the utterances. The /_\/ and /_^/ may be followed by a pause or silence; but /→/ differs from /_\/ and /_^/ in that the voice pitch neither rises nor falls. /+/ never occurs before silence, but /→/ can; /+/ is always present between syllables bearing primary and secondary stresses. When /→/ occurs within an utterance, it is at least twice as /+/. The symbols involved in showing the function of junctures can be shown as follows:

	<u>old</u>	<u>new</u>
sustained terminal juncture	/ /	/→/
rising terminal juncture	/ /	/ [^] /
falling terminal juncture	/ _\ /	/ _\ /

It must be noted that terminal junctures are features of pronunciation and are mostly equated with punctuation marks which may well be counted as features of pronunciation. It must also be born in mind that “junctures, such as internal and external ones, are utilized to mark special allophones of the segmental phonemes” (Demirezen, 1986). Junctures are, then, pauses made at junctions between idea units. That is, they are made at the *ends* of idea units (= chunks). Why does a speaker pause at an idea unit junction? The reason is usually one of the following:

1. To mark the end of one idea unit and the beginning of the next
2. To take a breath
3. To give a moment or two to the listener – to digest the idea contained in the idea unit that the speaker has just uttered.

So generally, when we pause at an idea unit junction, our aim is not to deal with hesitation. Most often, our aim (in making a junction pause) is to mark off one idea unit from the next. And we mark off one idea unit from the next one for two reasons: (a) Our listeners will then find it easier to understand us properly. (b) We will then find it easier to go on with our speech without faltering. So we must remember this: We are free to make a junction pause, even if we have no hesitation when we have finished uttering an idea unit. As we know, an ideal idea unit ends at a grammatical break, and so an ideal idea unit is a whole (= unfragmented) grammatical unit. So an ideal idea unit junction would be a grammatical junction. Now let us go through the following examples. In these examples, the symbol /+ / indicates a grammatical junction, that is, an ideal idea unit junction. The pauses we make at these junctions are junction pauses, and they mark off one idea unit from the next. Consider these examples:

“Mr. Gupta + please come over here.”

“For three hours + he waited there.”

“Finally + he gave it to me.”

“The route we took + wasn’t short.”

“What he told me + wasn’t the truth.”

“I met him there + and he came with me.”

“Ask her father + or one of her brothers.”

“He left the place + after John and others had come.” – “Before I came + nobody had left the place.”

“He’s been with that company + since last April.”

“I asked him to tell me + if he had seen it.” (Nair, 2000).

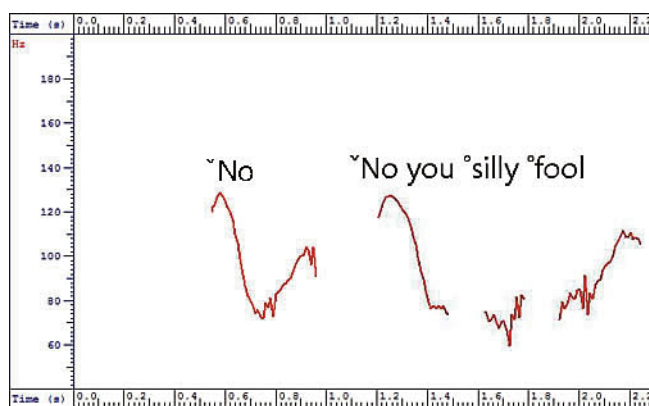
When speaking it is natural to pause at times, but this is not directly connected with breathing, as Calvert (1986:170) explains: “A speech phrase is defined phonetically as a continuous utterance bounded by silent intervals. In the phrase, syllables, which themselves are clusters of segmental phonemes, are linked together in coarticulated cluster. The intervals between phrases are called pauses. Speech phrasing is related to breathing but does not necessarily reflect breathing patterns. All inhalations during connected speech occur between phrases, that is, during pauses, but inhalation does not always occur with each pause. A speaker may say two or three phrases on the same breath. Speech pauses, or junctures aid the gathering of further thoughts (for the speaker) and give time for comprehension (to the listener). In English these pauses carry further importance, for it is between pauses that stress and pitch are used to highlight the intended meaning of the speaker. Pause junctures form the boundaries of what other linguists have termed as breath groups, thought groups, intonation units, intonation phrases, tone groups, metrical feet or rhythm groups. Each unit contains a logical message and reflects the speaker’s management of information. The length of such a unit is affected by speed of delivery (the slower the speech the shorter the unit) and the personal speech habits of the speaker, as well as the personal interpretation of the information. Tench (1996:31-3) claims that “in relaxed informal speech, there would be approximately 25 units per minute” and that any group of native speakers, when given a text to divide into intonation units, “would show a degree of conformity of about 80 per cent”. He also states that there is a maximum length to such a unit of five stresses over and above which it would automatically be converted into two or more units. Classroom experience of Ridgeway (1999) suggests that foreign learners who lack intonation in fast speech and sound boring may be breaking this rule, and that work on pause juncture boundaries might help them improve their intonation generally.

The sustained juncture demonstrates the pauses made by the speakers in relation to thought groups. Here are some examples:

/ˈGRIEF-ˌSTRICKən → I ˌWENT ˈBACK \\/
 /ˌIN ˈSɒCcer → you ˈCANNOT ˌTOUCH the ˌBALL → ˌWITH your ˈHANDS \\/
 /I ˈKNEW a ˌWOMən → ˈLOVELY in her ˌBONES → ˌWHEN ˈSMALL ˌBIRDS ˌSIGHED
 → → she would ˈSIGH ˌBACK at ˌTHEM \\/
 /As ˈLONG as you're ˈNOT ˌHURT → ˌTHAT'S the ˈMAIN ˌTHING \\/
 /I ˈDONT go out ˌMUCH ˌMAINly → be ˌCAUSE I ˌHAVE to ˈLOOK after the ˌKIDS \\/
 /ˌMISTər → ˌCAN you ˈSPARE a ˌDIME ↗/
 /The ˈROAD to ˌHELL → is ˌPAVED with ˈGOOD ˌin ˌTENTions \\/

2.1.4 Falling-Rising Terminal Juncture

Falling-rising terminal junctures marks the ending of words, phrases, clauses, and sentences that are accompanied by pitch phonemes that group in a rising movement towards the top of tonic syllable and start to fall down towards the end of the related word or sentence in an utterance. It is always the cues to the existence of juncture are acoustic features that help us determine the boundaries between the entities. The blog-jam given below indicates the rise and fall movement of the pitch of the voice in an utterance like “No. No, you silly fool.”



(Demirezen, 2013j; <http://blogjam.name/sid?page id=1115>)

2.1.5 Rising-Falling Terminal Juncture

In the working mechanism of the falling-rising terminal juncture, first the pitch voice goes down on the related syllable or a word in dipping position, and from there the voice pitch starts to escalate upwards towards the related syllable or word, where it fades off in a high tone.

The following two sentences are different in meaning because the fall-rise terminal juncture in the first sentence exposes a rising terminal juncture at the end of the words. In the second sentence, the meaning changes because the speaker is unsure of the situation and he/she shows it by using a falling terminal juncture at the end, which makes it a separate phoneme. The falling juncture in the foregoing falls on the lowest area of the word or phrase and the rising part of it dwells on the focused words in the utterances:

She's married, isn't she? / She's+ married → isn't+she \downarrow / \searrow / Uncertainty

She's married, isn't she? / She's+Cmarried → isn't+she \downarrow / \nearrow / Certainty

The tag questions are typical manifestations of the falling-rising terminal juncture phoneme in the structure of English suprasegmental phonemes.

“In each of the above-mentioned examples up to now the meaning and grammatical category of utterances change, which brings in the existence of junctures as phonemes” (Demirezen, 2013l).

Rising-falling juncture (a question that is answerable with “yes” or “no”): /↗↘/

1. /,DO you 'LIKE → 'TEA or ,COFFee↗↘ 'TEA↗↘/
2. /,DO you 'THINK → ,HE is 'FUNny↗↘ 'NO↗↘/
3. /,IS your 'FATHer → 'HANDsome↗ 'YES↗↘/
4. /,CAN you → 'SING↗ 'YES↗↘/
5. /,IS ,THIS → 'YOUR ,SCHOOL↗ 'YES↗↘/
6. /,DO you 'EAT → 'PASTa↘ 'YES↗↘/
7. /Is 'THAT ,MAN → 'FRENCH↗ 'YES↗↘/
8. /,ARE you 'TIRED → 'SIR↗ 'NO↗↘/
9. /,WILL it 'RAIN → to 'MORrow↗ 'YES↗↘/
10. /,YOU'RE 'COMing → ,WITH 'ME↗ 'YES↗↘/

2.1.6 The Functions of Juncture Phonemes

In the field of foreign language teaching, juncture phonemes perform a special function in relation to spoken English, connected English, and colloquial language forms. Therefore, their functions must be analyzed in a detailed fashion.

2.1.7 Special Emphasis

Students need to be confident about both the position and the length of sustained (pause) junctures in speech. Pause junctures are the foundation stones for the successful employment of the other suprasegmental elements, namely stress and pitch, and are therefore fundamental in successfully expressing one’s feelings and opinions. Punctuation could be a real guide in determining where to pause and how long to pause. Here is a typical example of how meaning changes by punctuation and the placement of juncture in a sentence:

An English professor wrote some individual words on the board asking his students to punctuate this correctly: “Woman without her man is nothing.” The male students punctuated the sentence like this: “Woman, without her man, is nothing.” and read /'WOMAn → wi₁THOUT her 'MAN → → is 'NOTH-ing ↘/ whereas the female students punctuated the same sentence as “Woman: without her, man is nothing.” and read it likewise in a completely different intonation: /'WOMAn → wi'THOUT ₁HER → → ₁MAN → → is 'NOTH-ing ↘/ (<http://en.wikipedia.org/wiki/Punctuation>).

“By putting pauses in difference places the two groups expressed the meanings of their choice” (Wilkes, 2004). Likewise, while teaching juncture to our students, we could first give them a pretest containing 25 such sentences without any punctuation marks to see how they fare, and then brief them on the basics of junctures and ask them to add commas, colons, semicolons, exclamation and question marks, etc. to form a meaningful structure of their choice. Then they could read their sentences aloud by putting juncture signs in relevant places. We could continue with this practice until our students are able to pause naturally in their utterances to form thought-groups and emphasize their intended meaning with them.

2.1.8 The Schools of Linguistics in Relation to Suprasegmental Analysis

This doctoral dissertation follows the principles of the phonemic analysis of suprasegmentals in relation to the Prague School in former Czechoslovakia, the American School in the USA, and the School of London in England.

2.1.8.1 The Prague School

The Prague school referred to such elements as boundary signals, neatly summarizing their role. Lieberman (1967:1872-8) mentions that “Bloch and Trager (1942) first introduced the plus juncture, an open internal juncture to indicate a word boundary”, and that later Trager and Smith (1951) “added three varieties of juncture to describe pauses in speech accompanied by particular pitch changes.” Confusion has arisen with respect to their connection with specific pitch movement; for example, a rising tone is connected to a question. “This is misleading because the intonation of a question is generally determined by whether it contains a question word (when the intonation usually goes down), or not (when the intonation usually goes up)” (Ridgeway, 1999).

The word juncture, represented by the /+/ symbol, distinguishes word boundaries and three types of pauses in connected speech. The latter are all phonemic and indicate different amounts of juncture; a short pause of about 0.3 seconds is represented by /→/, a longer pause of about 0.5 seconds is represented by /→→/, and an even longer sentence final pause of about 1 second is represented by /↘/. These lengths are not absolutes, as Peter and Karen Viney (1996:78) point out, "...generally British listeners expect longer pauses than American listeners." And this can affect the listener's ability to identify a suitable place to interrupt a conversation, for example. "The precise length of a pause will vary depending on the speech of utterance; in slow, clear speech all the pauses will be longer than in faster speech" (Ridgeway, 1999). Consequently, the comparative difference between the pauses is more important than the exact length; for this reason, they are referred to as "shorter" and "longer" pauses.

Shorter pauses usually indicate a continuing topic, either immediately following or after an interrupting clause, and may coincide with a comma as well as possibly occurring at a number of other optional sites in an utterance. There are also places where they must not occur, for example, at the start of a defining relative clause. When comparing these sentences: "The book, which he had just finished, was overdue at the library." – "The book which he had just finished was overdue at the library." It is apparent that in writing the only difference the non-defining and the defining relative clause is the punctuation. In speech the commas are replaced by short pauses, and the lack of a pause before the defining relative clause is a clear indication to the listener of the type of clause. In this way it is possible to refer to pauses in speech as "verbal punctuation".

Longer pauses coincide with semi-colons and colons in writing, which serve a number of functions, including connecting two sentences and introducing a list. The difference between a shorter and a longer pause can be demonstrated by contrasting the following sentences:

/She ɪHAD → 'TWO ɪDOGS → a 'CAT → and a ɪRABbit./ vs.

/She ɪHAD → 'TWO ɪDOGS →→ a 'KANgal → ɪAND_a → 'GERman ɪSHEPherd↘/

In the first sentences the shorter pause indicates that the list continues, whereas in the second, the longer pause shows that an elaboration of the main clause follows. This distinction may also be reinforced by differences in pitch patterns between the main clauses. "The difference between these junctures is important for setting the expectations of the listener, which is an enormous aid to comprehension" (Ridgeway, 1999).

2.1.8.2 The American School

In the classical phonetic and phonemic analysis of Bloomfield, Boas, Sapir, Trager-Smith, Hockett, Pike, Gleason, and Fries, the minimal units can serve the purpose of differentiating the meaning of the phonemes. The field of phonology deals with studies on how sounds alternate, that is, replace one another in different forms of the same allophones, as well as with the study of *suprasegmentals*, including *syllable structure*, *stress*, *pitch*, *junction*, *accent*, and *intonation*.

In suprasegmental analysis of utterances in the English language, it is believed that a complete theory of phonology of English should deal with stress placement including word, phrase, clause, and sentence stresses. The placement of stress in a word is partly dependent on whether the word is a noun or a verb; for example, /'rɛbəl/ *n.* vs. /rɪ'beɪ/ *v.*, /'ɪmpɔət/ *n.* vs. /ɪm'pɔət/ *v.*, and /'kɒŋdʌkt/ *n.* vs. /kən'dʌkt/ *v.* In the analysis of phrases, clauses, and sentence stresses, mobility of stress, which is the to and fro movement of primary stress. By addition and subtraction, certain suffixes create vowel reduction or *schwa* formation, which for learners of English in Turkey is very difficult to perceive.

In 1968, Noam Chomsky and Morris Halle published *The Sound Pattern of English* (SPE), the transformational basis for generative phonology. In this view, phonological representations are sequences of segments made up of distinctive features. These features were an expansion of an earlier work by Nikolai Trubetzkoy, Roman Jakobson and Morris Halle. In that study, not the SPE, but classical techniques and methods of structural phonology were followed. After the publication of SPE, it has become customary to distinguish between classical phonology and generative phonology.

David Stampe in 1979 coined the term “*natural phonology*” with specific principles. Phonological processes act on distinctive features within prosodic groups. In 1976, John Goldsmith introduced autosegmental phonology. Autosegmental phonology later evolved into optimality theory, which is predominant in North America today, in the school of American phonology.

2.1.8.3 The School of London

The London School of Harry Sweet (1845-1912) and Daniel Jones stressed the practical side of phonetics, and trained its students to perceive, transcribe and reproduce each minute sound distinction very precisely – far more than the American behaviorists, for example, and of course the Chomskians, who are extending models rather than testing them. This phonetic competence was much needed when J.R. Firth (1891-1960) and others at the School of Oriental and African Studies helped to plan the national languages and their writing systems for

the new Commonwealth countries. Overall, the School has been very far ranging – noting, for example, how stress and tone co-occur with whole syllables, and developing a terminology to cope: a basis for poetic metre. Firthian analysis also finds a place for aesthetic considerations and develops a system of mutually-exclusive options, somewhat like Saussure, but more socially and purposively orientated.

The London School of Linguistics stresses the instrumentality of language and prosodic analyses in language studies. This school is also known as the hub of systemic linguistics, linguistic semantics, prosodic phonology and prosodic analysis and functional linguistics not adequately defining prosodic units.

2.1.9 Juncture and Punctuation Relations

Junctures are generally considered as the intonational pause equivalents of punctuation marks in the written text. For instance, a falling arrow /↘/ corresponds to a period “.”, a question mark “?” to a rising arrow /↗/, a horizontal arrow /→/, a vertical line /|/ or more generally, a plus sign /+/ corresponds to a comma “,”. Punctuation is an important but not infallible clue for the English learner for two important reasons: Firstly, many mistakes are made in the placement of punctuation, and secondly, the correct placement of punctuation marks, particularly commas, is not completely agreed upon. For example, longer sentences may not be separated by commas to indicate where short pauses occur, and usage in this context seems to depend on fashion and personal preference. Burt (1983:27) says that “a comma can be used to mark a pause in long sentences, its exact positioning subject to personal taste, and that reading aloud may assist this”, whereas Trask (1997:13) seems to “disagree with this usage.” There are also some differences between British and American punctuation standards. When correctly used, a full stop, question mark and exclamation mark indicate a sentence boundary and also a longer, final pause:

“I’m going.” /ɪˈm ˈɡoʊɪŋ↘/
“Are you going?” /ˌɑːr ju ˈɡoʊɪŋ↗/
“You’re not going!” /juːr ˈnɒt ˌɡoʊɪŋ↘/

A colon and a semicolon also indicate a longer pause, this time within a sentence:

“The situation is clear; you mustn’t steal.”
/The siˈtʊeɪʃən ɪz ˌkliːə → → ju ˈmʌstˈnt ˌstiːl↘/

"Last year, we had a wonderful summer; but it is terrible this year."
/LAST ,YEAR, → we ,HAD a 'WONderful ,SUMmer → → ,BUT → ,IT is 'TERri-
ble → → 'THIS ,YEAR\

The comma is used in a number of different ways to indicate a short pause, for example:

"It was a beautiful, fluffy, ginger cat."
/IT was a 'BEAUtiful → 'FLUFFy → 'GINger ,CAT\

"One, two, three, four, five."
/One → two → three → four → five\

But a comma does not coincide with a pause when it is used prior to the name of the person spoken to, i.e., in direct addressing. The following examples show this in various situations:

"Good afternoon, Mr Smith."
/GOOD ,AFTER'NOON → ,MR 'SMITH\

"If you say so, mother."
/IF you 'SAY ,SO → 'MOTHer\

"Excuse me, madam. Your limousine has arrived."
/EX'CUSE me ,MADam\ Your ,Limou,SINE has ar'RIVED\

"Listen boy, I said I wanted a glass of tea."
/'LISTen ,BOY → → I ,SAID I 'WANTed → a 'GLASS_of ,TEA\

"Please wait a moment, Denise, while I lock the door."
/PLEASE → 'WAIT_a ,MOment → De,NISE → → ,WHILE I 'LOCK the ,DOOR\

This is also true for words other than names used in direct addressing, for example:

"Could you help me, please?"
/COULD you 'HELP me → 'PLEASE\

"Listen, now. Let's hurry up."
/ˈlɪstən ˌnəʊ → → ˌlɛt's ˈhʌrɪ up \↘/

"Hi, there!"
/ˈhi → ˌθɛrə \↘/

"Punctuation can therefore be a real guide to students in deciding where to pause and how long to pause. In addition students need to learn through suprasegmental consciousness where pauses are compulsory or advisable in situations where there is no punctuation" (Ridgeway, 1999).

2.1.10 Junctures in Spontaneous Speech

When we speak spontaneously, the natural way of composing and delivering speech is "to compose and deliver the things we want to say chunk by chunk – each chunk containing a few closely connected words. About 80% of all the chunks would normally contain 1 to 7 words per chunk" (Nair, 2010).

The most frequent number of words per chunk is about 5 words, and such a chunk would take about 2 seconds to utter. As we know, each such chunk is an idea unit. So we can see that the junctions between every two idea units are natural points for making pauses, and thus are natural points for your organs of speech to get a momentary rest. There is also a strong tendency for most of these idea units to be whole (unfragmented) grammatical units (= whole clauses or whole phrases, sometimes even single words). The idea units marked off by the /+ / sign in the above examples are all whole, unfragmented idea units. Occasionally, "a chunk (uttered as a single idea unit) may even consist of two (or even three) whole grammatical units (each unit being short – and made up of just 1, 2 or 3 words)" (Nair, 2010). Here are some examples:

"(breakfast) (and dinner)"; "(dozens) (of people)"; "(He parked) (off the main street)"; "(a matter) (of great importance)"; "(You know) (what he said) (surprised me)"; "(This happened) (at about 10 o'clock) (last night)".

So the junction between an idea unit (whether it contains only *one* grammatical unit or *two or three*) and the idea unit next to it tends to be a natural grammatical break – a grammatical junction. But we must remember that this is just a tendency. Therefore, this is just what is likely to happen often, or what happens often – but *not* what actu-

ally happens *all* the time. When we speak *spontaneously*, (that is, without prior planning or preparation), idea unit junctions may *not* always coincide with grammatical junctions. Thus, spontaneous speech situations are *not* ideal because in those situations, we are not delivering something planned ahead, or composed or organized in advance. nor are we making a scripted speech.

When we speak spontaneously, we find ourselves having to compose our speech and speak at the same time. We have to think and plan our speech, produce it, organize it and process it as we go along. And the time we have at our disposal, in order to do all this, is limited to the duration of speech. What fluent speakers do in such a situation is to put together units of ideas or information that occur to them on the spot. They put them together by using such words and structures that occur to them on the spot. And they refine and clarify things as they speak – by uttering other clarifying idea units. This is so, whether the spontaneous speech situation is public, non-public, formal, non-formal, informal or casual, or whatever. When fluent speakers speak spontaneously, their idea units may not often end exactly at grammatical breaks, and so their idea units may *not* often be whole grammatical units. Their idea units would be a word or two *shorter* than a whole grammatical unit, or a word or two *longer* than a whole grammatical unit. That is, their idea units would often be *fragmented* grammatical units. Therefore, many of the chunk junctions may *not* be grammatical junctions. In other words, “many of the junction pauses in spontaneous speech may *not* actually happen at grammatical junctions. Most often, they happen at the foot-boundary next to a grammatical junction” (Nair, 2000).

2.1.11 Junctures in Non-Spontaneous Speech

We must bear in mind that this is the *spontaneous* speech we are talking about – speech that is produced without prior planning, preparation or rehearsal. But when we speak after preparation, or when we speak about something that we have spoken about several times before, most idea units tend to be *whole* grammatical units, and most idea unit junctions tend to be *grammatical* junctions (Nair, 2000). This is because in such cases, we don't hesitate as much as we do when we speak about a new topic spontaneously. When we read aloud from a prepared text or when we prepare our speech thoroughly in advance and deliver it in a formal setting, almost all idea units would end at grammatical breaks. That is, almost all idea-units would then be *whole* (= un-fragmented) grammatical units. And so, in these ideal situations, almost all idea-unit

junctions would coincide with grammatical junctions. Likewise in these situations, almost all junction-pauses happen at grammatical-junctions.

2.1.12 Hesitation-Junctures

Hesitation junctures are pauses that speakers make whenever they have some kind of hesitation. We can make these pauses *anywhere* – at any point in the speech stream. We can make them not only in the middle, but also at the end or at the beginning of idea-units. Normally, we make a hesitation-pause under the following circumstances:

1. When we are uncertain about what to say next, or when we are deciding what to say next. This often happens when we have something to say, but we have not planned it in detail. This is a speech-planning pause, and usually occurs immediately *after* the first one or two words in an idea unit – often after the very first word.
2. When we are not sure that what we have said or what we are going to say is right.
3. When we have difficulty in finding an appropriate word.
4. When we want to utter a word that is especially significant, that is of high lexical content, or that may sound surprising in that particular context.
5. When we have difficulty completing a particular syntactic structure. We must remember that when we want to deal with hesitation, we are free to pause *anywhere* in our utterance – that is, not just when we are in the middle of an idea-unit, but also at the end, or even at the beginning of an idea unit. Now let us suppose that we pause at a junction, and that our aim in pausing there is to deal with a hesitation, then *that* pause is actually a hesitation-pause, rather than a junction-pause, though we make it at a junction (Nair, 2000).

We can make a junction-pause even if we have *no* hesitation when we reach a junction. As far as a hesitation-pause is concerned, speakers normally make it only if they have some hesitation. For instance, when we speak spontaneously, even for a few seconds, there *will* be points of hesitation here and there in our speech. That is, whenever anybody speaks continuously, he will certainly hesitate every now and then, so a hesitation-pause is made because of this reason. “We would not be able to go on with our speech without faltering – if we did not pause at every point of hesitation and deal with the hesitation properly” (Nair, 2000).

Now let us go through the following examples. In these examples, the symbol /-/ stands for a hesitation pause, and the symbol /+/ stands for a junction pause:

“Who planned + and directed the – campaign?”

“If – you have any doubts + why don’t you – express them?”

“Pull on the rope + and see if it’s – secure.”

“Fry the onions + but – don’t use too much – oil.”

“He shows – contempt for everybody.”

“That road + ran along side of a – railway.”

“He had a job + in the – Civil Service.”

2.1.13 Public Speakers Making Use of Junctures

“Public speakers, for example, tend to pause frequently to make their message clearer or more emphatic, as in a political statement” (Celce-Murcia, 1997).

Example: John F. Kennedy in his Inaugural Speech:

/We dare not forget today → that we → are the heirs → of that first → revolution. \-/ →→ Let the word go forth → from this time and place → to friend → and foe alike → that the torch has been passed → to a new generation of Americans → born → in this century → tempered by war → disciplined by a hard → and bitter peace → proud → of our ancient heritage → and unwilling → to witness → or permit → the slow undoing → of those human rights → to which this nation → has always been committed → and to which we are committed today → at home → and around the world. →→ Let → every nation know → whether it wishes us → well or ill → that we shall pay → any price → bear any burden → meet any hardship → support any friend → oppose any foe → to assure the survival → and the success of liberty. \-/ (Nakatani, 1976)

People can usually distinguish the word juncture in contrastive twins of word pairs such as “play+nice” and “plaintice”. We can see many features which differ between the twins in spectrograms, but observation alone cannot tell us which features are important to the perception of juncture. The contributions of pitch, amplitude, timing, and segmental features to juncture perception were studied in the following manner. Parametric representations of twins XY were obtained by analyzing natural speech, and the

above features were exchanged between the twins in a complete factorial design. A feature was considered important for juncture perception if exchanging X and Y also caused perception to be exchanged; that is, listeners heard Y when presented with X possessing feature f of Y, and vice versa. Listeners' responses indicated that all the features were important, but the importance of any particular feature or set of features depended on the juncture consonant. Features also interacted prominently for some consonants.

Junctures and pauses are similar, as they are both the stopping of speech.

A juncture is a pause or slight delay in a continuous flow of speech.

Pauses are intervals of silence between or within words, phrases or sentences. Such a silence is an effective communicative tool if used sparingly. For better effect, pausing to breathe must be done at natural breaks in the sentences where commas and full stops would be in written prose. This provides further benefits since "relaxed breathing regulates the oxygen supply to the brain and aids in clear thinking" (Diaz, 2009).

Carmin Gallo wrote a book a few years ago titled *The Presentation Secrets of Steve Jobs* (Gallo, 2009). In it he comments on the presentation performances of non-native English speakers. He says "Where the speaker was highly intelligent, the content of the talk was excellent and the subject was highly informative, yet there was something that made the presentation just die. That something was the speaker sounding like he or she was reading their script. There was no emotion, no passion and it sounded like a robot was speaking. You could write, and prepare the best presentation ever made, but destroy it in the first 30 seconds if you do not use rhythm, intonation and pausing in your presentation." He then continues, giving as an example one of the best presentations ever, saying: "Let's take a look at the 2007 launch of the iPhone. At the beginning of the presentation, Steve Jobs talks about what Apple has been doing, how the iPod has been selling, and other updates. He then pauses. The screen behind him only has an Apple logo; he clears his throat and begins:

"This is a day I've been looking forward to for two and a half years..." He then pauses again. Let us watch the video clip all together in a minute as a tribute to this giant innovator, not only in electronics, but also in the effective use of suprasegmentals to show how effective his style is on the audience. When we listen to him, we notice how Steve Jobs builds the excitement by using pauses, slow speech and intonation:

“This is a day I’ve been looking forward for 2 and a half years. Every once in a while a revolutionary product comes along that changes everything. Apple has been very fortunate it’s been able to introduce a few of these into the world. In 1984 we introduced the MacIntosh. It didn’t just change Apple; it changed the whole computer industry. In 2001, we introduced the first iPod. It didn’t just change. – We all listen to music. It changed the whole music industry. Well, today we’re introducing three revolutionary products of this class.”

/ˈTHIS_ɪs_a_ˈDAY → I've been ˈLOOKɪŋ_ˌFORwəd to → for ˈTWO_and a ˌHALF
ˌYEARS\

/ˈEVɛrɪ ˈONCE_in_ˌWHɪl/ → /ə_ˌREvəˈLUʃənəri_ˌPRɒdʌkt → ˌCOMES_əˈLɒŋ
→ that ˌCHʌŋdʒes_ˈEVɛrɪ_ˌTHɪŋ\

/ˈAPPLɪ → ˌHʌS_bɛn ˈVɛrɪ_ˌFɔːtʃənət\

/ˌɪt_s_bɛn ˈABlɪ to_ɪntrəˌDUːs → ə_ˈFEW_of_ˌTHESE → ˌɪntə_θə_ˈWɜːld\

/ɪn_ˈ198_4 → wɛ_ɪntrəˈDUːsɪd → θə_ˈMʌsɪn_ˌTɒʃ\

/ɪt_ˈdɪdn_t → ˈDʒʌst_ˌtʃʌŋdʒ → ˈAPplɪ\

/ɪt_ˌtʃʌŋdʒɪd → θə_ˌwəʊl_ˌkɒmˈpjuːtər_ˌɪndʌstri\

/ɪn_ˈ200_1 → wɛ_ɪntrəˈDUːsɪd θə_ˈfɜːst_ˌɪpɒd\

/ɪt_ˈdɪdn_t_ˈdʒʌst_ˌtʃʌŋdʒ → → wɛ_ˈɔːl_ˌlɪstən_ˌtuː_ˈmjuːzɪk\

/ɪt_ˌtʃʌŋdʒɪd → θə_ˌwəʊl_ˈmjuːzɪk_ˌɪndʌstri\

/ˌwɛl_ˌtuːˈdeɪ → → wɛˈre_ɪntrəˈDUːsɪŋ → ˌθriː_ˌREvəˈLUʃənəri_ˌPRɒdʌkts
of_ˈTHIS_ˌklɑːs\ <http://presentinenglish.com/the-importance-of-intonation-and-rhythm>

“What a difference Steve Jobs makes with his skilful use of intonation and rhythm in his presentation, doesn’t he? showing also his excitement and passion in his style” (Gallo, 2009).

Likewise, in our sentences as well we must practice our intonation over and over again, practice the pausing, practice the rising of our tone and the lowering of our tone. We must speak loudly, and then quietly again. As for our students, many of them, whose vocabulary, listening skills and understanding of English may be excellent, fall and fail when they stand up and give a presentation because they forget to use any kind of rhythm in their speech. So we should set a good example for our team and teach them to practice speaking with emotion. They should remember to slow down, take their time and enjoy putting stress, emphasis and tone into their words. Not only will they enjoy the experience more, but their audience will too.

2.1.14 Further Elaborations on Junctures

Junctures in connected speech are subject to different modifications. A non-native language teacher must pay special attention to these changes at the word, phrase, clause, and sentence boundaries.

2.1.15 Word Junctures

Word boundaries may be shown by using the plus juncture symbol /+/, for example:

A dog is a man's best friend.

/A+'DOG → is+a+₁MAN'S → → 'BEST+₁FRIEND↘/

This juncture has been analysed and is proved to be a distinct phoneme. Phrases have been examined which show small phonological differences in the production of phonemes at the word boundary, as in the following pairs. Here the /r/ is voiceless in the first sentence after the initial /t/, but voiced in the second sentence following the final /t/:

"My trams have bells?"

/My+'TRAMS+have+₁BELLS↗/

"Might rams have bells?"

/₁MIGHT→'RAMS+₁HAVE+'BELLS↗/

In the following, the /t/ in the first sentence is not aspirated, whereas, in the second, it is aspirated at the start of the word:

"Might Ann disappear?"

/₁MIGHT→'ANN+₁DISa'PEAR↗/ vs.

"My tan disappear?"

/My+₁TAN→₁DISap'PEAR↗/

These examples show a velarised /l/ in the first phrase at the end of a word, and a clear /l/ at the start of a word in the second phrase:

"Bill ate a rose."
/ˌbɪl → ˈeɪt + ə + ˌroʊz \ ˌ/ vs.

"Be later rose."
/ˌbi → ˈleɪtər + ˌroʊz \ ˌ/

However, it is not always easy to perceive the difference, and even native speakers rely on clues from context. In the following examples the question word determines the understanding of the question because the word juncture boundary is not sufficiently clear:

"What have you got to show for it?"
/ˈwʰæt + ˌhæv + ju + ˈgɒt + tə + ˈʃoʊ + ˌfɔr + ˈɪt \ ˌ/ vs.

"Who have you got to chauffeur it?"
/ˈwʰo + ˌhæv + ju + ˈgɒt + tə + ˌʃɑʊfˈfeɪr + ˈɪt \ ˌ/

Celce-Murcia et al. (1996:240-1) prefer to refer to such problematic word junctures as "potential segmentation problems" and agree that "... when spoken normally as part of an utterance, such phrases are virtually impossible to distinguish consistently even for English speakers, who use context or their knowledge of the world to help them segment and to choose from competing options." They do admit, however, that "some phrases are more easily distinguishable and give examples where stress also aids the distinction between the pairs: "key punching" /ˈkeɪ → ˌpʌnʃɪŋ/ takes primary stress on the first word and /ˌkiːp → ˈpʌnʃɪŋ/ on the second."

2.1.16 Phrase Junctures

A phrase that is part of a simple sentence, forming the subject, object or verb, may not normally be delineated by any pause by a native speaker, but in the classroom, where slower, clear speech is necessary, a pause is advisable. It is a pedagogical simplification, therefore, to teach students to pause after a phrase that forms the subject of the sentence, whether a comma is present or not:

"The sands of time were running out on him."
/The ˈsænds ɒf ˌtaɪm → → wɜr ˈrʌnɪŋ ˌaʊt → ˌɒn ˌhɪm \ ˌ/

A pause cannot come between a verb and its direct object, but a phrase following the direct object can again be separated off by a pause:

"Her teacher told her to pull her socks up."
/Her ,TEACHer 'TOLD her → to 'PULL her ,SOCKS_up\~/

In these examples pauses may occur in one or both of these positions:

"Life is never a bed of roses."
/,LIFE_is 'NEVer → a 'BED_of ,ROSES\~/ and /,LIFE → is ,NEVer → a 'BED_of ,ROSES\~/

"Optical character recognition (OCR) has helped automate the post office."
/'OPTical 'CHARacter ,RECOg'NItion → has ,HELPEd 'AUto,MATE the 'POST_ ,OF- fice\~/

"The post office automation has been helped by optical character recognition."
/The 'POST_ ,OFFice ,AUto'MATIOn → has ,BEEN 'HELPEd → → by 'OPTical 'CHARacter ,RECOg'NItion\~/

Sometimes phrases are set off by commas. These commas indicate compulsory short juncture pauses. Such commas may delineate phrases that begin with participles:

"Walking into town, she went past their shop."
/'WALKing into ,TOWN → ,SHE went 'PAST their ,SHOP\~/

"The birds, chirping cheerfully, ate all the crumbs they found."
/The ,BIRDS → 'CHIRPing ,CHEERfully → ,ATE_ 'ALL the ,CRUMBS → ,THEY 'FOUND\~/

"I chose the largest cake, filled with fresh cream."
/I ,CHOSE the 'LARGest ,CAKE → ,FILLED with 'FRESH ,CREAM\~/

Mark a phrase in apposition:

"His two daughters, Jennifer and Susan, are very famous."
/His 'TWO ,DAUGHTers → 'JENnifer_and ,SUSan → are 'VErY ,FAMous\~/

and can even mark off short asides:

"I quite agree, children are very tiring."
/I 'QUITE_a,GREE → 'CHILDren_are 'VEry ,Tiring \~/

"You heard, didn't you, about her operation?"
/ ,YOU 'HEARD → 'DIDN't ,YOU → a ,BOUT her ,Ope'RAtion \~/

"The most important issue for students to remember about phrases is that the best place to pause is either immediately before, or immediately after it, and that the phrase itself forms a minimal unit that cannot be broken into by pauses. Students therefore need to be competent in identifying phrases in text and speech" (Ridgeway, 1999).

2.1.17 Clause Junctures

Juncture bounding clauses, often (but not always) coincide with punctuation. In the following example, the main clause is preceded by a comma, which indicates a short pause:

"If I were you, I'd buy a car."
/ ,IF_I ,WERE 'YOU → I'd 'BUY_a ,CAR \~/

However, when the clauses are reversed, no comma exists. A native speaker may not pause at this point, but in slow, clear speech a pause would be present. It is best, therefore, to teach students to give a short pause in such situations:

"I'd buy a car if I were you."
/ ,I'D 'BUY_a ,CAR → ,IF_I 'WERE ,YOU \~/

"I'd have visited her yesterday if I had known."
/ ,I'D have 'VISited ,HER 'YESter ,DAY → ,IF_I had 'KNOWN \~/

A comma also serves to highlight the main clause in a misleading sentence:

"She moved on, to the left of the garden seat."
/She 'MOVED_on → ,TO the 'LEFT_of the ,GARDen \~/

"They moved along the beach, to their left."

/They ₁MOVED → a'LONG the ₁BEACH to their 'LEFT ↘/

A short pause is also indicated by a comma when a change is made to and from direct speech:

"I enjoyed the party," she said. "I really did."

/I₁enJOYED the ₁PARTY → ₁SHE 'SAID → I 'REALLy ₁DID ↘/

"I'll always be with you," he promised.

/I'll 'ALWays be with ₁YOU → he 'PROMised ↘/

Once again "punctuation marks give vital clues to the learner about where to pause, although where no punctuation exists, clause boundaries form an identifiable site for a pause" (Ridgeway, 1999).

2.1.18 Sentence Junctures

All sentences in connected speech are bounded by longer, final pauses. This applies equally to full stops, questions and exclamations: "Had she done it? I would never have believed it!" vs. "Had she done it, I would never have believed it." "Commas generally represent short pauses, although such pauses may be desirable when no comma is present. Brackets also represent short pauses and are often used to set off asides in more complex sentences when commas have already been used. Semicolons and colons represent longer pauses within sentences" (Ridgeway, 1999).

2.1.19 Junctures in Simple Sentences

In very short simple sentences there is normally no internal juncture:

"They're talking."

/₁THEY'RE 'TALKing ↘/

"Denise is intelligent."

/De₁NISe₁is₁in'TELLigent ↘/

"I like cooking."
/I 'LIKE ,COOKing \\/

However, when the sentence is slightly longer, short pauses are normal in slow, clear speech. A short pause may occur after the subject, or before the phrase that may follow a direct object:

"The university awarded him a degree."
/The ,Uni'VerSity → a'WARDed ,HIM → a de'GREE \\/

"The architect designed the shopping complex well."
/The 'ARchi,TECT → de'SIGNED the 'SHOPping ,COMplex → 'WELL \\/

When a simple sentence becomes longer by using a compound noun or phrase which serves as the subject, it is normal, even in faster speech, to give a short pause at this point:

"Tea making facilities can be found in all rooms."
/'TEA ,MAKING fa'CILities → ,CAN be 'FOUND → in ,ALL ,ROOMS \\/

"The inter-planetary spaceship traveled three times around the earth."
/The ,Inter-'PLANetary 'SPACE,SHIP → ,TRAVeled 'THREE ,TIMES → a'ROUND
the ,EARTH \\/

The same principle applies when simple sentences are made longer by using multiple adjectives. In addition, where a comma indicates a pause in a list of adjectives, there will also be a longer pause after the noun, as this functions to clarify subject boundary:

"A long-haired, green-eyed monster climbed out of the hole."
/A 'LONG-,HAired → 'GREEN-,EYED 'MONster → → 'CLIMBED_out_of the ,HOLE \\/

Where the object of a sentence is made longer by the use of adjectives, the same rule applies, as long as it is not final in the sentence:

"John got out of his highly-polished, expensive looking Mercedes two minutes ago."
/JOHN 'GOT_out → ,OF his 'HIGHly-,POLished → ex'PENsive-,LOOKing
Mer'CEdes → → 'TWO ,MINutes_a,GO \\/

Where the subject is compound, there will be no pause before the conjunction, although a short pause is appropriate at the end of the subject:

"The husband and his wife entered separately."
/The 'HUSband_and his 'WIFE → 'ENtered ,SEParately\

"The captain and the petty-officer were entertained by the ship's band."
/The 'CAPtain_and the 'PETty_Officer → ,WERE_EnTer'TAINED → ,BY the 'SHIP'S ,BAND\

By contrast, where the object or verb of the sentence is compounded, there may be a short pause before and after the *and*. This plays an important role in distinguishing between transitive and intransitive verbs. Let us compare:

"She cleaned and polished the furniture."
/She 'CLEANED_and ,POLished → the 'FURNiture\

where both verbs refer only to the furniture, and:

"She cleaned, and polished the furniture."
/She 'CLEANED → → ,AND 'POLished the ,FURNiture\

where she did general cleaning as well as polishing the furniture.

Another important point is that certain idioms which use "and" or "or" must not have a pause. Examples include "black and white" meaning "*in print*" and "one or two" meaning "*a few*". This is an important distinction, as the understanding, and therefore the response, will differ. For example: /,WOULD you 'LIKE → → 'ONE or ,TWO\ requires a "yes" or "no" answer, whereas: /,WOULD you 'LIKE → ,ONE → → or 'TWO\ requires a choice of either "one" or "two".

Where the subject of a simple sentence is more than doubled, commas indicate shorter pauses, there will also be a shorter pause before the final conjunction and another, longer pause after the final unit, which serves to clarify the subject boundary:

"The cat, the dog and the rabbit are good friends."
/The 'CAT → the 'DOG → ,AND the 'RABbit → → are 'GOOD ,FRIENDS\

This pattern is also followed when the object is more than doubled:

"She visited Bursa, Çanakkale and Bergama, before returning home."

/She ,VISited ,BURsa → Ça'NAKkale → and 'BERgama → → be,FORE re'TURN-
ing ,HOME↘/

When a verb is more than doubled the commas again represent short pauses and there will be another pause before the final conjunction:

"Her husband came in, sat down and read the paper."

/Her 'HUSband ,CAME_in → 'SAT ,DOWN → → and 'READ the ,PAPer↘/

"She fetched, poured and drank the milk."

/She 'FETCHED → 'POURED → → and 'DRANK the ,MILK↘/

"Did they beg, borrow or steal the money?"

/,DID they 'BEG → 'BORrow → → or 'STEAL the ,MONEY↘/

Commas also serve to separate multiple adjectives before a noun:

"It was a beautiful, fluffy, ginger cat."

/It ,WAS_a 'BEAUtiful → 'FLUFFy → → 'GINger ,CAT↘/

However, where multiple items are accompanied by multiple adjectives, the adjectives are separated in the normal way by commas and the items themselves by semicolons. The commas represent short pauses and the semicolons represent longer pauses, thus clarifying the item boundaries in connected speech:

"Take warm, full-length socks; a small, light, waterproof jacket; and sturdy, waterproof boots."

/,TAKE → 'WARM → 'FULL-,LENGTH 'SOCKS → → a 'SMALL → 'LIGHT →
'WATER,PROOF ,JACKET → → and 'STURDY → 'WATERP,ROOF ,BOOTS↘/

In simple sentences students can generally be guided by punctuation marks. It is also advisable to give a short pause after the subject and to use phrase boundaries as other sites for such pause junctures. The student needs to remember that "when a subject or

phrase contains short pauses within itself, the juncture at the subject or phrase boundary becomes a longer pause” (Ridgeway, 1999).

2.1.20 Junctures in Compound Sentences

The co-ordinate conjunctions and *but* are not normally preceded by a comma in English punctuation (unless they separate more complex clauses), but nevertheless a short pause is normally required. Other conjunctions will normally be accompanied by a comma, indicating a short pause:

“He went to bed and she watched the TV.”

/He 'WENT to ,BED → ,AND she 'WATCHED the T'V\~/

“She was poor, but she was honest.”

/,SHE was 'POOR → ,BUT she was 'HONest\~/

“He’s not a good talker, yet he does his work well.”

/He’s 'NOT_a 'GOOD ,TALKer → ,YET he 'DOES his ,WORK 'WELL\~/

These conjunctions follow the pattern of the previous example:

/I 'DIDN'T ,HAVE_a 'DRESS → ,SO I 'DIDN'T ,GO to the 'DINner\~/

/You ,SHOULD 'HURry → or ,YOU'LL 'MISS the ,BUS\~/

/I'm 'VERY ,HAPPy → for to'MORrowis → my 'EIGH,TEENTH 'BIRTH,DAY\~/

/I 'DON'T ,WANT to ,GO → 'NOR ,DOES my 'FRIEND\~/

In compounds where a semicolon is used, a longer pause is required. For example:

“It was a wonderful summer; it was a terrible summer.”

/,IT was_a 'WONderful ,SUMmer → → ,IT was_a 'TERrible ,SUMmer\~/

“I’m putting on too much weight; I ought to stop eating chocolate.”

/I'm 'PUTting_on 'TOO ,MUCH ,WEIGHT → → I_ 'OUGHT to 'STOP_ ,EATING 'CHOColate\~/

When conjunctive adverbs are bounded by a semicolon and a comma, the semicolon indicates a longer pause, and the comma a shorter pause. British English punctuation

convention often omits the comma after the conjunction, although a short pause is normal. Examples:

"Jane is very attractive; moreover, she's intelligent."
/JANE_is 'VERY_at,TRACTive → → ,MORE'Over → ,SHE'S_in'TELligent\

These all follow the same pattern:

/Mr 'BEE'S ,BLIND → → ,NEVerthe'LESS → he ,LEADS_a 'VERY_ ,Active ,LIFE\

/,THERE_are his'TORical ,RUINS_in ,CAPpa'DOcia → → ,THUS → 'TOURism_is 'VERY_ im,PORTant\

/'MANY ,ROADS_are 'NOT ,WIDE_e,NOUGH → → 'CONsequently → ,THERE_are 'MANY_ ,Accidents\

/It 'WASN'T_a 'GOOD ,DAY → → ,ON the 'CONtrary → ,IT was di'SAstrous\

/,THERE were 'SOME 'GOOD ,POINTS → → ,FOR_e'XAMPLE → the 'DISH,WASHer\

/The 'BUS ,CAME 'STRAIGHT_at_US → → 'FORTunately → it 'MANaged to 'PULL_over_in ,TIME\

Some sentences are combined by simply using a colon, which represents a longer pause. A colon may be used to introduce a list (especially in formal written style):

"Furniture contained in the house: four chairs, one table..."
/'FURniture → con,TAINED_in the 'HOUSE → → 'FOUR ,CHAIRS → 'ONE ,TABLE\ and may also be used to move from the general to the specific, without the use of a conjunction:

"The danger is clear: you shouldn't smoke."
/The 'DANger_is ,CLEAR → you 'SHOULDN'T ,SMOKE\

In compound sentences, students need to remember "the short pause connected with the conjunction, or the longer pause indicated by a semi-colon or colon" (Ridgeway, 1999).

2.1.21 Junctures in Complex Sentences

Because complex sentences consist of at least two clauses, there are potential sites for shorter and/or longer pauses. When the main clause precedes a subordinate clause that is introduced by a conjunction, a pause is normal in slow, clear speech:

"He couldn't imagine what it would look like."

/He 'COULDn'T i_MAgine → 'WHAT_it would 'LOOK_LIKE\

"I can't cook the dinner unless you get a new gas bottle."

/I 'CAN'T c_OOK the 'DINner → un_LESS you'GET_a 'NEW 'GAS_BOTTLE\

"I'll wait until you've finished."

/I'LL 'WAIT → un_TIL you've 'FINished\

Even native speakers in a faster, more informal delivery would pause in these examples:

"You won't want to go and see the circus unless there's a new act involved."

/You 'WON'T wANT → to 'GO_and sEE the 'CIRcus → → un_LESS there's_a 'NEW_ACT_in'VOLVED\

"I never imagined it would be possible without paying a lot of money."

/I 'NEVER i_MAgined → it 'WOULD be POSSible → → wiTHOUT 'PAYing → a 'LOT_of MONEY\

When the main clause follows the subordinate clause, however, a comma is usually used indicating that a short pause is required:

"If you can't buy the book, borrow it."

/IF you 'CAN'T bUY the 'BOOK → → 'BORrow_IT\

"As I understand it, he's the most hardworking student."

/AS_I_under'STAND_it → → HE'S the 'MOST → 'HARD_WORking_STudent\

The following sentences also follow the same pattern:

/Be'CAUSE he wON → she 'PAID for DINner\

/WHEN you GO → TAKE_Ay'SE with YOU\

/WHEN'Ever THEY have 'VISitors → they bAKE 'CAKES\

/Un_LESS she's 'HAPpy → she 'CAN'T wORK\

/Un'TIL_I FINish → I 'WON'T REST\

/Be'FORE you GO → 'GIVE me_a RING\

Where a main clause is interrupted by a subordinate clause (in defining and non-defining relative clauses), a short pause will always coincide with commas where they exist. For example, in non-defining relative clauses:

"The new teacher, who lives down the road, is really strict."

/The 'NEW ,TEACHer → who ,LIVES 'DOWN the ,ROAD → is 'REALly ,STRICT↘/

"The books at home, most of which I've read, are very old."

/The 'BOOK_at ,HOME → 'MOST_of ,WHICH_I've 'READ → are 'VERY_ ,OLD↘/

Where there is no punctuation, as in the case of a defining clause being incorporated into the main clause, a short pause should be given only when the main clause resumes:

"People who exercise live longer."

/ ,PEOPLE who_ 'EXer ,CISE → ,LIVE 'LONGer↘/

"I couldn't have said it better."

/I 'COULDn't ,HAVE 'SAID_ ,IT ,BETTER↘/

If the continuation of the main clause coincides with a reduced form, this removes the possibility of any pause juncture at that point. In this example it is not possible to have a short pause because the main clause resumes with a contraction:

"The lady who lives next door is a good cook."

/The 'LAdy who ,LIVES 'NEXT ,DOOR → ,is_a 'GOOD ,COOK↘/

If it is desirable to pause at the resumption of the main clause the contraction does not occur, thus making the pause juncture a possibility:

"The lady who lives next door is the best cook I've ever met in my life."

/The 'LAdy who ,LIVES 'NEXT ,DOOR → is the 'BEST ,COOK → I've_ ,EVER ,MET_ ,in
my 'LIFE↘/

To summarize, "where clauses are delineated by punctuation, pauses should follow the punctuation. Where punctuation does not exist, a short pause may be placed at the resumption of the main clause" (Ridgeway, 1999). Students should take particular care

with the juncture difference between defining and non-defining relative clauses, so as not to confuse the two in speech.

2.1.22 Junctures in Compound-Complex Sentences

Compound-complex sentences consist of at least two main clauses and a subordinate clause. Clause boundaries are potential sites for shorter or longer pauses (depending on whether they are separated by commas or semicolons). Where no punctuation or pause-permitting junctures are present, it is not normal to pause. If a pause is required to break down a longer utterance, it may be placed after the subject (unless it is the subject referred to in a defining clause), or at a phrase or clause boundary.

Here are some examples:

"At the village, we asked the shopkeeper if he knew anything about an underground city in the area, but he hadn't heard of any such thing."

/,AT the 'VILLage → we_ 'ASKED the ,SHOP,KEEPer → ,IF he knew_ 'ANY,THING
→ a,BOU_t_ an_ 'UNder,GROUND ,City → ,IN the_ 'AREa → → ,BUT he 'HADN't
,HEARD → of_ 'ANy ,SUCH ,THING \~/

"People who cannot decide what to choose from a menu are often grateful when the waiter steps in and makes a recommendation."

/,PEOPLE who 'CAN,NOT de,CIDE → 'WHAT to ,CHOOSE ,FROM_a 'MENU →
are_ 'OFten ,GRATEful → ,WHEN the 'WAITer ,STEPS_in → → and ,MAKES_a
,RECommen'DATion \~/

"Flamingos, which visit twice a year on migration, are being threatened by environmental pollution and may find other more appropriate sites for their stopovers."

/Fla'MINGos → ,WHICH 'VISit → 'TWICE_a ,YEAR_on mi'GRAtion → → are
,BEING 'THREATened by_ environ'MENTAL pol,Lution → → and may 'FIND →
,OTHER 'MORE ap'PROpRIate ,SITES → ,FOR their 'STOP,Overs \~/

"When he went to the disco that evening he didn't realize that the gun he carried would not only change the course of his own life but have a fatal effect on others."

/,WHEN he 'WENT to the ,DISCO → ,THAT 'EVENing → he 'DIDn't ,REALize ,THAT
 → the 'GUN he ,CARRied → would 'NOT_only ,CHANGE → the 'COURSE of
 his 'OWN ,LIFE → ,BUT 'HAVE a 'FAtal ,Effect → ,ON 'OTHerS\

“The student needs to be confident both about the position and the length of pause junctures in speech. Pause junctures are the foundation stone for the successful employment of the other suprasegmental elements, namely stress and pitch, and are therefore fundamental to success in the spoken language” (Ridgeway, 1999). Adequate practice is therefore necessary and can take the form of identifying the position of such junctures in both the written and the spoken language.

2.1.23 Junctures in Paragraphs

“A foolish young fellow once astonished an old clergyman by boasting that he did not believe in anything he could not see and understand. ‘Do you believe there is such a country as France?’ inquired the clergyman. ‘Yes,’ said he, ‘for though I have never seen it, I know others who have.’ ‘Then you refuse to believe in anything that you or others have not seen?’ ‘Most certainly,’ said the youth. ‘Did you ever see your own brains?’ ‘Of course not.’ ‘Do you know anybody who has seen them?’ ‘No.’ ‘Do you think you have got any?’ The young man had to acknowledge himself fairly caught.”

/A 'FOOLish 'YOUNG ,FELlow → 'ONCE a ,STONished an 'OLD ,CLERgy ,MAN →
 by 'BOASTing ,THAT → ,HE did 'NOT be ,LIEVE in 'Any ,THING → ,HE could 'NOT
 ,SEE → ,AND under 'STAND\ / → → /,DO you be 'LIEVE → ,THERE is 'SUCH a
 ,COUNTry as 'FRANCE / in 'QUIRED the ,CLERgy ,MAN\ / 'YES → → ,SAID he /
 /For ,THOUGH I have 'NEVer ,SEEN it → I ,KNOW 'OTHerS who ,HAVE\ / ,THEN
 you re 'FUSe to be ,LIEVE in 'Any ,THING that 'YOU or ,OTHerS have 'NOT ,SEEN\ /
 /'MOST ,CERTainly → → ,SAID the 'YOUTH\ / /,DID you 'EVer ,SEE your 'OWN
 ,BRAIN / /Of 'COURSE ,NOT\ / /,DO you ,KNOW 'Any ,BODY who has 'SEEN
 ,IT / /No\ / /,DO you 'THINK → ,YOU have 'GOT ,Any / The /'YOUNG ,MAN
 → ,HAD to ac 'KNOWledge him ,SELF → ,FAIRly 'CAUGHT\ / (Dretzke, 1998)

2.1.24 Juncture in Dialogs

Nancy: /I 'LOVE your ,GLASSes\ /

Juana: /,THANKS → ,THEY'RE 'BRAND ,NEW\ /

Nancy: /You ,LOOK 'GREAT → ,THEY'RE 'VERY ,FLATtering↘/
Juana: /'THANK ,YOU↘/
Nancy: /,CAN I 'TRY ,THEM 'ON↗/
Juana: /'SURE → ,GO_a'HEAD → ,TRY them_ 'ON↘/
Nancy: /,THANKS → ,NOW_I 'NEED_a → ,MIRror↘/
Juana: /O'KAY → I ,HAVE a 'LITTLE ,ONE → ,IN my 'PURSE↘/
Nancy: /Oh → I ,FEEL 'DIZzy↘ ,IT 'MUST ,BE the 'GLASSes↘/
Juana: /,TAKE_a 'LOOK_at your ,SELF↘/
Nancy: /I ,LOOK 'TERrible↘/
Juana: /,DON'T be 'SILly↘ → → You ,LOOK 'CUTE_in ,THEM↘/
Nancy: /I ,LOOK_ 'ALL ,BLURry↘/
Juana: /'THAT'S be ,CAUSE → the 'GLASSes_ ,are → 'MY pres ,CRIption → 'NOT ,YOURS↘/
Nancy: /,OH → ,SO → 'THAT ex ,PLAINS → ,WHY you 'DIDN'T ,LOOK → 'BLURry to ,ME → ,WHEN you 'HAD them_ ,ON↘/
Juana: /,YOU'RE 'NOT ,SERious → 'ARE ,YOU↗/
Nancy: /,WHY do you 'SAY ,THAT↗/
Juana: /You 'WEREN'T ,WEARING → → 'MY ,GLASSes → ,WHEN you 'LOOKED_at ,ME↘/
Nancy: /,OH → ,THAT'S 'RIGHT → You ,WERE 'WEARing ,THEM↘/
Juana: /,UMM → 'YEAH↘/
Nancy: /,AND → you ,LOOKED 'GREAT → ,IN 'THEM↘/
Juana: /,HE 'HE → 'THANK ,YOU↘/ (englishforeveryone.org)

2.1.25 Juncture Teaching Methodology

In this type of methodology, the principles, techniques, methods, theories, and approaches of the Prague School, American School, and London School of England have been utilized. For example, phonemic analysis, contrastive analysis, free variation, complementary distribution, the mim-mem-method, the audio-lingual method, and the audio-articulation method have been used, and so have the imitation theory, the reinforcement theory and analogy theory from the behaviorist approach.

Learning how to hear and mark stress and juncture can be accomplished, after the students have become well-acquainted with the system, by use of the dialogs that follow. Basically, the instructor takes unmarked dialogs and has the students listen to the whole thing one time, while the instructor is reading. Next, the instructor reads

thought-groups, one at a time, and has the students mark the stress and junctures that they hear, with a pencil equipped with an eraser. After the dialog is completed, each student reads a line out loud and describes stress and juncture marks. Corrections are made verbally.

Another way of teaching the junctures can be “the use of listening exercises in which the speaking forms of the samples of native speakers’ utterances can be given to the students, and then they may be asked to give their junctural patterns” (Klein, 2003).

There are other possibilities for further practice. For example, “sample utterances from the eBooks, electronic dictionaries, and even from short films can be selected and downloaded by means of the Audacity program and used as exercises; in addition, any written exercise prepared by the teacher can be articulated by the text-to-speech programs” (Demirezen, 1986) and downloaded by the Audacity program so as to be used in any kind of exercises.

2.1.26 Classroom Procedures

We can tell the students that “*close juncture* is a movement from sound to sound which has no intervening pauses or delay whereas *open juncture* is not continuous. In the open juncture there is a slight stoppage of the last sound till it blends with the next” (Monteron, 2011). As for the sound-related functions of juncture, we can also teach them about and drill them on the plosive-to-plosive, plosive-to-continuant, from /t/ or /d/ to /the/, vowel-to-vowel, consonant to vowel, linking /r/ transition, within a syllable and from syllable to syllable within word features as in the examples below:

1. Plosive to plosive: hot day (the first plosive is held briefly, then exploded as part of the second): “a+good+team”, “the+black+table”, “on+a+dark+day”, “blood+bank”, “the+sick+baby”, “hard+times”.

2. Plosive to continuant: the plosive is not exploded before the continuant, but becomes part of the latter: “hot+water+without+money”, “with+a+big+smile”, “to+keep+late+hours”, “old+land+lord”, “picnic+supper”, “next+month”.

3. From /t/ or /d/ to /the/ or /th/ or should be sounded more prominently: “at+the+store”, “them”, “through+thick+and+thin”, “right+there”, “about+that+time”, “tasted+the+pie”, “third+theme”.

4. Vowel to vowel: a momentary glide consonant is likely to link them together: “my+own+book”, “every+actor”, “flew+away”, “with+a+cry+of+joy”, “the+creation”.

5. Consonant to vowel: The plosive is exploded blending with the vowel. Ex. “Stop it.” It is continuous with some continuants Ex. “Pull out.”: “made+it+up”, “a+cup+of+tea”, “slept+an+hour”, “some+of+us”, “an+orange”, “in+a+minute”, “keep+it+up”, “broke+a+leg”, “a+bag+of+apples”.

6. Linking /r/ transition: When a syllable ends with a vowel (followed by “r”) the /r/ sound s links them together. Ex. “Star+of+the+show+moreover”: “For-ever+and+ever,” “where+and+when”, “faster+and+faster”, “our+uncle”, “poor+orphan”.

7. Within a syllable: “man + ear + clear + bed”

8. From syllable to syllable within a word: “lady+shadow+faith-ful” “man-ly+plenty+ live-ly”

2.1.27 Guide Questions

They can read the students the following pairs. Ask them to tell the difference in meaning between each pair:

1. The president, said the secretary, is busy. The president said, the secretary is busy.
2. Who is calling, Jingky? Who is calling Jingky?
3. Are you leaving my child? Are you leaving, my child?

Increase your “tonal vocabulary” through these exercises:

1. Imagine yourself in each of these situations.

They can say “what’s the matter” using changing in *pitch*, *tempo*, *force*, *pauses*, and *voice quality*:

- a) A friend is found crying.
- b) There is commotion in the classroom.
- c) A colleague stubbornly insists on a proposal you strongly dislike.
- d) Somebody finds faults with you.

2. They can say ‘yes’ to the following:

- a) You’re happy about it.
- b) You’re excited about it.
- c) You’re not sure of it.
- d) You’re forced into it.
- e) You’re afraid of it.
- f) You’re angry at it. (Monteron, 2011)

Here is another very effective way of teaching juncture:

1. We can give the students copies of the dialog below. Remind them that the arrows /↗/ /→/ /↘/ are called “junctures” and represent pitch and spacing, dividing-thought groups, and that the primary stress marks / ' / placed above vowels show the loudest syllables IN EACH GROUP OF WORDS. Require your students to learn this terminology, including falling, rising and sustained juncture, and to know their significance in their accurate performance of dialogs.

2. We can read the dialogs to the class at least twice at normal speed and with no exaggeration, with the handouts open. The teacher should ALWAYS be the first source of spoken language in a given exercise. Explain new vocabulary and situations as needed. Explain cultural differences in dialogs, when appropriate. Be sure that all of the students have a fairly good

idea of what is going on before the practice begins. This may take a while. That is fine, as long as the explanations are in English. There is no such thing as wasted time in ESL, if two-way communication in English is taking place.

3. With the dialog text turned over, so that ears will be given priority, have the entire class repeat the dialog twice, giving no more than one thought-group between the arrows at a time. If the utterance is too long to retain, use backward buildup. Seven syllables seems to be the natural retention limit for most people. Thought groups in English can have up to eleven syllables (Klein, 2003).

You will find less accuracy in repetition of spoken English if the students look at the words! Adults are very visually oriented, sometimes to the detriment of spoken English. EXAMPLE: “Here’s one that you can use → to buy some frózen foods \ ” BACKWARD BUILDUP: foods/frozen foods/some frozen foods/to buy some frozen foods/etc.

4. Have individuals selected at random repeat sentences, one thought group at a time, with the dialog texts turned over so that they will not be able to see the dialog. That way listening, rather than reading, is emphasized. Diplomatically correct major pronunciation or other problems by modeling correct responses.

5. Using the written text, have the students role play with the persons next to them. Go around the class monitoring and diplomatically correcting. Do not overcorrect or worry about small details. When correcting, simply model the correct response.

6. Encourage the students to memorize the dialogs as homework. This will provide new vocabulary and structure, as well as opportunity to speak English in a natural structural environment.

7. As students advance and become more aware of this system, they can be taught to insert these symbols in unmarked materials that are read to them. Explain that there are no “rules” for proper placement. They must be heard in full sentences spoken by native English speakers and then marked according to thought groups (Klein, 2003).

2.1.28 Dialogs with Juncture Marks

Tom: /'HI → A,LI\ It's ,GOOD to 'SEE ,YOU a,GAIN\

Ali: /'HI → ,TOM\ ,HOW are ,YOU 'DOing /

Tom: /,JUST 'FINE\ WELL → ,After 'SIX ,MONTHS, ,HERE → ,IN the U.S.'A. →→ ,WHAT do you 'THINK\

Ali: /I'm 'ALways sur,PRISED\ →→ 'JUST ,WHEN → I 'THINK I ,KNOW → ,WHAT A'MERicans are 'LIKELY to be ,DOing → 'SOME,THING 'HAPpens →→ to 'MAKE me ,CHANGE my 'MIND\

Tom: /,CAN you 'GIVE me → an ,e,XAMPLE /

Ali: /,YES\ / ,WHEN I ,ar'RIVED ,HERE → ,FROM my 'COUNtry → I ,THOUGHT that A'MERicans → 'WEREN'T ,FRIENDly\ / In 'MY ,COUNtry → ,PEOPLE 'GO ,OUT of their ,WAY → to 'HELP ,STRANGers\ / ,AT 'FIRST → 'PEOPLE ,SEEMED 'COLD\ / ,NOW I ,FEEL 'QUITE ,WELcome\

Tom: /,SO → 'WHAT do you ,THINK → ,HAS 'CHANGED\

Ali: /The 'FUNny ,THING → is ,THAT → I ,THINK → 'I ,HAVE ,CHANGED\

Tom: /In 'WHAT ,WAY?\ /

Ali: /For 'ONE ,THING → per,HAPS → I ,ex'PECTed ,PEOPLE → to 'COME to ,ME\ In 'MY ,COUNtry → we ap'PROACH ,STRANGers\ / 'IF ,THEY ,LOOK 'LOST → we 'THEN ,OFFer them 'HELP\ / ,HERE → 'WE have to ,ASK for 'HELP\ The 'GOOD ,NEWS → ,IS 'THAT → A'MERicans are 'VERY ,HELPful → ,ONCE you 'ASK ,THEM for 'HELP\

Tom: /So → 'WHAT do you ,THINK → ,IS the 'DIFference → 'NOW ,THAT → you 'KNOW ,us ,BETter\

Ali: /,WHAT I 'REALize ,NOW → 'IS ,THAT → A'MERicans →→ are 'MORE ,PRIvate → ,THAN 'WE ,ARE\ / I 'COME from 'TRIBal ,PEOPLE → where 'NObody is a ,STRANGER\ / A'MERicans ,SEEM to 'HAVE →→ a 'NOTHer ,WAY of 'LOOKing → at the ,PEOPLE → a'ROUND ,THEM\ / ,THERE is 'MORE ,SPACE → ,BUT we ,FEEL 'WELcome → in 'THAT ,SPACE\ →→ A'MERicans → ,DON'T 'WANT to in,VADE → ,OUR 'PRIVacy\

Tom: /That ,SOUNDS 'RIGHT\ / 'EACH ,CULTure is 'DIFferent →→ from ,EVERy ,OTHER 'CULTure\ / 'VISitors into 'NEW ,CULTures → ,NEED to 'FIND ,OUT →→ 'WHAT the 'DIFferences ,ARE → ,SO that → ,THEY will 'FEEL → 'MORE ,COMfortable\

Ali: /I'M 'LEARNing\ I'm ,GETting to 'KNOW → A ,MERicans 'BETter → 'EVERy ,MONTH\ / And my re,SPECT is 'GROWing → 'ALL of the ,TIME → 'THANKS to ,FRIENDS → ,LIKE 'YOU\ / I'll 'SEE you ,LATER →→ 'TOM\

Tom: /,SEE you 'SOON\ / /'CALL me → if you 'THINK of → ,ANYthing 'ELSE\ ,I 'LOVE → ,TALKing about 'CULTures\ / (Klein, 2003).

In brief, juncture is the suprasegmental feature that indicates the borders of most words and groups of words in speech. Several varieties of juncture are used to describe pauses in speech that accompanies particular pitch changes. Junctures or pauses between statements in a sentence can affect the listener's ability to identify a suitable place to interrupt a conversation. Shorter pauses usually indicate a continuing topic, either immediately following or after an interrupting clause, and may coincide with a comma as well as possibly occurring at a number of other optional sites in an utterance. There are word junctures /A+'DOG+is+a+ ,MAN's+'BEST+ ,FRIEND\ / and pause junctures /'LIS-ten ,BOY → I ,SAID → → I 'WANTed a 'GLASS_of ,TEA\ /. Junctures may be short and long to separate meaningful groups in clauses and sentences. Students need to be confident both about the position and the length of pause junctures in speech. Pause junctures are the foundation stone for the successful employment of the other suprasegmental elements, namely stress and pitch, and are therefore fundamental to successfully expressing feelings and opinions.

Punctuation could be a real guide to determine where to pause and how long to pause. Here is a typical example of how meaning changes by punctuation and placing juncture in a sentence. An English professor wrote some individual words on the board asking his students to punctuate it correctly: "Woman+without+her+man+is+nothing." The male students wrote: "Woman, without her man, is nothing." and read /'WOMAn → with ,OUT her 'MAN → → is 'NOTHING\ /, whereas the female students punctuated the sentence differently: "Woman: without her, man is nothing." and read /'WOMAn → with 'OUT ,HER → → ,MAN is 'NOTHING\ /. By putting pauses in different places, each group expressed the meaning of their choice.

2.2. STRESS PHONEMES

2.2.1 What is Stress?

“Stress can be defined as the relative degree of force or emphasis given to a particular syllable or word to make it stand out (i.e., be easily noticed) from other syllables or words in an utterance” (Zapata, 2009). If syllables have stress, they are said to be stressed syllables (or accented syllables). If syllables do not have stress, they are considered to be unstressed syllables (or unaccented syllables). There are two main types of stress: word stress and sentence stress. Word stress (also called accent) is the relative degree of force or emphasis that words or parts of words have when they are considered (or spoken) individually or in isolation, as in a dictionary. Two levels of word stress are marked in most words: primary stress / ˈ / and secondary stress / ˌ /. The syllable that is pronounced loudest or with the greatest emphasis in a word receives the primary stress. Likewise, the secondary stress is on the syllable that is pronounced with a little less emphasis than the syllable with the primary stress. The monosyllabic words “book” /bʊk/ and “speak” /spi:k/ have primary stress. Similarly, the syllables “-pa-” and “-cause-” of the disyllabic words “paper” /ˈpeɪpə/ and “because” /brˈkɔz/ have primary stress. In a like manner, the word “attention” /əˈtɛnʃən/ has the primary stress in its syllable “-ten-”. The polysyllabic words such as “pronunciation” /prəˌnʌnsɪˈeɪʃn/ and “secondary” /ˈsekəndəri/ also have secondary stress on “-nun-” and “-dar-” along with their primary stress on “-cia-” and “-sec-”. The stress marks are / ˈ /, / ˌ / placed just before the syllables that carry the stress. In isolation, every word has a primary stress; however, pronouncing dictionaries do not usually mark them in the transcription of monosyllabic words. Likewise, only words of two or more syllables can have primary and secondary stress at the same time. Sentence stress is the relative degree of force or emphasis that words or parts of words have when they are used in *connected speech*, that is, in combination with other words forming phrases and sentences.

2.2.2 The Nature of Stress

From the point of view of production (the speaker), a stressed syllable is produced with more muscular activity and more lung compression than an unstressed syllable. From the point of view of perception (the listener), a stressed syllable is heard as louder than an unstressed one. Stressed syllables can be described as “prominent” syl-

lables because "...words easily become unrecognizable if the stress is wrongly placed" (O'Connor, 1973). Roach (1983) mentions "the four characteristics that make a syllable stressed:"

1. It is louder,
2. It is longer,
3. It has a higher pitch.
4. It contains a vowel different in quality from the neighboring vowels.

For Underhill (1994), "higher pitch, length, and increased volume tend to come together in a stressed syllable." However, a stressed syllable may only have one or more of these features. He also notes that in connected speech secondary stress belonging to a lexical item tends to appear as an unstressed syllable. A stressed syllable is also referred to as a "strong" syllable and an unstressed syllable as a "weak syllable" (Roach, 1983). Vowels of strong syllables, more often than not, are pronounced a lot closer to the vowel quality as specified in the alphabet. Unstressed syllables have the same characteristics of weak syllables.

Stress is a suprasegmental feature of utterances. Ladefoged (1982) states that "stress applies to syllables, not to individual vowels or consonants, and that it is revealed on a particular syllable of a word by employing a greater amount of energy." Block and Trager (1942) equate stress with "loudness". Stressed syllables also receive a higher pitch level. Another term, "accent", is employed by some authors to describe what we know as tonic stress. Knowles (1987), for instance, offers the following definition: "The term 'accent' refers to prominence given to a syllable by means of a change in pitch." Stress phonemes take place in words, compound words, phrases, clauses, and sentences. Stress in words and compound words belongs to phonemics, but in phrases, clauses, and sentences, it belongs to syntactical phonology.

2.2.3 The Importance of Stress

Experience has clearly shown that one of the most visible areas of weakness in EFL students is stress placement, i.e., knowing which syllable of a certain word they should

emphasize in their speech. This weakness is further magnified by the fact that no stress patterns and drills are introduced in the early levels of the curriculum or indeed at any other level. EFL students in general find it extremely difficult to deal with the correct stressing of the new words they learn, and it is frustrating for anyone to learn the stress of each word separately. For this reason and many more related to efficient foreign language communication and efficient learning, teaching as many English stress patterns and supporting them with appropriate drills is of paramount importance and an absolute priority.

The six years of high school English to which students are exposed prior to university entrance are mostly inappropriate in terms of foreign language communication. Their total ignorance of stress placement and its intricacies increases their feeling of unfamiliarity and unease when it comes to learning new and vital vocabulary. This situation is, to say the least, detrimental to the effective use of the target language in oral communication.

It is of extreme importance that the stress patterns and their derivations and applications be taught at schools by a specialist teacher with experience in the field of phonetics/phonology. The ideal choice would be a trained phonetician. Stress patterns should be introduced to students as early as possible. This would help them avoid the wrong accentual habits and build a strong foundation for verbal language activity. The stipulation of stress patterns in the English language curriculum would certainly liberate students in their search for more and varied vocabulary and their attitude towards more efficient learning (Guella, 2010).

Word stress, also known as lexical stress, appears to be a “vital component of word-shape” (Brown, 1977; Kenworthy, 1987). Kenworthy (1987) has the following to say on the importance of identification of stress: “...the stress pattern of a word is an important part of its identity for the native speaker. There is a great deal of evidence that native speakers rely very much on the stress pattern of words when they are listening. In fact, experiments have demonstrated that often when a native speaker mishears a word, it is because the foreigner has put the stress in the wrong place, not because he or she mispronounced the sounds of the word.” Furthermore, Underhill (1994) points out: “It may be that a word spoken with not-quite-right sounds, but with correct stress pattern, is more easily understood than one with more or less correct sounds but in-

correct stress pattern.” This is a very widespread observation by language teachers as well. For instance, the word “cigarette”, when pronounced with no stress or with stress on its first syllable, may sound to the listener as either the word “sacred” or “secret”.

Kenworthy (1987) mentions three similar examples: “written” may sound like “retain” when it is stressed on its final syllable; “Comfortable” sounds like the expression “come for a table” when “table” is stressed; and “*productivity*” sounds more like “productive tea” if “-*duc-*” is stressed. These examples illustrate the extent to which intelligibility is deteriorated by misapplications of the stress phonemes.

2.2.4 Phonemic Status of Stress Phonemes

Various systems of scansion are used to mark the metrical patterns in verse. They are based on the different lengths of each syllable where the meter often has a regular foot. The linguists George Trager and Henry Lee Smith described a four-stress system in their *An Outline of English Structure*, (1951) in which “/ / / symbolized the primary or heavy stress, /^/ the secondary or medium stress, / \ / the tertiary or medium-light stress and finally / ˘ / the weak stress or light syllable.” For the phonetic transcriptions in this dissertation the symbols / ˈ / / ˌ / / ˙ / / ˚ / have been adopted to mark relevant stresses as advised by International Phonetic Association (IPA) in their most recent charts.

2.2.4.1 Primary (Heavy) Stress / ˈ / or / ˈ /

This is the strongest and loudest stress type in English. In the following words, the grammatical category of the vocabulary items changes due to the shift of the primary stress to the weak stress, which is proof of its phonemic status:

<u>Noun</u>	<u>Verb</u>
subject /'sʌbdʒɪkt/	subject /səb'dʒekt/
suspect /'sʌspɛkt/	suspect /sə'spɛkt/
convict /'kɒnvɪkt/	convict /kən'vɪkt/
present /'prezənt/	present /prɪ'zɛnt/
conduct /'kɒn,dʌkt	conduct /kən'dʌkt/
insult /'ɪnslʌt/	insult /ɪn'sʌt/
record /'rɛkəd/	record /rɪ'kɔəd/

2.2.4.2 Secondary Stress /ʌ/ or / ˌ /

In the International Phonetic Alphabet (IPA) system, the secondary stress is indicated by the sign /ʌ/ or / ˌ / In this dissertation, for quick application and convenience, the phonemic sign / ˌ / is employed, as is the practice of many dictionaries.

The secondary stress (sometimes called the *secondary accent*) is the weaker of two degrees of stress in the pronunciation of a single word, a compound word or a phrase forming a thought group. The stronger degree of stress or prominence is called ‘primary’ and that of a weaker degree is referred to as ‘secondary’. The IPA symbol for secondary stress is a short vertical line preceding and at the foot of the stressed syllable. For instance the syllable “-nun-” in the word *pronunciation* /prəˌnʌnsiˈeɪʃən/ has the secondary stress. Another tradition in English to show stress is to assign acute and grave accents for primary and secondary stress, as in /pronùnciátion/.

Most languages, if they have stress at all, have only one degree of it on the phonemic level; however, in English, having such a suprasegmental structure as the secondary stress is a great asset to clarify the articulation and enunciation. The distinction in stress between the compound words and phrases indicates the intended meaning and conveys it more clearly as the modified element vs. the item that modifies it. For instance in the compound *TAX relief* /ˈtæks rəˌliːf/ the word *tax* has higher prominence than *relief*, with the former word having the primary stress reducing the latter to secondary and making the meaning of the word clearer where the stress is placed.

Another example explains it a little further. Again, in the compound *English teacher* /ˈɪŋɡlɪʃ ˌtiːtʃə/, the word *English* /ˈɪŋɡlɪʃ/ has prominence over *teacher* /ˌtiːtʃə/ thus meaning that the teacher actually teaches English but he himself is not necessarily of English origin. However, if the first word *English* falls into the secondary prominence over the second item as in the *English teacher* /ˌɪŋɡlɪʃ ˈtiːtʃə/, then we can safely assume that the one doing the teaching is, himself, English.

So the meaning of phrases or compounds can be better understood by the location of their primary and secondary stresses. Here is yet another typically striking example:

- a *BLACKBOARD eraser* /ə ˈblæk ˌbɔːd ˌɪreɪsə/ (a board-eraser that is black) vs.
- a *BLACKBOARD eraser* /ə ˌblæk ˈbɔːd ˌɪreɪsə/ (an eraser for a blackboard).

Also in the sentence My 'BIKE has been ,STOLEn /maɪ 'baɪk ,hæz bən ,stəʊlən \ / vs. My ,BIKE has been 'STOLEn /maɪ ,baɪk ,hæz bɪn 'stəʊlən \ / the words “bike” and “stolen” have correlation in meaning between the two, and either one may have primary or secondary stress according to the prominence of their meaning. Thus the secondary stress plays a very important role in distinguishing the shades of meaning or the intensity of the utterance of the whole sentence.

Let us continue with other examples. In a question statement such as /Is 'THIS my 'BIRTH, DAY 'PRESent? ˈ / /'ɪz ,ðɪs → maɪ 'bɜːθ, deɪ 'prezənt ˈ / the primary stress on the word “this” and the secondary on “birthday” express a surprise on the nature of the gift. In an alternate mode, in 'IS ,THIS my 'BIRTH, DAY ,present? /'ɪz ,ðɪs → maɪ 'bɜːθ, deɪ ,prezənt ˈ / , the newly-formed intonation pattern of rising prominence on 'BIRT, DAY /'bɜːθ, deɪ/ and reduction of the stress to secondary position on this arouses curiosity on whether the parcel actually contains a birthday /'bɜːθ, deɪ/ present or perhaps something else. As for the lexical formation of secondary stresses, much could be said about the recognition of their location. If we study such multisyllable words with their bases such as ,EX'PLAIN /ɪks'pleɪn/ vs. ,expla'NATION /,eksplə'neɪʃən/, con'SIDER /kən'sɪdə/ vs. con, SIdE'RATION /kən, sɪdə'reɪʃən/, as'SOCIate /ə'souʃɪet/ vs. as, soci'Ation /ə, sou'ʃɪeɪʃən/ and 'CHARacter /'kærəktə/ vs. ,CHARacteri'ZATION /,kærəktəri'zeɪʃən/ , we immediately recognize that the derivatives show a change in the position of primary stress, leaving their earlier prominence to the reduced form as the secondary stress.

The role of secondary stress becomes more obvious in full sentences where meaningful thought-groups are separated from one another by sustained junctures. In such thought-chunks, those elements having greater prominence in meaning assume primary stress in pronunciation, whereas those with less prominence fall into secondary positions. To exemplify this statement, here are some English proverbs divided into such thought-groups separated by juncture signs clearly showing individual instances of primary and secondary stresses:

/The 'BEST ,THINGS in ,LIFE → are 'FREE \ /
 /ðə 'best ,θɪŋz ɪn ,laɪf → ,a:ə 'fri: \ /

/A 'STITCH in ,time → ,SAVES 'NINE \ /
 /ə 'stɪtʃ ɪn ,taɪm → ,seɪvz 'naɪn \ /

/ˈSTILL ˌwɔ:təz → ˌrʌn ˈDEEP \

/ˈstɪl ˌwɔ:təz → ˌrʌn ˈdi:p \

/He ˈTEACHes ˌɪl, → who ˈTEACHes ˌɔ:l \

/hi ˈti:tʃəz_ɪl → ˌhʊ ˈti:tʃə_z_ɔ:l \

/You ˈCAN'T ˌTAKE it ˌWITH ˈYOU → → ˌWHEN you ˈDIE \

/jə ˈka:nt ˌteɪk_ɪt ˌwɪθ ˈju → ˌwɛn jə ˈda:i \

/ˌBETter ˈUNˌtaught → than ˈɪlˌtaught \

/ˌbetə ˈr_ʌnˌtɔ:t → ˌðæˈn_ɪl ˌtɔ:t \

/ˈDON'T ˌCROSS your ˌBRIDGes → ˌTILL you ˈCOME to ˌTHEM \

/ˈdoʊnt ˌkrɔs jə ˈbrɪdʒəz → ˌɪl jə ˈkʌm tə ˌðɛm \

/ˈSOON ˌlearnt → ˌsoon for ˈGOTten \

/ˈsu:n ˌlɜənt → ˌsu:n fə ˈgɒtən \

/ˈEven a ˌworm → will ˈTURN \

/ˈi:vən ə ˌwɜ:m ˌwɪl ˈtɜ:n \

/It was the ˈLAST ˌstraw → that ˌbroke the ˈCAMEl's ˌBACK \

/ɪt wəz ðə ˈla:st ˌstrɔ: → ˌðæt ˈbrəʊk ðə ˈkæməlz ˌbæk \

/The ˈWAY to a ˈMAN'S ˈHEART → is ˌTHROUGH his ˈSTOMach \

/ðə ˈweɪ ˌtu ə ˈmænz ˌhɑ:t → ɪz ˌθru: hɪz ˈstʌmək \

/ˌWhere ˌTHERE'S a ˈWILL → ˌthere's a ˈWAY \

/ˌweə: ə ˈðe:ə r_ɪz ə ˌwɪl → ˌðeə r_ɪz ə ˈweɪ \

/ˈMARry in ˌHASTE → and re ˈPENT at ˌleisure \

/ˈmæri_ɪn ˌheɪst → ˌænd rə ˈpent_ət ˌleɪʒə \

/If you ˌwish ˈGOOD ad ˌVICE → con ˌSULT an ˈOLD ˌMAN \

/ɪf jə ˌwɪʃ ˈgʊd əd ˌvaɪs → kən ˌsʌlt ə ˈn_ɔ:ld ˌmæn \

/'NO ,NEWS → is 'GOOD ,NEWS↘/

/'no:ʊ ,nju:z → 'gʊd ,nju:z ↘/

/'BIRDS of a ,FEATHer → 'FLOCK to,GETHer↘/

/'bɜ:dz_əv_ə ,fɛðə → 'flɒk tə,gɛðə↘/

/,TELL me 'WHOM you ,GO with → ,AND I'll 'TELL ,YOU 'WHO you ,ARE↘/

/,tɛl mi 'hʊm jə 'gou ,wɪθ → ,æn_aɪl 'tɛl jə 'hʊ jʊ_a:ə↘/

2.2.4.2.1 The Location of the Secondary Stress

What makes acquiring the correct pronunciation of English words extremely difficult for foreign speakers is that English has several degrees of word stress. All words in English have a primary stress, whose placement is totally unpredictable. In addition, long words in particular have a secondary stress. Phonologists also distinguish a tertiary stress, but for the purpose of this dissertation, except for a brief explanation, only the two most common types of stress, namely primary and secondary stress, will be used.

All the vowels of a six-syllable word except the one with primary stress may be considered as unstressed syllables whose vowels are reduced to schwa:

ɪmparti'ALity /,ɪmpəə'ʃɪæləti/

However, we notice that the vowel in the first syllable, far from being reduced to schwa is a long, tense vowel. The fact that the vowel has managed to preserve its value though primary stress doesn't fall on that syllable is explained by the fact that the second syllable of the word bears a clear secondary stress, so we duly mark this syllable by a lower case / , / stress sign to show its secondary prominence.

In some cases, secondary stress falls in those syllables where the prominence previously falls but the main stress moves toward the end of the word:

Here are some examples to compare:

'Library /'laɪbrəri/ vs. ,Lɪ'BRARIan /,laɪ'breɪrɪən/

'SECreTary /'sɛkrəri/ vs. ,SECre'TARIAL /,sɛkre'teɪrɪəl/

'NATional /'næʃənəl/ vs. ,INter'NATional /,ɪntə'næʃnəl/
 'PHOTO,GRAPH /'fəʊtə,grɑ:f/ or pho'TOgraphy /fə'tɑgrəfi/ vs. ,PHOTO'GRAPHic
 /,fəʊtə'græfɪk/ or ,PHOTO'GRAPically /,fəʊtə'græfɪkəli/

and some with no previous roots:

'DORMi,TORY /'dɔrmɪ,tɔri/
 'TESTi,MONY /'tɛstɪ,mɒni/
 'MATri,MONY /'mætrɪ,mɒni/
 'CERe,MONY /'sɛrə,mɒni/

2.2.4.3 Tertiary Stress / \ / or / ˙ /

In his work *Intonation*, Cruttenden (1986) cites the term ‘the tertiary stress’ as “involving a prominence produced principally by length and/or loudness.” Therefore, it cannot be referred to as ‘tertiary accent’ because he refers to the same term ‘accent’ also for pitch prominence. Roach (1983), on the other hand, acknowledging the concepts of a tertiary stress (and even a fourth-level stress, called *quartary stress*), suggests that an underscore symbol / ˙ / be used to mark the tertiary stress, as in these examples taken from J.C. Well’s Longman “Pronunciation Dictionary” (1990).

,INDi'VISible /,ɪndɪ'vɪzəbəl/ vs. ,INDi,visi'BILity /,ɪndɪ,vɪzə'bɪləti/
 ,INDi'VIDual /,ɪndɪ'vɪdʒʊəl/ vs. ,INDi,visuali'ZAtion /,ɪndɪ,vɪzʊələ'zeɪʃn/
 be'HA,VIOR /bə'heɪ,vɪə/ vs. be'HAVio,RISM /bə'heɪ,vɪə,rɪzəm/
 ,CIga'RETTE /,sɪgə'ret/ vs. ,CIga'RETTE ,HOLder /,sɪgə'ret ,həʊldə/
 ,EDu'CAtion /,ɛdʒə'keɪʃən/ vs. ,COedu'CAtion /,kəʊ,ɛdʒə'keɪʃənəl/ and
 ,POPu'LAtion /,pɒpʃə'leɪʃən/ vs. ,Overpopu'LAtion /,oʊvə,pɒpʃə'leɪʃən/.
 'FIRST ˙past the ,POST /'fɜ:st ˙pæst ðə ,pəʊst/.

Nevertheless, Roach does not seem to value the use of tertiary stress very highly when we read his words carefully: “Although it may be a phonetically correct account of some pronunciations, the introduction of a tertiary stress seems to introduce an unnecessary degree of complexity” (Roach, 1983). Therefore, in this thesis, apart from its brief definition in this paragraph, the concept is not given relevance, nor is it included in the IPA phonetic transcription of words or sentences.

2.2.4.4 Weak Stress vs. Strong Stress Mobility

In those words spelled the same way both in their noun and verb forms, the stress moves forward to the right in the noun vs. the verb alternatives. These three examples can be generalized with further examples in the list:

'CONflict /'kɒnflɪkt/ (n.) “There will be no conflict.” vs. con'FLICT /kən'flɪkt/ (v.)
“I hope that won't conflict in any way with our plans.”

'RECORD /'rekɔ:d/ (n.) “I'll keep a record of that request.” vs. re'CORD /rɪ'kɔ:d/ (v.)
“Remember to record the show.”

'PERmit /'pɜ:mɪt/ (n.) “We already got a permit.” vs. per'MIT /pə'mɪt/ (v.)
“I won't permit that.”

2.2.4.4.1 Noun vs. Verb Contrast

<u>Noun</u>	<u>Verb</u>
addict /'ædɪkt/	vs. addict /ə'dɪkt/
address /'æ,dres/	vs. address/ə'dres/
affix /'æfɪks/	vs. affix /ə'fɪks/
annex /'æ,nɛks/	vs. annex /ə'nɛks/
combat /'kɒm,bæt/	vs. combat /kəm'bæt/
compact /'kɒm,pækt/	vs. compact /kəm'pækt/
compress /'kɒm,pres/	vs. compress /kəm'pres/
concert /'kɒnsət/	vs. concert /kən'sət/
conduct /'kɒn,dʌkt/	vs. conduct /kən'dʌkt/
conflict /'kɒnflɪkt/	vs. conflict /kən'flɪkt/
conscript /'kɒn,skrɪpt/	vs. conscript /kəns'krɪpt/
contract /'kɒn,trækt/	vs. contract /kən'trækt/
contrast /'kɒn,træst/	vs. contrast /kən'tra:st/
convert /'kɒn,vɜ:t/	vs. convert /kən'vɜ:t/
convict /'kɒnvɪkt/	vs. convict /kən'vɪkt/
defect /'di:fɛkt/	vs. defect /dɪ'fɛkt/
desert /'dezət/	vs. desert /dɪ'zɜ:t/
detail /'di:teɪl/	vs. detail /dɪ'teɪl/

digest /'daɪdʒest/	vs. digest /daɪ'ʒest/
escort /'es,kɔət/	vs. escort /es'kɔət/
essay /'es,seɪ/	vs. essay /es'seɪ/
export /'eksɔət/	vs. export /eks'ɔət/
extract /'ekstrækt/	vs. extract /eks'trækt/
ferment /'fɜmənt/	vs. ferment /fə'ment/
finance /'faɪnæns/	vs. finance /faɪ'næns/
frequent /'fri:kwənt/	vs. frequent /fri:'kwənt/
implant /'ɪm,plænt/	vs. implant /ɪm'plænt/
import /'ɪm,ɔət/	vs. import /ɪm'ɔət/
impress /'ɪm,prɛs/	vs. impress /ɪm'prɛs/
imprint /'ɪm,prɪnt/	vs. imprint /ɪm'prɪnt/
incline /'ɪn,klaɪn/	vs. incline /ɪn'klaɪn/
increase /'ɪn,kri:s/	vs. increase /ɪn'kri:s/
insert /'ɪn,sɜət/	vs. insert /ɪn'sɜət/
insult /'ɪn,sʌlt/	vs. insult /ɪn'sʌlt/
intrigue /'ɪntri:g/	vs. intrigue /ɪn'tri:g/
invert /'ɪnvɜət/	vs. invert /ɪn'vɜət/
mismatch /'mɪs,mætʃ/	vs. mismatch /,mɪs'mætʃ/
misprint /'mɪs,prɪnt/	vs. misprint /mɪs'prɪnt/
object /'ɒb,ʒekt/	vs. object /əb'ʒekt/
overlap /'oʊvə,læp/	vs. overlap /,oʊvə'læp/
overrun /'oʊvə,rʌn/	vs. overrun /,oʊvə'rʌn/
permit /'pɜmɪt/	vs. permit /pə'mɪt/
pervert /'pɜ,vɜt/	vs. pervert /pə'vɜt/
produce /'prɒ,dju:s/	vs. produce /prə'dʌkt/
progress /'prɒ,gres/	vs. progress /prə'gres/
project /'prɒ,ʒekt/	vs. project /prə'ʒekt/
protest /'prɒ,tɛst/	vs. protest /prə'tɛst/
rebel /'rebəl/	vs. rebel /rə'bɛl/
record /'rɛkəd/	vs. record /rɪ'kɔəd/
refund /'ri:,fʌnd/	vs. refund /rɪ'fʌnd/
refuse /'rɛfju:s/	vs. refuse /rɪ'fju:z/
relay /'ri:,leɪ/	vs. relay /rɪ'leɪ/
reprint /'ri:prɪnt/	vs. reprint /rɪ'prɪnt/
research /'ri:sɜ:f/	vs. research /rɪ'sɜ:tʃ/

subject /'sʌbzɪkt/	vs. subject /səb'zɛkt/
survey /'sɜːveɪ/	vs. survey /sɜː'veɪ/
suspect /'sʌs,pɛkt/	vs. suspect /sə'spɛkt/
transfer /'træns,fɜː/	vs. transfer /,træns'fɜː/
transform /'træns,fɔːm/	vs. transform /,træns'fɔːm/
transplant /'træns,plænt/	vs. transplant /,træns'plænt/
transport /'træns,pɔːt/	vs. transport /,træns'pɔːt/

2.2.4.4.2 Noun vs. Adjective

invalid /'ɪnvəlɪd/	vs. invalid /ɪn'vælɪd/
minute /mɪnɪt/	vs. minute /maɪ'njuːt/
complex /'kɒmpleks/	vs. complex /kəm'pleks/
content /'kɒn,tɛnt/	vs. content /kən'tɛnt/

2.2.4.4.3 Adjective vs. Verb

absent /'absənt/	vs. absent /əb'sɛnt/
compound /'kɒm,pəʊnd/	vs. compound /kəm'paʊnd/
abstract /'æbs,tɹækt/	vs. /əb'stɹækt/
perfect /'pɜːfɪkt/	vs. perfect /pə'fɛkt/
present /'prezənt/	vs. present /prɪ'zɛnt/

2.2.4.4.4 Noun vs. Adverb

agape /'æɡəpi/	vs. agape /ə'ɡeɪp/
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As the above-given examples indicate, / ' / and / , / are assigned as two different phonemes. In accordance with the rules of the Prague, American, and London Schools, they are considered as in phonemic opposition.

In English, the placement of stress depends on the number of syllables that a word has and whether the word is used in isolation (i.e., alone) or in connected speech (i.e., together with other words forming phrases and sentences). As mentioned above, in isolation, all one-syllable (monosyllabic) words have primary stress; in connected speech, they often lose their stress, especially if they are function-words. One of the reasons that

this happens is because in connected speech, among other things, we often speak more quickly and we need to say all the words of a phrase or sentence in a shorter time.

When words have two or more syllables, it is somewhat difficult to know where we must place the stress; therefore, one must learn it by experience. In English, the position of the stress varies considerably; that is to say, the placement of stress can be predicted only to some extent. There are no infallible rules that we can follow in order to determine on which syllable words have their primary and secondary stress; however, a series of helpful rules have been proposed by phoneticians.

The Trager-Smith stress levels of English (Trager & Smith, 1951), together with the mass of practical and pedagogical rules and data expounded in such works as Arnold (1957), Kingdon (1950), Wijk (1966) and a host of other authorities in the field offer a fairly solid basis for a workable framework for the teaching of English stress and stress patterns. One such framework, supported by an extended computer analysis of English word stress, is satisfactorily exhibited by Guierre (1968). It provides systematic training and practice in English stress patterns by introducing only the most important word classes.

In the first stage, only the main stress is accounted for. Because of the general linguistic level of the students and the wrong accentual habits that they might have acquired in high school, as well as the possible interference from the mother tongue, the stress patterns and rules should be proposed to them in a simple form in order to facilitate their learning and the automatic drilling. The exceptions to the rules should be rote-learned to avoid confusion.

2.2.5 Stress and Morpheme Relations

The stress phonemes can be employed in various ways with the base, root, and stem morphemes. In order to show the places of stressed syllables big and small, capital letters will be used for primary and secondary stresses alternately. Here are some examples:

/₁Over¹COME/, /un¹FRIENDly/, /un¹PRACTicable/, /₁MIScon¹DUCT/, /un¹TIMely/,
/im¹POSSible/, /in¹COMpetent/, /₁INcor¹RECT/, /₁ANti¹SOCial/, /₁SUper¹SONsonic/,
/₁TRANS¹PAREnt/, /¹GLORious/, /ex¹CEPtions/, /₁UNder¹WEAR/, /₁UNder¹WATER/,
/up¹BEAT/, /₁ANte¹ROOM/, /₁PICtu¹RESQUE/, /₁AN¹Ti¹pathy/, /¹SUper₁MAN/,
/'SUR₁CHARGE/, /¹FORE₁SIGHT/, /¹Uni₁FORM/, /¹Uni₁SEX/, /¹TRANS₁PORT/

2.2.5.1 Nouns Stressed on their First Syllable

In kinship terms:

/ˈfɑːðər/, /ˈmʌðər/, /ˈbrʌðər/, /ˈsɪstər/, /ˈʌŋkl̩/, /ˈnepɦw̩/, /ˈkɔːsɪn/,
/ˈɛldər/

In core vocabulary items:

/ˈhʊmən/, /ˈstʊdnt̩/, /ˈbæbi/, /ˈbækn̩/, /ˈneɪɡhbər/, /ˈmaʊntɪn/,
/ˈrɪvər/, /ˈbæskɪt/, /ˈpiːpl̩/, /ˈbɑːrbər/, /ˈpæpər/, ˈmɑːkɪt/, /ˈstres/,
/ˈkʌntri/, /ˈdɪnər/, /ˈkɒlɪdʒ/

In compounds made of nouns:

/ˈtiːpɒt/, /ˈaɪsˌkriːm/, /ˈbedˌhɛd/, /ˈbɜːθˌdeɪ/, /ˈbiːˌhɪv/,
/ˈhəʊmˌtaʊn/, /ˈhəʊmˌwɜːk/, /ˈklɑːsˌruːm/, /ˈkɔːrsˌbʊk/,
/ˈaɪˌlæʃ/, /ˈnəʊtˌbʊk/, /ˈhændˌbæɡ/

In nouns used as verbs:

/ˈsʌspɛkt/, /ˈprɒdʒɛkt/, /ˈpɜːvɜːt/, /ˈtrænzˌpɔːt/, /ˈprezˌɛnt/, /ˈsʌbdʒɛkt/,
/ˈɒbdʒɛkt/, /ˈkɒnsɜːt/, /ˈkɒntræst/, /ˈkɒnvɪkt/, /ˈkɒnvɜːt/, /ˈkɒndʌkt/

In one-syllabled nouns with suffixes:

/ˈtiːtʃər/, /ˈtʃɪldɪʃ/, /ˈkæptər/, /ˈmænlɪ/, /ˈdʌkklɪŋ/, /ˈmɪlkˌmæn/,
/ˈfrɛndʃɪp/, /ˈtriːˌlɛs/, /ˈlændˌskeɪp/, ˈfæʃɪst/, /ˌbɜːˈmeɪs/, /ˈkɪŋ-
dɒm/, /ˈæktres/, /ˈpɪɡlɪt/, /ˈziːləs/, /ˈbɔɪˌhʊd/

2.2.5.2 Verbs Having Stress on their Second Syllable

In verbs used as objects:

/prəˈduːs/, /preˈsɛnt/, /kɒnˈdʌkt/, /sʌsˈpekt/, /reˈspekt/, /kɒnˈvɜːt/,
/kɒnˈsɜːt/, /trænzˈspɔːt/

In verbs beginning with prefixes:

/be'GIN/, /re'PEAT/, /in'SPECT/, /in'FER/, /,Over'STATE/, /,UNder'ESTi,MATE/,
/pre'FER/, /,DISre'SPECT/, /,UNder'STATE/, /un'COVer/, /un'DO/, /,FORE'SEE/,
/,Over'COVE/, /,MIS'HEAR/, /,Super'SEDE/, /be'FRIEND/

2.2.5.3 In Syllables Preceding Some Word-Endings

A. Words ending in (-ic) or (-ics) have their main stress on the first syllable before the last (or penultimate syllable). Examples:

/spe'CI Fic/, /,DIplo'MATic/, /,IDio'MATic/, /,DEMO'CRATic/, /au'THENtic/,
/fan'TASTic/, /pho'NETics/, /re'PUBLIC/, /,SCIEN'TIFic/, /,PESSi'MISTic/, /sta'TIS-
tics/, /,RITua'LISTic/, /,MATHe'MATics/, /,SYMpto'MATic/

It is worth mentioning that the Daniel Jones *English Pronouncing Dictionary* (1917) has more than 1,500 words ending in “-ic”. The number of *irregular words* (i.e., exceptions to this rule) is less than 20. The most common *exceptions* are:

/'ARabic/, /a'RITHmetic/, /'ARsenic/, /'CATHolic/, /'HERetic/, /'LUNatic/,
/'POLitic(s)/, /'IMpolitic/, /'RHEtoric/

B. Words ending in (-ical) have their main stress on the second syllable before the last: Examples:

/e'LECTrical/, /me'CHANical/, /,ECO'NOmical/, /,PAREn'THEtical/, /,PSYcho'LOGical/

Both *rules A and B* above can be merged and taught together in one or two sessions so that their related drills (reading and repeating words) are mixed, and include the exceptions.

C. When a word ending in “-ic” generates a word ending in “-icist”, “-icize” or “-icism”, then the main stress remains on the same syllable. This means that these words behave accentually like words in “-ical”. Examples:

/ro'MANTic/ → /ro'MANTicism/; /'CRITic/ → /'CRITicism/; /'CLASsic/ →
/'CLASsicist/; /fa'NATic/ → /fa'NATicize/; /i'TALic/ → /i'TALicize/ but: /'POLitic/
→ /po'lITicize/, /'CATHolic/ → /ca'THolicism/

The above examples show some variation in pronunciation and, for the last two, a change in stress allocation. The following remarks should be noted:

- a) The letter “-c” in the generated words is pronounced /s/ instead of /k/.
- b) The irregular words ending in “-ic” are *regularized* when they take the endings “-ical”, “-icist”, “-icize” and “-icism”

D. Words ending in “-ion” are stressed on the syllable before “-ion”. Examples:

/sus'PIcion/, /'LEgion, 'CUSHion/, /'TENsion/, /'CAPtion/, /,iVARI'Ation/, /,iEX-
ploi'TAtion/, /,iEXcla'MAtion/, /,iCONsti'TUtion/, /compen'SAtion/, /di'MENsion/,
/,iTRANS'LAtion/, /,iSATis'FAtion/, /,iSUPpo'Sition/, /me'DALLion/, /pre'CAUtion/.

There are thousands of “-ion” words. They come in all shapes and forms. The following remarks will help us to see some order in them.

Words ending in “-ion” are often preceded by the letters “c”, “g”, “sh”, “s” or “t”, but the majority of “-ion” words are words ending in “-tion”; in this case, “-ion” counts as one syllable.

The word “dandelion” /'DANde,LIon/ primary stress on “dan-” appears to be the only exception to rule D. (The reason for the exception may be that the word comes from French, meaning “dent de lion” meaning “lion’s tooth”).

The /ʒn/ and /ʃn/ pronunciation is a result of palatalization, e.g.:

“dis'CUSS” /dɪs'kʌs/ + -ion “dis'CUSSion” /dɪs'kʌʃn/
“de'cide” /dɪ'saɪd/ + -ion “de'cision” /dɪ'sɪʒn/.

Words ending in “-ional” are stressed in the same way as “-ion” words. The same applies to final {-ionist}, {-ionism} and {-ionize} derived words.

/sen'SAtion → sen'SAtional/
/tra'Dition → tra'Ditional/
/'FRACtion → 'FRACtional/
/'NAtion → 'NAtional/
/,iAbo'LItion → ,iAbo'LItionist/

/,Edu'CAtion → ,Edu'CAtionist/
 /im'PREsSion → im'PREsSionism/
 /per'FEction → per'FEctionism/
 /,REvo'LUtion → ,REvo'LUtionize/
 /'UNion → 'Unio,NIZE/

There is a change of vowel from /eɪ/ to /æ/ in such words as /'neɪʃən → 'næʃənəl/

The rule for words ending in “-ion” also applies to words ending in the following:

{-io}: /ora'TORio/, /port'FOLio/, /'RATio/, /'PATio/, /'RADio/
{-ior}: /'SENIor/, /su'PERior/, /'JUNIor/, /ul'TERior/, /in'TERior/
{-ious}: /sus'PICious/, /har'MONious/, /pre'COcious/, /no'TORious/, /a'TRO-
 Cious/, /te'NAcious/
{-uous}: /con'TEMPTuous/, /con'TIGuous/, /con'TINUous/, /,DIScon'TINU-
 ous/, /'STRENUous/, /'VIRtuous/
{-eous}: /,SPON'TANEous/, /,HOMO'GENEous/, /,ADvan'TAGEous/, /cou'RA-
 Geous/, /er'RONeous/, /dis'COURteous/

2.2.6. Stress Teaching Strategies

Word stress is an integral part of the English language and it has the importance to set the very basic quality of oral communication. Kenworthy (1987) states that native speakers of English largely rely on stress patterns of words to identify the words correctly, and that most of the problems occurring during the communication between non-native speakers and native speakers stem from the lack of emphasis on word stress patterns. “However, the correct application of stress in words demands skill and knowledge, as the word stress patterns of English do not have concrete rules to apply to every new word for EFL learners. Despite this difficulty, considering its importance for communication, word stress patterns must be emphasized and given importance in pronunciation education.

The following strategies can be applied in teaching the word stress patterns of English (Özkan, 2010):

1. Teach the accentual rules on the primary stress in the first stage. Make sure the patterns are well understood; for example, the words ending with “-ic” and “-ics” have their main stress on the penultimate syllable. Try to

make the learning and internalization as easy and practical as possible by providing, if need be, rule-of-thumb procedures.

2. Select a large corpus of words intended for a straightforward application of the basic rules. Jones's *English Pronouncing Dictionary* (1917) contains over 58,000 words in the International Phonetic Alphabet, of which more than 43,000 are common ones. The selection of the corpus should be made on judicious grounds. If the students are asked to provide examples from Jones's E.P.D., their work should be carefully monitored in order to avoid confusion and increase efficiency. Active production on the part of students and drilling exercises are highly encouraged.

3. Select the most important and common irregular forms (exceptions). Note that these will be very few in comparison with the regular ones, and thus should be learnt by heart to avoid confusion.

4. Methodically introduce "weak derivations"; these entail no change in the "basic" stress pattern and should not be too difficult to internalize, e.g.: -logic → /'LOGical/ → /'LOGically/ → -rational → /'RATionalist/ → /'RAtionalism/ → /'RAtionalIZE/. Once again, the general purpose is to avoid theoretically complex and technically burdensome references and works in the field of stress patterns, such as those produced by transformational generativists and by other similar developments. Always remember that our students need simple rules presented in a practical form in order to facilitate their internalization and avoid alienation.

5. Make students practice by drilling and reading. One student may read the "base" and a different student "decline" the derivations. Students may also be encouraged to produce sentences (even nonsense ones) containing the words with the endings under study. Examples of such sentences are:

/IT was_a → dra'MAtically fan'TASTic ,BOOK → → 'MADE_Into a dia'BOLically
,PHILO'SOphical ,FILM\~/

/,WE 'DON'T ,LIKE → his hys'TERically me'CHANical i'DEAS → → and his
dra'MAtically ro'MANTic ap,PROACH\~/

/,IT was_a rea'LISatically → philo'SOphical ,BOOK → → ,AND its 'PURpose was
syste'MAtically scien,TIFic\~/

/,THEY were sus'PIicious → of his 'DUbious re,LAtions → → and his dis'COUR-
teous edu,CAtion ↘/

/His su'PErior abo'LItionist ,VIEWS ,LED him to revo'LUtionize per,FECTionism →
in 'HUman edu,CAtion ↘/

Many more of these sentences can be devised by both teachers and students alike. More than one stress pattern may be used, and irregular forms should be inserted in the various examples to reinforce their learning. The whole procedure should offer a lot of fun at the same time as a great deal of practice and internalization.

6. Other strategies may be devised to offer more practice to students, with the aim of developing automatisms. Some patterns involve stress shifts, and thus require more practical work.

a. On the internet and in e-books, there are many dialogs in sound, which can be downloaded and analyzed for teaching purposes.

b. Short dialogs from popular television sit-coms can be shortened and thus tailored for the use of students.

2.2.7 Primary and Secondary Stress in Sentences

For intonation exercise, the teacher can explain to the students how to mark the primary and secondary stress on several sentences by demonstrating with the following sentences and phrases:

"John loves Mary." /,dʒɒn → 'lʌvz ,mɛəri ↘/

"Phonetics is easy." /fə'netɪks → ɪ,ẓi:'zi ↘/

"Want to see it?" /,wʌŋə → 'si:̣,ɪt ↗/

"I'm eighteen." /,aɪṃ_eɪ'ti:n ↘/

"Where is their home?" /,wɜəz ðeɪ 'hoʊm ↗/

"a week ago" /ə 'wi:ḳ_ə,ɡoʊ/

"Where do you live?" /'we:ə dʊ jə ,lɪv ↗/

"Come here, please." /'kʌṃ ,hiə → ,pli:z ↘/

"You study English?" /jʊ 'stʌdi → 'ɪŋɡlɪʃ ↗/

"How are you?" /'ha:ʊ_a:ə jʊ ↗/

"Fine, thanks." /ˌfaɪn ˈθæŋks ˌ/

"Who did that?" /ˈhuː dɪd ˌðæt ˌ/

"Mrs. Jones." /ˌmɪsɪz ˈdʒoʊnz ˌ/

"Mrs. Jones?" /ˌmɪsɪz ˈdʒoʊnz ˌ/

"Yes, she did." /jɛs → ʃi ˈdɪd ˌ/

"The situation is intolerable." /ðə sɪtʃuːeɪʃən ɪz ɪnˈtɒlərəbəl ˌ/

"What time did you call?" /ˈwɒt ˌtaɪm → ˌdɪd jə ˈkɔ:l ˌ/

Then he/she can ask the students to do the same with the examples below:

"Would you like some coffee?"

"The teacher is sick?"

"The President likes swimming, doesn't he?"

"We speak Spanish in Venezuela, don't we?"

"How much money have you got?"

"Pay attention to your teacher."

"Let's rent a car."

"Don't be silly."

"Why are you angry?"

"Did you understand my explanations?"

"Will you come to class tomorrow?"

"Who broke the chair?"

"You didn't feel the earthquake?"

"Is that John over there?"

"You know it as well as I do."

"This room is more expensive than that one."

"Do you know John, dear?"

"Good morning, Mr. Smith!"

"Young man, we'll see you later."

"My friend, I want to tell you something."

"You want a chair, don't you?"

"Shall we meet here, or in your room?"

"I looked down, and there were my keys."

"It's unbelievable!"

"What a beautiful day!"

"I ordered an apple not a pear."

"Pass me the onion near the sugar bowl."

“Are you coming to our party?”
“Is he the man you talked to me about?”
“I already know him, but I haven’t met her yet.”
“Ask them all the questions you want.”
“Where were your glasses?”
“John’ll do the work for you.”
“I was cleaning the house when he arrived.”
“There are eighteen students in my class.”
“What’s it mean?”
“The teacher gave each one of us a piece of cake.”
“There’s a cat under the table.”
“Who are you waiting for?”
“Have you seen Arthur?”
“How long has he lived in Middleford?”
“Let’s have a party on Friday.”
“Is Bruce going to ring Mary up?”
“No, he’s telephoning another girl.”
“What’s Mr. Steele putting on?”
“Can you tell me the time?”
“You mustn’t smoke in class.”
“Arthur, come into my office.”
“Do you speak English?”
“What can I do for you?”
“May I help you?”
“Whose house does Arthur live in?”
“I’ve just come back from England.”
“We’re going to visit Jenny, Mary and Sheila.”
“Would you like to go to the cinema or to the theater?”
“Did you feed the chickens?”
“How often does Mary go to a restaurant?”
“What’s the matter with you?”
“Don’t miss class.”
“You study English, don’t you?”
“You can’t smoke in class, can you?”
“Will he come tomorrow?”
“You have nothing cheaper?”
“May I ring the bell?”

“You’re married, aren’t you?”

“My English students don’t watch TV, do they?”

“What time did you call?”

“We speak Spanish in Venezuela, don’t we?”

“John, are you listening to me?”

2.2.8 Stress Placement on Polysyllabic Words

Turkish students with the traditional word stress patterns of their mother tongue tend to make considerable stress placement errors when they pronounce English polysyllabic words. They usually misplace stresses in their utterance, either as a result of their native pronunciation habits or their lack of stress-placing knowledge in the target language. Experience has clearly shown that one of the most visible areas of weakness in Turkish students learning to speak English is their stress placement. This problem can be and resolved with an “algorithm of suffixes”. The learners of English in Turkey are very much in need of practicing such algorithm lists and going through electronic dictionaries. The study patterns or algorithms in this research involve words having at least four syllables having one prominent primary stress. Students are first given a pretest to see how they naturally fare in English rhythm and to expose their misplaced stress patterns, their stress mobility concept and their fossilized erratic stressing habits. In the pretest, 25 questions are downloaded via the Audacity program and given to them three times by the computer, with 5-second intervals. For those freshmen uninitiated in the English stress patterns clearly presented in this test, a total lack of English stress patterns is marked by a general irregularity in their utterance. Next, they are briefed on general characteristics of the English stress patterns of polysyllabic words based on their grammatical category within an algorithm of some general suffix patterns. After a 3-hour intensive stress placement drill, a post-test of a fresh 25 words is administrated to them to determine the rate of improvement in their pronunciation and to determine the efficiency of the algorithm of suffixes introduced.

A polysyllabic word is a word having more than three syllables. In polysyllabic words in English at least one of the syllables is stressed and in most dictionaries that syllable is followed by a stress mark / ' / in its phonetic transcription. For example in the word /'FEbruary/ /'fɛbrʊəri/ the first syllable “feb-” is stressed, and for the word /'OPposite/ /'ɒpəzɪt/ again the first syllable “-op-” is stressed. In /in'CREdible/, however, the second syllable “-cred-” and again in /e'XAmin/e the second syllable “-am-” is stressed.

And finally in the word /employ'EE/ the last syllable “-ee” is stressed, to demonstrate the inconsistency of the English phonetics. Stress is one determinant of word pronunciation in English and it is important for the speaker to predict its location for the accuracy of his spoken utterance as well as for his understanding of it. The primary or main stress in a word is the exact location of its most prominent syllable, determining and clearly conveying its meaning. It is the distinction in stress that causes the difference in the pronunciation and meaning between the noun /'OBject/ (with primary stress located on the first syllable) and the verb /ob'JECT/ (with primary stress located on the second syllable). This difference in stress is manifested by “variations in the pitch, duration and amplitude of each syllable in a word” (Urbanczyk & Eady, 1988). Although English is notorious for its complicated stress patterns, there are still certain features or algorithms for predicting the location of the primary stress. It is good to know that in English certain suffixes do influence the stress, such as the suffix “-eer” (as in the word /engin'EER/), which attracts primary stress to itself at the end. However, “words containing the suffix “-ical” (as in /'CHEMical/) cause the primarily stressed syllable to immediately precede the suffix” (Urbanczyk & Eady, 1988).

Many efforts to resolve this problem have shown that “a simple rule for the assignment of stress to English words can operate as accurately as other more complex algorithms” (Berstein & Nessly, 1981:19-21). Thus, it has been noted that “the most effective way of predicting the primary stress of a word is accomplished by incorporating some basic stress rules with some level of morphological decomposition” (Klatt, 1987:737-793).

Following the analysis by Fudge (1985) on the effect of affixes (i.e., prefixes and suffixes) on stress patterns in English, “an algorithm has been developed that will locate the primary stressed syllable.” “The algorithm has two components: one makes use of a basic stress rule; the other involves the analysis of words into their constituent morphemes” (Urbanczyk & Eady, 1988).

Much work has been done to formally capture the systematic variations in “the location of main stress for English words” (Chomsky & Halle, 1968; Liberman & Prince, 1977; Selkirk, 1984). Selkirk’s work has pointed to the concept of “syllable weight” as being important for stress determination in a word. Syllable weight refers to the phonological structure of each syllable. A “heavy” syllable is one that ends in a consonant cluster (i.e., more than one consonant). A “light” syllable is one that ends with a single consonant. This concept is important for stress placement, because it is usually a heavy syllable that carries primary stress. Light syllables are usually unstressed.

“Another important observation about basic stress patterns in English is that primary stress rarely occurs on the last syllable of a polysyllabic word. It usually occurs on the penultimate (second to last) or on the antepenultimate (third to last) syllable” (Urbanczyk & Eady, 1988). Of these syllables, the one which receives primary stress depends on the concept of syllable weight. In particular, stress placement depends on the weight of the penultimate syllable.

Word stress is an integral part of the English language and it has the importance to set the very basic quality of oral communication. Kenworthy (1987) states that “native speakers of English largely rely on stress pattern of words to identify the words correctly and most of the problems occurring during the communication between non-native speakers and native speakers stem from the lack of emphasis on word stress patterns.” However, the correct application of stress in words demands skill and knowledge, as the word stress patterns of English do not have concrete rules for EFL learners to apply for every new word. Despite this difficulty, considering its importance for communication, some word stress patterns or algorithms must be emphasized, and importance should be given to pronunciation education. Thus, solving the stress placement problems of English learners will certainly have a beneficial effect on their overall communication strategies.

Mistakes in word stress are a common cause of misunderstanding in English because stressing the wrong syllable in a word can make the word very difficult to hear and understand. Stressing a word differently can change the meaning or type of the word. Even if the speaker can be understood, mistakes with word stress can make the listener feel irritated, or perhaps even amused, and could prevent good communication from taking place. For these and many other reasons, word stress is an extremely important part of English language learning, and students should definitely get special help from their pronunciation teachers to acquire the skill of placing stress on the right syllables in order to express themselves intelligibly.

Many experts in phonetics feel that the early introduction of stress patterns in curricula will be of immense benefit to students both in terms of their efficient foreign language communication and their effective learning. Experience has clearly shown that one of the most visible areas of weakness in Turkish students learning English is stress placement. This weakness is further magnified by the fact that no stress patterns and drills are introduced in the early levels of the curriculum or indeed at any other level.

“EFL students in general find it difficult to deal with the correct stressing of English polysyllabic words, and it would be maddening for anyone to learn the stress of each word separately” (Guella, 2005).

For this and many other related reasons, in order to establish an efficient EFL communication and effective EFL learning, the teaching of as many English stress patterns as possible and supporting them with appropriate drills should be of paramount importance and absolute priority. Stress patterns should be introduced to students as early as possible. This would help them “avoid the wrong accentual habits and build a strong foundation for verbal language activity” (Guella, 2005). The current study has the sole purpose of raising awareness on this issue and of providing relevant materials to remedy the ills of wrong stress placement, especially in polysyllabic words. In full cooperation with our colleagues, we can emphasize this systematic approach to English stress patterns in Turkey, especially with reference to the classification of some English word endings in an algorithm of suffixes.

The algorithm of suffixes described here has been evaluated using a method that has been used to assess other such algorithms. “A corpus of 475 polysyllabic words was compiled from the Brown Corpus of most frequent words of English” (Kucera & Francis, 1967). The list contains the most frequent polysyllabic words in English. The algorithm was tested on this list in order to determine its accuracy and to compare it to the accuracy of other systems. After each word was tested, it was evaluated as to whether the stress was located on the correct syllable.

For illustrative purposes, only a few stress patterns are dealt with here. In the first stage, only the main stress is accounted for. Because of the general linguistic level of our students and the wrong accentual habits that they might have acquired in high school, “along with the possible interference from the mother tongue, the stress patterns and rules should be proposed to them in a simple form in order to facilitate their learning and automatic drilling. The exceptions to the rules should be rote-learned to avoid confusion” (Guella, 2005). It is worth mentioning that the Daniel Jones *English Pronouncing Dictionary* has thousands of polysyllabic words to work on, and the number of irregularity (exceptions to the listing of algorithms below) are less than to be numbered.

Peter Roach claims that “the effect of prefixes on stress does not have the comparative regularity, independence and predictability as suffixes,” and adds that “there is no

prefix of one or two syllables that always carries primary stress”. He continues that “the best treatment seems to be to say that stress in words with prefixes is governed by the same rules as those for words without prefixes” (Roach, 2005). He could very well be the right advisor to help us frame our algorithm for the stress placement in English polysyllable words.

2.2.9 The Pronunciation Algorithms

2.2.9.1 Prefixes

When prefixes and suffixes are added to root words, the word stress sometimes changes, eg., the noun and verb /'PHOtO,GRAPH/, adjective /,PHOtO'GRAPHic/, its opposite /,UNphoto'GRAPHic/ and the person /pho'TO,GRAPHer/ express the versatility of the English affix system. Although the stress structure of the English language is the most complicated and unpredictable among all western languages, there are still certain norms that could be considered as “stress algorithms” to be taken for granted. Starting with prefixes followed by suffixes such norms will be presented for learners and teachers of this language as a guidepost. Learning the stress pattern of the following 54 most common prefixes will make the non-native speaker of English very comfortable in his / her utterances.

- {a-}**: (without) 'Amoral, 'Apolitical, 'Atypical
- {ante-}**: (before) ,Ante'CEdent, ,ANte'DATE
- {anti-}**: (against, opposing) 'ANti-,WAR, 'ANti-bac,TERial
- {arch-}**: (more extreme) 'ARCH-,CAPitalist, 'ARCH-,REBel
- {auto-}**: (self) 'AUTO-,DIAL, 'AUTO-ro,TATE
- {bi-}**: (two, twice) ,BI'LINGual, ,BI'SECT, ,BI-'MONTHly
- {circum-}**: (round) 'CIRcum,NAVigate, 'CIR cum,VENT
- {co-}**: (with) 'CO-,AUTHor, 'CO-,EDit
- {col-}, {com-}, {con-}**: (with) col'LABo,RATE, com'BINE, con'NECT
- {contra-}, {counter-}**: (against, opposing) ,CONtra'CEPtion, 'COUNter-,CLAIM
- {de-}**: (opposite action) de'CLASsi,FY, de'STROY
- {dia-}**: (across) 'DIAgonal, 'DIAmeter
- {dis-}**: (not, opposite of) ,DISa'GREE, ,DIS'PROVE, ,DIS'TRUST, ,DISbe'LIEF
- {dys-}**: (abnormal) ,DIS'LEXia, ,DIS'FUNCtional
- {e-}**: (electronic) 'E-,LITerate, 'E-,BOOK

{eco-}: (relating to the environment) 'E₁CO-,TOURism, 'E₁CO-,DISaster
{em-}, {en-}: (cause to) ,EM'BRACE, ,EN'CODE
{equi-}: (equal) 'EQUI,DISTant, 'EQUI,LATeral
{ex-}: (previously) 'EX-,PRESident, 'EX-,STudent
{extra-}: (very) 'EXtra-,BRIGHT, 'EXtra-,STRONG
{extra-}: (outside) 'EXtra-,CURricular, 'EXtra-,SENSory
{fore-}: (before) 'FORE,CAST, 'FORE,SIGHT, 'FORE,RUNner
{hyper-}: (having too much) ,HYper'ACTive, ,HYper'SENSitive
{il-}, {im-}, {in-}, {ir-}: (not) il'LOGical, im'POSSible, 'INdistinct, ir'RATional
{im-}, {in-}: (in, movement to) 'IM,PLANT, 'IM,PORT, 'IN,PUT, 'IN,SET, 'IN,TAKE
{inter-}: (between, connected) 'INterre,LATed, ,INter'ACT
{intra-}: (within) 'INtra-,GENE'RATional, 'Intra,MUScular
{kilo-}: (thousand) 'KILO,GRAM, 'KILO,MEter, 'KILO,WATT
{macro-}: (large in size or scope) 'MACro-,ECO'NOMics, 'MACro-,SCALE
{mal-}: (badly) 'MAL,FUNCTion, 'MAL,PRACTice
{micro-}: (small in size or scope) 'MICro-,ECO'NOMics, 'MICro-,SCALE
{mid-}: (middle) 'MID,DAY, 'MID,WAY
{mis-}: (wrongly) mis'TAKE, ,MIStrans'LATE, ,MISunder'STANDing
{mono-}: (one) 'MONo-,CENTric, monoculture
{multi-}: (many) 'MULTi,CULTural, 'MULTi-,LEVEL
{neo-}: (based on something older but in new form): 'NEO-,CLASsical
{non-}: (not) 'NON-be,LIEVer, 'NON-com'PETitive, 'NON,SENSE
{out-}: (more, to a greater extent) 'OUT,NUMBER, 'OUT,LIVE
{over-}: (over/above/too much) 'Over,LOOK, 'Over,COOK, 'Over,HEAD
{post-}: (after) 'POST-e,XAMi'NATION, 'POST-,MODern
{pre-}: (before) ,PRE-in'DUSTrial, 'PRE,VIEW, 'PRE-,WAR
{pro-}: (in favor of) 'PRO-,FEMinist, 'PRO-,LIBeral
{pseudo-}: (false) 'PSEUdo-,Intel'LECTual, 'PSEUdo-,SCIENCE
{quasi-}: (almost, not quite) 'QUAsi-,Aca'DEMic, 'QUAsi-,LEGAL
{re-}: (again) ,REdis'COVER, 'REde,FINE, 'RE,NAME, re'TURN
{retro-}: (backwards) ,REtro'GRESsive, ,REtro'SPECTive
{semi-}: (half, partly) 'SEMi,CIRcle, 'SEMi-or,GANic, 'SEMi-,PRECious
{sub-}: (under, beneath, part of something) ,SUBma'RINE, 'SUB,SECTION
{super-}: (above, bigger) 'SUper,POWER, ,SUper'SONic, 'SUper,STAR
{trans-}: (across) ,TRANS,CONTi'NENTAL, ,TRANS'CRIBE, ,TRANS'PORT
{ultra-}: (extreme) 'ULtra-,SENSitive, 'ULtra-,SOUND

{un-}: (not) un'CERTain, un'Usual, un'SCREW, un'PLUG, un'FRIENDly

{under-}: (insufficient, under, beneath) ,UNderem'PLOYED, ,Under'SEA

{well-}: (useful, successful) 'WELL-de,SIGNED, 'WELL-,WRITten

2.2.9.2 Suffixes

Roach also suggests that polysyllabic words have three types of suffixes having to do with their stress-placement:

1. Suffixes carrying primary stress themselves (autostressed suffixes) /-ee, -eer, -ese, -ette, -esque/

2. Suffixes that do not affect stress placement /-able, -age, -al, -en, -ful, -ing, -ish, -like, -less, -ly, -ment, -ness, -ous, -fy, -wise, -y/

3. Suffixes that influence stress in the stem /-eous, -graphy, -ial, -ic, -ion, -ious, -ty, -ive/. Here is the algorithmic listing of those suffixes determining the English stress placement in polysyllabic words and their examples:

2.2.9.2.1 Autostressed Suffixes (Suffixes Carrying Primary Stress Themselves)

{-ation}: ,PREPa'RATion, ,REPU'TATion, ,DESpe'RATion, ,CORO'NATion, ,HEsi'TATion, ,POPU'LATion, ,STAR'VATion, ,DECo'RATion, ,Agi'TATion, ,QUO'TATion, do'NATion, ,CIVili'ZATion, i,MAGi'NATion.

{-self}: her'SELF, him'SELF, it'SELF, my'SELF, ,ONE'SELF, ,OUR'SELF, thy'SELF, your'SELF.

{-ee}: ,REFu'GEE, e,VACu'EE, ,EMploy'EE, ar,REST'EE, as,SIGN'EE, ,CONfer'EE, ,TRAIN'EE, as,SAULT'EE, au,DIT'EE, a,WARD'EE, bio,GRAPH'EE, ,CALL'EE, ,CONTACT'EE, ,COUNsell'EE, e,LECT'EE, ,FLIRT'EE, ,INteract'EE, ,INtroduc'EE, ,INvest'EE, ,MURder'EE, ,OWN'EE, ,PHON'EE, ,PICK'EE, ,RAP'EE, re,LEAS'EE, ,REScu'EE, ,TICKL'EE.

{-eer}: ,MOUNTai'NEER, ,VOLun'TEER, ,AUctio'NEER, ,BUDGe'TEER, ,CAME'LEER, ,CANno'NEER, ,CHARio'TEER, ,COMman'DEER, con,VENTio'NEER, de'CREER, , e,LECTio'neer, ,ENgi'NEER, ,FAK'EER, ,FICTio'NEER, 'FLEER, ,FORE'SEER, 'FREER, ,JUNKet'EER, ,LEAFle'TEER, ,MARKet'EER, ,MUSke'TEER, ,MUTi'NEER, ,ORien'TEER, ,Over'SEER, ,PION'EER, ,PIStol'EER, ,SLOGan'EER, ,SUMmit'EER

{-ese}: ,PORTu'GUESE, ,JOURna'LESE, ,BUReaucra'TESE, ,COMpute'RESE, edu,CAtio'NESE, ,FEDera'LESE, ,GOVERNmen'TESE, ,JOURna'LESE, ,LEga'LESE, of,Ficia'LESE, ,Sociolo'GESE, te,LEgra'PHESE

{-ette}: ,CIga'RETTE, ,LAUNde'RETTE, ,BRU'NETTE, ,CHEmi'SETTE, ,CO'QUETTE, ,FLOWe'RETTE, ,KITChe'NETTE, ,LUNcheo'NETTE, ,MAIso'NETTE, pi'PETTE, ,POU'SETTE, quar'TETTE, quin'TETTE, ,ROO'METTE, ,SERmo'ETTE, ,SERvi'ETTE, ,SILhou'ETTE, toi'LETTE, ,TOWe'LETTE, ,VIDEocas'SETTE, ,WAGO'NETTE

{-esque}: ,PIctu'RESQUE, ,ARA'BESQUE, ,BEAT'LESQUE, ,BUR'LESQUE, ,DISne'YESQUE, ,GIGan'TESQUE, ,GRO'TESQUE, ,HUMo'RESQUE, ,LINcol'NESQUE, ,MODE'LESQUE, ,PIctu'RESQUE, ,ROMa'NESQUE, ,RUBE'NESQUE, ,STATu'ESQUE, ,Michelange'LESQUE

2.2.9.2.2 Suffixes that do not Affect Stress Placement

{-able}: 'COMfor,TABLE, a'BA,TABLE, a'BOMi,NABLE, ac'CEPTable, ac'COMpli,SH-ABLE, ac'COUNTable, a'CHIEVable, a'DAPTable, 'ADmirable, ad'VISable, a'GREE-able, 'Amiable, 'APpli,CABLE, at'TAINable, be'LIEVable, 'BLAMable, 'BREAKable, 'CALculable, 'CERTifiable, 'CLASSifiable, col'LECTable, com'MENDable, con'CEIVvable, de'FENDable, de'PENDable, de'TESTable, de'VISable

{-age}: 'ANchorage, 'AMperage, as'SEMblage, 'BARonage, 'BREAKage, 'BRO-Kerage, 'COUNTer ,Espionage, 'HARborage, 'SEWerage, 'SHRINKage, 'STOCK,BROKERage, 'TUtelage.

{-al}: re'FUsal, ab'DOMinal, ab'NORMal, ,Abo'RiGinal, ,ACa'DEMical, a'COUSTi-cal, ad'DItional, ,AERo'MEDical, ,AGriCULTural, 'Anal, 'Anar,CHICal, 'ANcestral, ,APpa'RItional

{-ary}: 'AC,TUARY, 'CAPI,LARY, 'ORDi,NARY, 'ARbi,TRARY, fi 'DU,CIARY, 'NECES,sARY, 'LEGen,DARY, 'FEB,RUARY, 'CUSTo,MARY, 'DICTio,NARY, a'POTHe,CARY, 'MERcerce,NARY, ,BENE'ficiary, 'ADver,SARY, 'COMmen,TARY, re'ACTio,NARY, 'MOMen,TARY, he'REDi,TARY, evo'LUTio,NARY, con'FECTio,NARY

{-berry}: 'BAY,BERRY, 'DOG,BERRY, 'CHINA,BERRY, 'CRAN,BERRY, 'DEW,BERRY, 'SNOW,BERRY, 'GOOSE,BERRY, 'HACK,BERRY, 'MUL,BERRY, 'BLACK,BERRY, 'WIN-ter,BERRY

{-en}: 'WIden, 'STRAIGHTen, 'STRENGTHen, 'BROADen, 'DEEPen, 'SOFTen, 'STEEPen

{-ful}: 'WONderful, 'BASKetful, 'BOTtleful, 'BOUNtiful, 'BUCKetful, 'CONflictful, 'DESsert,SPOONful, dis'GRACEful, dis'GUSTful, disres'PECTful, dis'TRUSTful,

'FORE,SIGHTful, 'INsightful, 'PRAYerful, re'PROACHful, 'TABLE,SPOONful, unre'MORSEful

{-ing}: a'MAZing, a'BANDoning, a'BOLishing, a'BOUNDing, 'Abro,GATing, ad'MINistering, ad'MONishing, 'HANDi,CAPPING, 'HAND,SHAKing, 'HEART,BREAKing, 'HOSpitalizing, 'TRESpassing, 'TRIUMphing, ,UNcom'PELLing.

{-ish}: 'DEVilish, 'AMateurish, car'TOONish, 'CLEVerish, 'COCKneyish, 'COUNtryish, 'WATerish, 'YELLowish.

{-like}: 'ANimal,LIKE, 'BASket,LIKE, 'BUSiness,LIKE, 'CHIMney,LIKE, com'PUter,LIKE, de'TECTive,LIKE, 'DOUGH,NUT,LIKE, 'FACTory,LIKE, 'FLOWer,LIKE, 'GRANite,LIKE, 'LOBSter,LIKE

{-less}: 'POWERless, af'FECTIONless, a'GENdaless, ,AM'BITIONless, 'ASteriskless, 'CHARacterless, com'PASSionless, ,CONsti'TUTIONless, 'DAUGHterless, e'MO-Tionless

{-ly}: 'HURriedly, ab'HORrently, a'BOMinably, a'BORTively, a'BUNdantly, aca'DEMically, ac'COMmodatingly, a'CQUIsitively, ad'DItionally, ad'MINistratively, ad'VENTurously, af'FECTIONally, ag'GRESsively, a'GREEably, 'AMateurishly

{-ment}: 'PUNishment, 'GOVERNment, de'VELOPMENT, 'MANagemet, em'PLOYment, ar'RANGEment, im'PROVEment, ap'POINTment, 'PARliament, as'SESSment, be'REAVEment, ,rede'VELOPMENT, ac'COMpaniment, pre'DICament, en'LIGHTenment, a'MAZEment, rein'FORCEment.

{-ness}: 'YELLowness, a'BORTiveness, ab'RUPtness, 'ABSoluteness, ab'SURDness, a'BUSiveness, 'ACcurateness, 'AIRlessness, 'AIRworthiness, a'LIKEness, 'AGElessness, ad'VISableness, ad'VENTuresomeness, 'AMorousness, 'APpositeness, be'TWEENness, 'BEAUtifulness

{-ony}: 'ACri,MONY, 'AGri,MONY, 'Ali,MONY, 'ANti,MONY, 'CERre,MONY, 'MAtri,MONY, 'PAtri,MONY, 'PARsi,MONY, 'SANcti,MONY, 'TESTi,MONY

{-ory}: 'MINa,TORY, 'AUdi,TORY, 'MANDanda,TORY, 'ORa,TORY, 'PREDa,TORY, 'LAUDa,TORY, 'CIRcula,TORY, 'PURGa,TORY, ac'CUsa,TORY, o'BLIga,TORY, de'ROga,TORY, con'CILia,TORY, con'TRIBu,TORY, de'POsi,TORY, 'PROmis,SORY, ex'CLAMa,TORY, inter'ROGa,TORY, pre'PARa,TORY, ob'SERva,TORY, ma'NIpula,TORY.

{-ous}: 'POISonous, ab'STEMious, acri'MONious, ,ADven'TAGEous, ,AMbi'DEXtrous, ,ANA'CHRONous, a'NONymous, ,ANTitu'BERculous, 'BLASphemous, ca'COphonous, can'TANKerous, ,Cere'MONious, con'TEMPtuous, har'MONious, ho'MONymous.

{-fy}: 'GLORi,FY, 'AMpli,FY, 'CLASSi,FY, ,COM'PLEXi,FY, de'CLASSi,FY, dis'QUALi,FY, ,DIS'SATis,FY, e'XEMpli,FY, ,MIS'CLASSi,FY, ,Over'SIMpli,FY, per'SONi,FY, 'SANcti,FY, ,SUB'CLASSi,FY

{-wise}: 'OTHer,WISE, ,ANti'CLOCK,WISE, 'CONtrari,WISE, 'COUNter,CLOCK,WISE, 'PROFit,WISE

{-y}: 'BEAUtifully, ab'DOMinally, ab'HORrently, acci'DENTally, ca'COPHony, cos'MO,gony, ,DIS'HARmony, ,ETHno'BOtany, he'GEmony, ,INter'COMPany, 'MATtri,MONY

2.2.9.2.3 Suffixes that Influence Stress in the Stem

{-eous}: ,ADvan'TAgeous, con,TEMpo'RAneous, con'SANguineous, dis'COURteous, ,EXtempo'RAneous, ,HOMO'GEneous, ,INstan'TANEous, ,MIScel'LANeous, ,NONsimul'TANEous, ,PORce'LANeous, ,SIMul'TANEous.

{-graphy}: ,PHOTO'GRAPHy, bi'O,GRAPHy, ge'O,GRAPHy, au'TO,GRAPHy, ,BIBli'Ography, ,CHRO'NOgraphy, to'POgraphy, ,VIDe'Ography

{-ial}: pro'VeRbial, ac,CES'SORial, ad'VeRbial, ,ADver'TORial, am,BASSa'DORial, ,ANTicom'MERcial, ,BAC'TERial, ,Bicen'TENnial, ,BIOma'TERial, ,CIRcumfe'REntial, ,DIFfe'REntial, ,EVI'DENTial, ,EXtrater'REStrial, ,IMme'MORial, ,INter'RAcial.

{-ic}: cli'MACTic, ,ACro'NYmic, ,Acti'VISTic, ad,VENTu'RISTic, a'GNOSTic, ,AGora'PHObic, ,ALche'MISTic, ,ALlo'GRAphic, ,ALlo'MORphic, al'TRUISTic, ,TOPO'GRAPHic, ,PLUra'LISTic, ,NONrea'LISTic

{-ion}: per'FECTION, ab,BREvi'Ation, a,BOMi'NATION, ac,CEP'Tation, ,ADminis'TRation, ,ANTiorgani'Zation, ,ARGumen'Tation, as,SAsi'NATION, ,INconside'RATION, ,INflam'MATION.

{-ious}: in'JUrious, ,ACri'MONious, ,Antire'LIGious, ,CERE'MONious, ,DIShar'MONious, har'MONious, ,INhar'MONious, ,NONre'LIGious, ,OSTen'TATious, ,SEMI'CONscious, ,Overconsci'ENTious.

{-ty}: ,TRAN'QUILLity, a'BILity, ab'SURdity, ac,COUNta'BILity, ad'VeRSity, ad,ViSi'BILity, ,Amo'RALity, an'TIquity, au'DAcity, ,BAR'BARity, be,LIEVa'BILity, ,BiSexu'Ality

{-ive}: re'FLEXive, a'BORTive, abs'TRACTive, ac'COMmodative, ac'CUmulative, a'CUsative, af'FIRMative, ag'GRESsive, al'LIterative, ,ARGu'MENTative, ,COMpre'HENSive, ,CON'tEMplative, ,CONtra'CEptive, ,DIS'TINCTive, ,EX'TENSive, ,INex'PENSive

2.2.10 Stress on Phrases and Compounds

The three types of stresses, namely “word stress”, “compound stress” and “phrasal stress” are the key elements that determine the exact means of conveying a specific intent in an utterance. Therefore, during perception and production of such meaning-carrying codes,

the ability to use the right stress pattern is vitally important to establish the intended communication, or the language learning and teaching technique to be followed.

The research at hand investigates the learner's ability, through various stress patterns, to perceive, distinguish and produce the meaning differences between words, phrases and compound words during L2 acquisition. In such contrastive patterns as “/'HOT ₁DOG/, for a type of food, (compound) vs. /₁HOT 'DOG/, for a hot canine, (phrase)” and “a /'GREEN ₁HOUSE/, for a building made of glass for growing plants inside, (compound) vs. a /₁GREEN 'HOUSE/, for any house which is painted green, (phrase),” the difference in the stress placement is a clear indication of the meaning changes expressed. Compound nouns have primary stress on the first word and on those following them they have secondary stress. In the compound noun /'GOLF ₁BALL/, the first word has primary stress and the following the secondary stress. As for phrases, however, their qualified elements, i.e., the words second in line, are stressed more prominently. Therefore the acquisition of such a distinction in stress patterns in phrases and compound words is very important for learners of English in order to analyze what is said and convey their meaning more precisely in oral communication. Native speakers make few mistakes in distinguishing between the two because they are familiar with them from their childhood in their immediate environment. We, as language teachers, can help our students to acquire this skill by teaching them special stress paradigms, and allowing them to compare minimal pairs by using pictures representing a compound word or a phrase and asking them to explain the difference between the two. Our students can listen to a pre-recorded tape with the names of the items, and then be asked to indicate which one it is that they have heard. Such words may be marked with capitalized letters in relevant syllables or phonetic transcriptions with suprasegmental features to show relevant stress patterns with primary or secondary stress where necessary. These drills may also include many other activities until we are satisfied of their performances. Thus our students having full consciousness of the meaning-determining feature of stress placement in compounds and phrases will eventually be able to understand and convey their intended meaning more clearly.

2.2.10.1 Background of Phrasal and Compound Stresses

It has generally been assumed in descriptions of throughout this century that “the stress patterns on expressions we call compound words and phrases somehow a direct consequence of their syntactic structure” (e.g. Poutsma, 1914:22; Trager & Smith, 1951:67-77; Lees 1960:120; Quirk et al., 1972:915-1019; Chomsky & Halle, 1968:91).

Numerous pedagogical resources on ESL/EFL pronunciation advocate teaching non-native speakers (NNSs) suprasegmentals to improve the intelligibility of their speech. There are many instances that some foreigners speak English with perfectly intelligible consonants and vowels and with standard grammatical forms, and yet the native have the greatest of difficulty in understanding them because of the speakers' lack of using suprasegmental elements in their oral utterance. Moreover, such mispronunciation "may cause misinterpretation and potential discomfort devaluing the speaker's effort in oral communication irrespective of their fairly good grammar" (Tuan, 2010). Emphasizing on proper intonation in L2 teaching contributes to a high percentage to the total intelligibility of the speaker's speech. McNerney and Mendelsohn (1992) claim that "a short term pronunciation course should focus first and foremost on suprasegmentals as they have the greatest impact on the comprehensibility of the learner's English. Thus giving priority to the suprasegmental aspects of English not only improves learners' comprehensibility but is also less frustrating for students because greater change can be effected by such a priority in their teaching. This argument has been supported by works of Brazil, Coulthard, and Johns (1980), Pennington and Richards (1986:207-225), Morley (1991:481-520), Brown (1995), Clennell (1996:17-28), Celce-Murcia, Brinton, and Goodwin (1996), and Chela-Flores (1998) and many other phoneticians.

Stress placement on compound words and phrases has also been the topic of study by several researchers such as Kubozono (1990) and Quirk et al. (1985). In order to explain the paradigms of stress placement in English blending words, they have dealt with the issue of blending phonological headedness as well as phonological headedness of English compound words and noun phrases. Quirk et al. (1985) suggested that "stress patterns of blending forms tend to follow that of the rightward source word." According to Kubozono (1990) and Quirk et al. (1985), "phonological headedness in English blending words should be rightward." However, Tzakosta and Weijer (2006) pointed out that "phonological headedness depends on different degrees of stress; accented syllables are heads, while unaccented syllables are nonheads." According to this definition suggested by Tzakosta and Weijer (2006), we can say that "the headedness of English compound words is leftward (stressed), while the headedness of English noun phrases is rightward (stressed)" (Nishihara, 2006).

While some have contended that the stressing of phrases and compounds in English is impossible to master in a native-like way, some others like Giegerich (2004:1-24) have adopted the view that "the compound-phrase distinction is not that robust and that

the stress criterion, commonly invoked in attempts to draw the compound-phrase distinction in English, is even less reliable than previously thought; it not only fails to correlate with other (semantic and syntactic) criteria for compound status” (Bauer, 1998; Giegerich 2004:1-21), but “also draws on incomplete and deeply flawed generalizations regarding stress in compounds and phrases” (Giegerich, 2004:1-24).

On the other hand, some phoneticians like Gero Kunter (2011) adopt the terms “left prominence” and “right prominence” instead of “compound stress” and “phrasal stress”.

2.2.10.2 The Distinction between Phrasal vs. Compound Stresses

Stress in English compound words poses difficult problems for EFL learners. English does not seem to be at all consistent in the way it treats compounds and phrases, either from the point of view of writing or from the point of view of pronunciation and especially stress. “If we look at how this uncertainty and inconsistency arise we can perhaps understand better the difficulties. And if we look beyond the principles of word stress to the principles of accent placement, and in so doing pay attention to the information structure of compounds, we can obtain valuable guidance about stress placement in such words” (Tayler, 1991).

It is notoriously difficult to know how to stress English compound words. “This is partly because we cannot easily define what a compound word is, and partly because it is not simply a question of stress but also of accent” (Tayler, 1991). The latter involves a significant combination of both stress and tone and serves to highlight what is regarded as ‘new’ or important information in a particular group of words or tone group. If we look beyond the principles of stress to the principles of accent as well, we are in a better position to try and explain the stress of compound words in English.

The compound stress pattern is a reliable indicator of compound status since this stress pattern would never be possible in a syntactic phrase. The compound stress is the stress falling on the initial part of the thought-group:

*/ˈCOW,BOY/, /ˈSCHOOL,BUS/, /ˈCHRISTmas ,PREsent/, /ˈBALlet ,LESSon/, /ˈELe-
vator ,OPerator/, /ˈPEAnut ,BUTter/, /,JAR/, /ˈLAbel/, /ˈBLOCK,HEAD/,
/ˈBLACK,BERRY/, /ˈYELlow ,JACKet/, /ˈWATCH,DOG/, /ˈCRY,BABY/, /ˈCOVER ,LETter/,
/ˈSCARE,CROW/, /ˈCAR,SICK/, /ˈSUN,BATHE/, /ˈWATER,SKI/, /ˈFREE,LOAD/, /ˈDEEP-*

,FRY/, /'STIR-₁FRY/, /'TIE-₁DYE/, /'RED-₁CHEEKed/, /'PIG-₁HEAded/,
 /'LEVel₁HEAded/, /'HOME-₁GROWN/, /'OVER-₁RATed/, /'HOME-₁COOKing/,
 /'LATE-₁BLOOming/, /'SIGHT₁SEEing/, /'MOUNtain-₁CLIMBing/, /'BOOK-₁MARKed/,
 /'LABor₁DAY/, /'VETeteran's₁DAY/, /'MAIN₁STREET/, /'EASY₁STREET/ etc.

In phrasal stress, the latter words have stress which we refer to as the rightmost stress. Here, the stress occurs toward the end of the statement as opposed to the initial stressing in compounds.

/the 'BROTHher of ₁MARy/ vs. → /'MARy's₁ BROTHer/
 /He was ₁TEACHing lin'GUIStics/ → /'He was ₁TEACHing in 'GHANa/

Most expressions that linguists would classify as compounds take compound stress, i.e., a pattern. Secondary stress, compared to primary stress, is weaker in prominence. Gimson defines a syllable that bears secondary stress as the syllable articulated with the second-highest degree of energy. He defines secondary stress as “an accentuation that has no pitch prominence” (Gimson, 1967). Pitch prominence is carried by primary stress. In writing, primary stress is often indicated by the mark / ' / before the stressed syllable; for secondary stress the same mark is used, but is placed at the foot of the syllable in question as / , / . In English, secondary stress usually appears in longer words such as pronunciation /prəˌnɑːnsiˈeɪʃn/. It is also important to note that besides primary and secondary stress there is ‘unstress’. The stressed syllables, whether being stressed primary or secondary, are only realized in contrast with syllables that are not stressed, i.e., ‘unstressed’. Compound words are words that consist of two units created by joining independent English words. “As far as stress placement in compounds is concerned, compounds usually contain a single primary stress on one element of the compound, the other element or elements carrying secondary stress” (Gimson, 1967). Compounds frequently consist of two nouns. These usually have the stress on the first element (e.g. /'SUN₁RISE/ /'sʌn₁raɪz/). Compounds comprising an adjectival first element and the -ed morpheme at the end receive stress on the second element (e.g. /₁BAD'TEMpered/ /₁bæd'tempəd/). For compounds that have some form of a number as the first element, the stress will fall on the second element (e.g. /'SEC-ond₁CLASS/ /₁sekənd'klæs/. Compounds functioning as adverbs are usually final stressed (e.g. /₁NORTH-'EAST/ /₁nɔːθ'i:st/). Compounds that are final stressed also include those that function as verbs and have an adverbial as the first element (e.g. /₁DOWN'GRADE/ /₁daʊn'greɪd/).

If we compare the stress pattern of compounds with that of phrasals we see a clear distinction between their locations. Let us take the example of ‘blackbird’ – a compound – and ‘black bird’ – a phrase. Following the rule of stressing a compound that is made up of two nouns, blackbird is stressed on the first syllable and semantically, it is a type of bird. If talking about a phrase, the second word is stressed and any kind of bird that is black is meant. Other examples include /'BLACK₁BOARD/ (a board used in classroom) – /₁black'board/ (a board painted black), or /'DARK₁ROOM/ (a lightless room for developing photographs) – /₁DARK'ROOM/ (a room with not much light in it). It is good to note at this point that connected speech may influence moving the stress to the preceding syllable, as is the case of /₁BAD-'TEMpered/ /₁bæd'tempəd/ that becomes /₁BAD-'TEMpered 'TEACHER/ /₁bæd'tempəd tɪ:tʃə/. Similarly to stressing certain syllables in polysyllabic words, during speech production, some words are made more prominent. “The position of the stress is determined largely by the meaning which the utterance is intended to convey” (Plavka, 2003).

Contrasting the compounds with the corresponding noun phrases we come up with such pairs in sentences: “That sounds like a /'BLACK₁BIRD/.” (compound), and “A carrion crow is a completely /₁BLACK 'BIRD/.” (noun phrase). Similar compound / phrase contrasts can also be found in the following examples:

/ 'BLACK₁BOARD/ (C) vs. /₁BLACK 'BOARD/ (NP)
 / 'GREEN₁FLY/ (C) vs. /₁GREEN 'FLY (NP)
 / 'HOT₁HOUSE/ (C) vs. /₁HOT 'HOUSE/ (NP) (Tayler, 1991).

The stress often shifts from the second to the first element when the compound is being used attributively in a noun phrase. This is analogous to the redistribution that occurs in compounds like /'LIGHT₁HOUSE-'KEEPer/ vs. /₁LIGHT₁HOUSE-'KEEPer/. Or in these contrastive examples:

/The 'ROOM is /₁DOWN'STAIRS/ vs. a /'DOWN₁STAIRS 'ROOM/
 /His work is₁ FIRST 'CLASS/ vs. His /'FIRST₁ CLASS₁ WORK/
 /The water is₁ KNEE-'DEEP/ vs. /'KNEE-'DEEP in water/ (Tayler, 1991).

The stress distribution provides a firm basis for distinguishing between different underlying relations, not so much between compound and phrase as between different semantic relations:

a /'BULL-₁FIGHT/ involves bulls, and a /₁BULL 'CALF/ is a young bull.
 a /'FRENCH ₁TEACHer/ teaches French, but a /₁FRENCH 'TEACHer/ is French.
 a /'SLATE ₁QUARRY/ yields slate and a /₁SLATE 'ROOF/ is made of slate.
 a /'TOY ₁FACTory/ produces toys, but a /₁TOY 'FACTory/ is a model of a factory
 used as a toy.

“For the compound nouns, the stress is on the first part /'BLACK₁BIRD/, and /'RAIL₁ROAD/. For compound adjectives, however, the stress is on the second part as in /₁BAD-'TEMpered/ and /₁OLD-'FASHioned/. And for compound verbs, the stress is on the second part to /₁UNDER'STAND/ and to /₁Over'FLOW/” (Tayler, 1991).

A compound word consists of two or more lexical components, each of which can stand alone as separate words (Teschner-Whitley, 2008); thus ‘corn’ and ‘field’ can combine to produce /'CORN₁FIELD/ (a field where corn is grown), ‘kick’ and ‘back’ produce /'KICK₁BACK/ (money given to someone as a bribe), ‘out’ and ‘house’ give /'OUT₁HOUSE/ (a small building or shed located outside a larger house, often containing a primitive toilet) and tens of thousands more similar examples can be found.

English strongly favors compounding. In terms of stress placement, most of the English compounds strong-stress the left component of the compound such as 'AFTER₁BIRTH, 'AIR₁BASE, and 'BASket₁BALL. Indeed, about 90 percent of all compounds written as single words strong-stress the left component. But the remaining 10 percent do not, strong-stressing instead the right-hand component, while giving the appearance of strong-stressing both components equally. Here are five such exceptions having right-strong-stressing compounds:

/₁AFTER'NOON/, /₁BACK'YARD/, /₁BLACK'CURRant/, /₁BROAD-'MINDed/,
 /₁BUCK'TEETH/ (Teschner-Whitley, 2004)

Many have contended that it is impossible to master the skill of stressing compounds and phrases properly in a native-like way. Giegerich (2004:1-24), on the other hand, looks at the issue from another perspective. He tries to prove that “the compound-phrase distinction is not that robust and that the stress criterion, commonly invoked in an attempt to draw the compound-phrase distinction in English, is even less reliable than previously thought.”

As for the determination of prominence in a compound, Roach (1983) suggests that “if the first part of the compound is (in a broad sense) adjectival, the stress goes on the second element, with a secondary stress on the first.” For example:

/,LOUD'SPEAKer/, /,BAD-'TEMPerEd/, /,SECond-'CLASS/ and /,THREE-'WHEELer/

If, however, the first element is (in a broad sense) a noun, then the stress goes on the first element. Examples:

/'TYPE,WRITer/, /'CAR-,FERry/, /'SUN,RISE/, /'SUIT,CASE/ and /'TEA-,CUP/

Roach is, however, fairly cautious about these ‘rules’, but states in this way that they are genuinely helpful to teachers and learners alike.

Taylor (1991) suggests that “by following the predictability and information-conveying feature of either part of the compound, stress is determined”, thus: /'PARK ,STREET/, as opposed to /'PARK ,AVenue/, /'PARK ,ROAD/, or /'PARK ,PLACE/. Street is the more common and predictable term in these cases, and is thus de-accented, as opposed to the less common terms such as place, square, terrace, grove, lane, avenue, and many others which are all accented.

It is interesting to note, however, that many compounds marked by Kingdon (1958) as having ‘double primary stress’ are nowadays considered as having one primary and one secondary stress. Although Kingdon marks the following words, among others, with double stress, most speakers today would probably distinguish the primary and one secondary stress on them:

/'FARM,HOUSE/, /'BOX,Office/, /'SEA ,LEVel/, /'TISsue ,PAper/, /'BOA con,STRIC-
Tor/, /'VACuum ,CLEANer/, /'COLD ,CREAM/, /'SIX,SHOOTer/, /'SLEEPing ,PART-
ner/, /'FLYing ,FISH/, /'SMALL ,HOLDer/, /'PUBlic ,SCHOOL/, /'TRAVeller's
,CHEQUE/, /'STAGE ,MANager/, /'WEEK,END/, /'WARrant ,OFFicer/, /'SUGar
,BEET/, /'MAIDen ,NAME/

What seems to be happening is that sometimes speakers tend to have difficulty in recognizing a compound in the first place. One could say that they are treating the compounds as two separate words and stressing them accordingly. In this they are perhaps

often led (or misled) by the spelling, but not always, as in the case of /'MAKE-be₁LIEVE/, /'HOSE₁PIPE/ and /'GRAND₁MOTHer/.

Sometimes the contrasts are so clear that one cannot but help stressing the relevant item when one talks about it:

a /'DANCing₁TEACHer/ vs. a /₁DANCing 'TEACHer/
a /'YOUNG 'GERMan₁TEACHer/ vs. a /₁YOUNG 'GERMAN₁TEACHer/ or an
/'ENGLISH₁STUdent/ vs. an /₁ENGLISH 'STUdent/

To sum all this up very briefly, we can say that, “in cases of doubt, if we look at which element of a compound carries the most information, or is the most unpredictable, and place the accent on that element, we have a good chance of producing correct compound stress” (Tayler 1991).

2.2.10.3 The Structure of Phrasal and Compound Stresses

According to Hayes (1995) the word *stress* is the strongest stress in a prosodic word. As for the *phrasal stress*, it is assigned beyond word stress in syntactic collocations of words, such as phrases, clauses, or sentences. Essentially like Bloomfield (1933), for whom /'ICE-CREAM/ was a compound and /₁ICE 'CREAM/ a phrase, Liberman and Sproat (1992) drew the PS/NS distinction strictly along stress lines. Thus, he suggests that placing stressing in relevant syllables of the word “girlfriend” as /₁GIRL 'FRIEND/ having end-stress, while with fore-stress for /'GIRL-₁FRIEND/, would determine the intended meaning.

As in the examples of such phrases like /a₁ GREEN 'HOUSE/ (wS) (which is a house that is green), but /a 'GREEN₁ HOUSE/ (Sw)” (is a glass building for growing plants). Likewise /a₁ FRENCH 'TEACHer/ (wS) a phrasal meaning a teacher from France, but /a 'FRENCH₁ TEACHer/ (Sw) who is a teacher of French is a compound word. Another example is /a₁ WOMan 'DOCTOR/ (wS), meaning any female doctor; however, /a 'WOMan₁ DOCTOR/ (Sw) is a gynecologist. This distinction can be attributed to the difference between compound and phrase in surface structure, hence the common names “phrasal stress” and “compound stress”. This is the analysis formalized in the Chomsky-Halle Compound Rule (1968) which presupposes a syntactic analysis such that “compound” is defined as a branching structure of a sort. The treatment of cases like /'STEEL₁ WARE-house/ vs. /₁STEEL 'WARE₁HOUSE/ under this analysis is somewhat obscure, since both

seem to be noun-noun compounds; here, however, reference is often made to deep syntactic differences – i.e. “warehouse made of steel” vs. “warehouse for storing steel” - and, though details of such an analysis have never actually been worked out, “the assumption continues to be held that ultimately the whole phenomenon will be shown to depend on syntax at one level or another” (Gibbon, 1984).

While phrases tend to be stressed phrase-finally, i.e. on the last word, compounds tend to be stressed on the first element. This systematic difference is captured in the so-called “nuclear stress rule (phrasal stress is on the last word of the phrase) and the so-called compound stress rule (stress is on the left-hand member of a compound) formalized in Chomsky and Halle” (1968) as in these examples of noun phrases: the /₁ORange 'CARpet/, this /₁NEW 'HOUSE/, such a /₁GOOD 'JOB/, contrasted with these examples of the nominal compounds:

/₁PAYment ,PROBLEms/, /₁INstal'LAtion ,GUIDE/, /₁SPACE re,QUIREment/ (Plag, 2002).

This systematic difference between the stress assignment in noun phrases and in noun compounds does lead to minimal pairs where it is only the stress pattern that distinguishes between the compound and the phrase:

/a 'BLACK,BOARD/ (C) (a board to write on) vs. /a ,BLACK 'BOARD/ (P)
(a board that is black)
/'OPERating ins,TRUCTIONS/ (C) (instructions for operating something) vs.
/₁OPERating in'STRUCTIONS/ (P) (instructions that are operating)
/in'STALLing ,OPTions/ (C) (options for installing something) vs. /ins,TALLing
'OPTions/ (P) (the installing of options)

Given the correctness of the compound stress rule, another interesting problem arises: how are compounds stressed that have more than two members? Consider the following compounds, their possible stress patterns, and their interpretations:

/'MAIL de,LIVery ,SERvice/ vs. /₁MAIL de'LIVery ,SERvice/
/'STUdent 'FEEDback ,SYSTEM/ vs. /₁STUdent 'FEEDback ,SYSTEM/
/'GOVernment 'REVenue ,POLicy/ vs. /₁GOVernment 'REVenue ,POLicy/ (Plag, 2002).

The data at hand show that a certain stress pattern seems to be indicative of a certain kind of interpretation:

A /'MAIL de₁LIVery/ service is a service concerned with /'MAIL de₁LIVery/ (i.e., the delivery of mail), whereas a /₁MAIL de₁LIVery/ service is a /de₁LIVery ₁SERvice/ concerned with mail. This is a small semantic difference indeed, but still one worth taking note of. A /'STUdent ₁FEED₁BACK/ system is a system concerned with 'student, feedback, whereas a /₁STUdent 'FEED₁BACK/ system may be a /'FEEDback ₁SYStem/ that has something to do with students (e.g. was designed by students or is maintained by students). And while the /'GOVernment ₁REVENue/ policy is a policy concerned with the /'GOVernment ₁REVENue/ the /₁GOVernment 'REVENue/ policy is a certain /'REVENue ₁POLicy/ as implemented by the government (Plag, 2002).

Many pronunciation teachers sum up the whole concept of compound and phrase stress in these five rules:

1. Compounds combining two nouns have the stress on the first element.
E.g. /'TYPE₁WRITER/, /'SUN₁RISE/, /'TEA₁-cup/, /'SUIT₁CASE/
2. Compounds with an adjectival first element and –ed at the end have stress on the second word.
E.g. /₁bad-'TEMpered/, /₁HEAVY-'HANDed/
3. Compounds in which the first element is a number tend to have final stress.
E.g. /₁three-'WHEELer/, /₁SECond-'CLASS/, /₁FIVE-'FINGer/
4. Compounds functioning as adverbs are usually final-stressed.
E.g. /₁HEAD-'FIRST/, /₁NORTH-'EAST/, /₁DOWN'STREAM/
5. Compounds which function as verbs and have an adverbial first element take final stress.
E.g. /₁DOWN-'GRADE/, /₁BACK-'PEDAL/, /₁ILL-'TREAT/.

2.2.10.4 The Methodology of Teaching Phrasal and Compound Stresses

The teaching of compound and phrasal stress patterns to L2 learners is very important for increasing their understanding of the spoken language and especially for improving their oral performances. We can help them acquire such skills by getting them to

know the basic elements of stress patterns, by drilling minimal pairs of such compound words or phrases, and by asking them to distinguish between the two meanings. Students may be exposed to some pictures and words, and, referring to the names of the items, be asked to indicate which one it is that they have heard. Words may be marked with capitalized letters and with primary and secondary stresses shown on relevant syllables, either as they are written ordinarily or in their IPA transcription. After drilling on many such examples, students are instilled with full consciousness of the meaning-determining feature of stress placement in compounds and phrases and are able to convey their intended meaning more clearly.

2.2.10.5 Minimal Pair Drills for Phrasal and Compound Stresses

Students can look at these examples on the board, with the explanations given from the loudspeaker, and try to guess which item is meant by the relevant stress pattern:

/a 'WHITE ,BOARD/ (C) (a board to write on) vs. /a ,WHITE 'BOARD/ (P) (any board that is white)

/a 'WHITE ,HOUSE/ (C) (a house that is painted white) vs. /the ,WHITE 'HOUSE/ (P) (the US president's residence)

/'RED ,SOCK/ (C) (an ordinary red sock) vs. /,RED 'SOX/ (P) (Boston's baseball team)

Then students are given another list of compounds vs. phrases and are asked to read them aloud, making sure that both primary and secondary stresses are placed correctly.

/ge,OLOGist as'TRONomer/ vs. /ge'OLOGist as,tronomer/

/,APple 'PIE/ vs. /'APple ,PIE/

/,SCHolar-'Activist/ vs. /'SCHolar-,Activist/

/,APricot 'CRUMble/ vs. /'Apricot ,CRUMble/

/,MICHigan 'HOSpital/ vs. /'MICHigan ,HOSpital/

/,MADison 'AVenue/ vs. /'MADison ,AVenue/

/,BOSTon 'MARathon/ vs. /'BOSTon ,MARathon/

/,PENny 'LANE/ vs. /'PENny ,LANE/

/,SUMmer 'NIGHT/ vs. /'SUMmer ,NIGHT/

/a,LUMinum 'FOIL/ vs. /a'LUMinum ,FOIL/

/,MAY 'FLOWers/ vs. /'MAY ,FLOWers/

/₁SILK 'TIE/ vs. /'SILK ₁TIE/
 /'FOUNtain ₁PEN/ vs. /₁FOUNtain 'PEN/
 /'HOSE₁PIPe/ vs. /₁HOSe'PIPE/
 /'FAULT ₁FINDing/ vs. /₁FAULT 'FINDing/
 /'MAKE-₁BELieve/ vs. /₁MAKE-be'LIEVE/
 /'ENGLISH ₁TEACHer/ vs. /₁ENGLISH 'TEACHer/
 /'BUS con₁DUCTor/ vs. /₁BUS con'DUCTor/
 /'ENgine ₁DRIVer/ vs. /₁ENgine 'DRIVer/
 /'DINing ₁ROOM/ vs. /₁DINing 'ROOM/

Finally students are asked to read some sentences containing minimal pairs of compounds and phrases to make sure that the meaning intended is crystal clear to themselves and the audience:

/A 'BULL-₁FIGHT involves bulls./ vs. /A ₁BULL 'CALF is a young bull./
 /A 'FRENCH ₁TEACHer teaches French./ vs. /A ₁FRENCH 'TEACHer is French./
 /A 'SLATE ₁QUARRY yields slate./ vs. /A ₁SLATE 'ROOF is made of slate./
 /A 'TOY ₁FACTory produces toys./ vs. /A ₁TOY 'FACTory is a model of a factory used as a toy./

2.2.11 Sentence Stress

Sentence stress along with pitch and rhythm are the main components of intonation. They form the music of spoken English. Like word stress, sentence stress can help one better understand spoken English, and express one's meaning and emotions more effectively. Sentence stress is what gives English discourse its rhythm or "beat". The word "stress" is an accent on one syllable within a word. As for "intonation", it is the accent on certain words within a sentence. Most sentences have two types of words: "content words" and "structure words". Content words are the key words of a sentence. They are the most important words carrying the meaning or sense. Structure words are not the essential words for communication but they are small, simple words that make the sentence sound good grammatically. They give the sentence its correct form or "structure". If the structure words are removed from a sentence, the sentence could still be understood, but if the content words are removed, then the sentence loses its meaning. Suppose we receive a coded message like this: "*Sell / car / gone / France.*" Out of this grammatically broken and not complete sentence we can still

sense something like this: “*Somebody wants you to sell his car for him because he has gone to France.*” By adding a few structural elements we can make out of it a complete, grammatically correct sentence to give it a clearer idea:

/Will you 'SELL my ,CAR → because I've 'GONE to ,FRANCE? ↗/

When we read out this sentence loud we make the words /SELL/, /CAR/, /GONE/ and /FRANCE/ stand out among others; in other words, we accentuate or stress them because they are extremely important for communication, incomparable with structure words in their functioning. It is this particular emphasis on the rhythm of the English language placed on the content words in a sentence that produces the effective articulation and conveys the essential intent in an utterance. In this study, in order to teach basics of sentence stress, we will first be dealing with the forms and various functions of intonation, and be doing many exercises to make sure that our students do realize its importance and actually use it in their oral performance. We can give them 25 examples of some written and recorded sentences first to see how they read them aloud and ask them to score their performances themselves. After three hours, we brief them on the basics of sentence stress features and then give them a post-test to make sure that we have instilled in them the skill of emphasizing meaning-determining elements in a sentence and using them in their utterance. Thus, we will be helping them to distinguish meanings more clearly in the spoken words they hear and also to express themselves more coherently in their own oral communication through their awareness of “sentence stress” or intonation as a whole.

2.2.11.1 General Overview for Sentence Stress

The term sentence stress, intonation or prosody can be broadly defined as “the speech melody” or “it is not what you said, it is how you said it”. More technically put, it is the accent or pitch used by the speaker when speaking words. As Hard et al. (1990) put it, it is “the ensemble of pitch variations in the course of an utterance”. This idea that “Intonation is the music of language” is emphasized by Baker and Goldstein (2008). O’Connor and Arnold (1961) explained it thus: “When we talk about English intonation, we mean the pitch patterns of spoken English, the pitch tunes of melodies, the musical features of English”. Despite the differences in word-choice, Bradford (1992), Cruttenden (1986), Kelly (2000), Tench (1981) and many other linguists have all referred to intonation as “the changes of pitch pattern in utterances”. In summary, it was widely recognized among linguists that intonation dealt with pitch variations in utterances (Chela-Flores, 2003).

Like pitch, loudness, length and quality are auditory percepts. A question sounds different from a sentence that is a statement. If we say a sentence out loud, first as a question and then as a statement, we can hear the differences in sound. That is the intonation. For instance, when we say “You are going tomorrow” and “You are going tomorrow?” the ‘melodies of the two sentences are different. “The melody of the first sentence drops at the end, making it a statement. However, the melody of the second sentence rises at the end, making it a question” (Durov, 2011).

Periods, question marks, and other punctuation in a written story help the reader of a text to know about the melody. Thus, intonation is a melody that belongs to an entire sentence. Thus, it is the intonation that gives the meaning to our words when we speak them. Without intonation, it is impossible to understand the expressions and thoughts that go with words. “Changing the intonation can completely change the meaning. For instance, the sentence “It’s raining” could be spoken using the same words, but giving it different meanings, such as “What a surprise!”, or “How annoying!”, or “That’s great!”” (BBC, British Council, 2010).

The first thing that Daniel Jones, Kindom and Pike looked at in intonation was *pitch variation*. In other words, they emphasized such crude rules as “Wh Qs fall; Yes/No Qs rise” based on introspection (What do I say?) rather than data (London Style Nyelviskola, 2010).

O’Connor (1980), Arnold and Cook (2004) provide exercises where speech functions such as polite requests or confirmation questions dictate the intonation patterns which listeners should expect or speakers should employ. The Scottish Intonation Project claims that the relationships between intonation patterns (such as the tones categorized by O’Connor and Arnold) and speech functions shown by their findings are not so predictable. “Here are clear instances of rising tune: 1. Echo questions: e.g. “You what?” 2. Challenging questions: e.g. “On Monday?” 3. Conciliation questions: e.g. “Oh really?”” (London Style Nyelviskola, 2010).

Attitude: O’Connor and Arnold believe that *intonation* goes with *attitude*. They list 500 different attitudes. They have Four Main Tunes. Attitude is not conveyed by pitch alone. They remark that “*there is more to context than just pitch*” (London Style Nyelviskola, 2010).

Turn-taking: Brazil claims that a special intonation is used for giving the floor to another person or taking your turn in a conversation. He remarks that rise and fall are used as a signal for when to speak and when not to. People remain at a high pitch if they want to continue talking. A fall shows completion.

O'Connor claims that major stress items pick out the most important words in the sentence because they point to the new or unknown information in the sentence. The tonic or stressed item in the sentence is the item which has the greatest amount of pitch movement on it.

2.2.11.2 Elements of Sentence Stress

Due to the differences in definitions, linguists and researchers have offered different elements of English intonation. Cruttenden (1986) assumed that “intonation had three main elements at three layers: intonation units (parts of a stream of speech), tonic status (a stressed syllable of an important word) and tones of intonation units (the pitch chosen for a certain intonation unit).” These elements more or less corresponded to the tone units, tonic syllable and tunes mentioned by O'Connor and Arnold (1961). In contrast, Pierrehumbert (1980) emphasized “the importance of pitch movement in perceiving intonation, and considered three elements of pitch: accents, phrasal tones and boundary tones.” The accents or tones were restricted to only two basic ones: high (H) or low (L). Her idea was then developed by Beckman, Hirschberg and Shattuck-Hufnagel (2005), adding pauses as an important element of intonation, to form a system of intonation transcription named Tones and Break Indices (ToBI) (ToBI, The Ohio State Univ. Dept of Linguistics, 1999).

2.2.11.3 Importance of Sentence Stress

Many language learners feel uncertain and self-conscious about their pronunciation skills. The reason for it may be not only *incorrect pronunciation of words*, but also *incorrect intonation*. The importance of intonation and stress in speaking is difficult to be overestimate. If we want native speakers to understand our students, first of all, we must help them improve their intonation. The importance of intonation in English communication has been emphasized over and over in many studies. It was stated by Cook (2000) in his preface to *American Accent Training* that speech with high speed but strong intonation was easily understood. Gilbert (1993) also claimed that “...time spent helping students concentrate on rhythm and the major intonational road signs is more important than any other efforts to improve their pronunciation.”

“Studying grammar and vocabulary is not enough”, says Tamara Jones (2010). “Students also need to simultaneously be made aware of the intonation norms of the target language and the meaning associated with them. After all, although the offense of the listeners maybe was minor and quickly resolved, it might not be the case if a student were to make this error in, for example, a job interview.”

Carmine Gallo wrote a book a few years ago titled *The Presentation Secrets of Steve Jobs*. In it he comments on the presentation performances of non- native English speakers. He says “Where the speaker was highly intelligent, the content of the talk was excellent and the subject was highly informative, yet there was something that made the presentation just die. That something was the speaker sounding like he or she was reading their script. There was no emotion, no passion and it sounded like a robot was speaking. You could write, and prepare the best presentation ever made, but destroy it in the first 30 seconds if you do not use rhythm, intonation and pausing in your presentation.” He then continues on giving as an example one of the best presentations ever, saying: “Let’s take a look at the 2007 launch of the iPhone. The beginning of the presentation, Steve Jobs talks about what Apple has been doing, how the iPod has been selling and other updates. He then pauses. The screen behind him only has an Apple logo; he clears his throat and begins... ‘This is a day I’ve been looking forward to for two and a half years...’ He then pauses again.” (Gallo, 2008) Let us watch the video clip in a minute all together as a tribute to this giant, not only in electronics but also in the effective use of suprasegmentals, to show how important it is on the audience: Notice how Steve Jobs builds the excitement by using pauses, slow speech and intonation. Let us first try reading the following out loud without pausing or changing the tone of our voice:

“This is a ,day → I’ve been 'looking forward ,to → for 'two and a ,half years.
→ → 'Every once in ,awhile → a revo'lutionary ,product 'comes ,along → that
,changes 'everything. 'Apple has ,been → 'very ,fortunate. → → It’s been →
able ,to intro,duce → a 'few of ,these → ,into the 'world. In '198,4 → ,we
intro'duced → the 'Macintosh\ . It 'didn’t just ,change → 'Apple; → → it
,changed the 'whole com,puter 'industry. In '200,1, → we ,intro'duced the
'first ,iPod. It 'didn’t just ,change how we 'all listen to ,music; → it ,changed
the 'whole 'music, ,industry. → → Well, → today → we’re introdu'cing 'three
revo'lutionary ,products of 'this ,class...” (<http://presentinenglish.com/the-importance-of-intonation-and-rhythm.>)

“What a difference Steve Jobs makes with his skilful use of intonation and rhythm in his presentation, by showing his excitement and passion in his style. So in our sentences we must practice over and over again, practice the pausing, practice the rising of our tone and the lowering of our tone. We must speak loudly, then quietly. Many of our students whose vocabulary, listening skills and understanding of English may be excellent, fail when they stand up and give a presentation because they forget to use any kind of rhythm in their speech” (Gallo, 2008). Therefore, we should set a good example to our students and teach them to practice their speech. They should remember to slow down, take their time and enjoy putting stress, emphasis and tone into their words. Not only will they enjoy the experience more, but their audience will too.

2.2.11.4 Functions of Sentence Stress

Roach (1983) demonstrated four important functions of intonation in English: *Attitudinal function* (helping speakers to express their attitude and to add special kinds of meaning to their spoken language); *Accentual function* (helping speakers to express intention by putting a sense of emphasis or prominence on the important word or syllable); *Grammatical function* (helping listeners to recognize the grammatical and syntactic structure of their utterance); and *Discourse function* (signaling to the listeners what is considered new or shared or what kind of answer is expected).

Vaissiere (2004) made the point clearer by “introducing seven ranges of intonational functions: Syntactic, Informational, Interactive, Modal, Attitudinal, Emotional, and Others (speaker’s identity, sex, age, and so on). Actually, the Attitudinal (attitude towards the speech and listener) and Emotional (speaker’s arousal) functions in Vaissiere’s study could be combined to form Roach’s Attitudinal function. The Informational function in Vaissiere’s corresponds to Roach’s Discourse function, and Vaissiere’s Syntactic function is included in Roach’s Grammatical function.” In agreement with those ideas, Ted Power (2010) added one more function of English intonation in communication, that of “turn-taking”.

“The rising and falling of the tone can be used as a signal to keep the conversation going on or let the other person do the talking. You should remain at a high pitch if you want to continue talking, and a fall shows completion” (Fraser, 2000). Ted Power maintains that the importance of intonation lies not only in the benefits of suitable intonation in communication but also in the bad effects it brings when used inappropriately.

Because intonation is perceived unconsciously (Kelly, 2000; Al-Sibai, 2004), native speakers are often unable to recognize this kind of mistake in non-native speakers' utterances and consider the novice speakers' inappropriate intonation as deliberate (O'Connor, 1998; Al-Sibai, 2004). This will certainly lead to misunderstanding and breakdown in communication. This point was stressed again when Hewings (1995:251-265) clarified in his review "Tone Choice in the English Intonation of Non-Native Speakers" the contention that: "we often react more violently to . . . intonational meanings than to . . . lexical ones; if a man's tone of voice belies his words, we immediately assume that the intonation more faithfully reflects his true linguistic intentions." (Pike, 1972)

Pike comments further on the communicative importance of intonation in the following words: "If one says something insulting, but smiles in face and voice, the utterance may be a great compliment; but if one says something very complimentary, but with an intonation of contempt, the result is an insult." Gimson (1980) also commenting on the communicative importance of intonation, describes changes in it as "the most efficient means of rendering prominent for a listener, those parts of an utterance on which the speaker wishes to concentrate attention."

"We can easily assume that intonation is such an important and sensitive aspect of the English language that the appropriate or inappropriate use of it may determine the success or failure of communication. The process of communication cannot be performed without intonation as it has its own constitutive and distinctive functions in a sentence" (Durov, 2011). Intonation forms sentences and each sentence consists of one or more intonation or thought groups.

"An intonation group is a word or a group of words characterized by a certain intonation pattern and is generally complete from the point of view of meaning: e. g. *You'll come early | and stay as long as you can | won't you ||*" (Durov, 2011).

Sentences are separated from each other by *pauses or junctures*. The end of a sentence is always recognized by a long pause; the end of a non-final intonation group is usually characterized by a shorter pause: e. g. *He's passed his exam || He is a student now || Like most old people | he was fond of talking about the old days. ||* Intonation also serves to distinguish the communicative types of sentences, the actual meaning of a sentence, and the speaker's emotions or attitudes to the contents of the sentence,

to the listener or to the topic of conversation: e.g. *He's passed his exam* || Low-Fall - a statement of fact, High-Rise - a question, Low-Rise – a question with surprise, High-Fall – an exclamation. One and the same sentence pronounced with different intonations can express different emotions. Intonation is also a powerful means of differentiating the functional styles.

“It is generally acknowledged that the pitch of the voice or speech melody, sentence stress and rhythm are the three main components of intonation, whilst pauses, tempo and timbre play a subordinate role in speech. The pitch of the voice does not stay on the same level while the sentence is pronounced. It falls and rises within the interval between its lower and upper limits. Three pitch levels are generally distinguished: high, medium and low. As for rhythm, it is a regular recurrence of stressed and unstressed syllables at definite intervals” (Durov, 2011).

“To acquire a good English speech rhythm one should:

1. Arrange sentences into intonation groups;
2. Arrange sentences into rhythmic groups;
3. Link the words beginning with a vowel to preceding words;
4. Weaken unstressed words and syllables; and
5. Make the stressed syllables occur regularly within an intonation group” (Durov, 2011).

A separate word when used alone as a sentence is always stressed. In a sentence consisting of more than one word, some of the words are left unstressed. They are the *words of small semantic value* or those with a purely grammatical function: articles, prepositions, conjunctions, auxiliary, modal and link verbs, personal and reflective pronouns. “*Words essential to the meaning of the utterance* are normally stressed (nouns, adjectives, notional verbs, adverbs, demonstrative and interrogative pronouns)” (Intonation, Wikipedia, 2011)

Words that provide most of the information are singled out by means of sentence stress. Sentence stress has a greater prominence in that, as compared with the other

words, one or more words in a sentence are pronounced according to their informational (semantic) importance. This greater prominence is achieved by:

- “1. Greater force of exhalation and muscular tension.
2. Changing of the pitch level.
3. Pronouncing the stressed syllables longer.
4. Not changing the quality of a vowel in the stressed syllable” (Intonation, Wikipedia, 2011)

“The most important piece of information conveyed in the sentence is called its communicative center” (Kingdon, 1960). It may be expressed by a single word or a number of words. Usually it is the last word in a sense-group and it carries the terminal tone. The main function of sentence stress is to single out the communicative center of the sentence, which introduces new information. Thus, it performs a distinctive function and distinguishes the speaker’s modal and emotional attitude to the words. Sentence stress may vary in degree. It may be full or partial. Full sentence stress in its turn may be unemphatic and emphatic.

2.2.11.5 Specific Features of Sentence Stress

Sentence stress has one meaning: the distribution of stresses within a sentence. With sentence stress, some words in a sentence are STRESSED (loud) and other words are WEAK (quiet). “Though we know that usually notional words are stressed in the sentence and form (functional) words are unstressed, it is necessary to point out that any word in a sentence may have logical stress” (Durov, 2011). A word which is made prominent by logical stress may stand at the beginning; at the end or in the middle of a sense-group, but it is usually the last stressed word. Sentence stress on words following logical stress either disappears or becomes weak. In addition, functional words may be stressed in some special cases.

Auxiliary, modal and link verbs are stressed in the following positions:

1. At the beginning of the sentence in general and in alternative questions. E.g. *Can you come? Did you meet him?*

2. When they stand for a notional verb in short answers for general questions. E.g. *Yes, I am. Yes, I have.*

3. In contracted negative forms. E.g. *He didn't do it.*

4. *To be* is stressed when final and preceded by the object which is unstressed. E.g. *I want him to be here.*

5. The auxiliary verb *to do* is stressed in emphatic sentences. E.g. *I do like it!*

Prepositions are stressed when they consist of two or more syllables and are followed by an unstressed personal pronoun. E.g. *The dog ran after him.*

Conjunctions are stressed at the beginning of a sentence when followed by an unstressed word. E.g. *When he had gone | she went home too. — If he drives | he may be here at any moment.*

When a **personal pronoun** is connected by the conjunction '*and*' with a noun they are both stressed. E.g. *My mother and I.*

'*Have to*' is stressed in the meaning of '*must*'. E.g. *He has to go.*

The general rules for sentence stress are sometimes not observed; a word that should be stressed according to these rules may be left unstressed. In most cases it is rhythm that is responsible for the omission of stress.

Compounds are influenced in the following way:

1. When preceded by a stressed syllable they are stressed on the second element. E.g. *They are all first-class. It is too old-fashioned.*

2. When used as attributes before nouns stressed on the first syllable, the stress falls on the first element of the compound. E.g. *She is a good-looking girl.*

3. When two nouns occur together the first being used attributively, the second is not stressed. E.g. *film-star, telephone-book.* But if the second noun is polysyllabic, it must be stressed. E.g. *picture gallery, detective story.*

Some words belonging to the *notional parts of speech are not stressed* in certain cases:

1. When a word is repeated in a sense-group immediately following, the repetition is generally unstressed. E.g. How many books have you got? — Two books.
2. Word-substitutes like ‘one’ are usually unstressed. E.g. I don’t like this dress. Show me that red one.
3. When the word ‘most’ does not express comparison, but a high degree of quality and is equivalent to ‘very’ or ‘extremely’ it is not stressed. E.g. This is a most beautiful picture.
4. The pronoun ‘each’ in ‘each other’ is always unstressed. E.g. They loved each other.
5. The adverb ‘so’ in ‘do so’, ‘think so’ is not stressed.
6. The conjunctions ‘as’ in the constructions of the type ‘as well as’ is not stressed.
7. The word ‘street’ in the names of streets is never stressed. E.g. Oxford Street

Generally speaking, the following intonations are distinguished:

1. *Rising Intonation* means that the pitch of the voice increases over time /↗/;
2. *Falling Intonation* means that the pitch decreases with time /↘/;
3. *Dipping Intonation* falls and then rises /↘↗/;
4. *Peaking Intonation* rises and then falls /↗↘/ (Wikipedia, Intonation).

2.2.11.6 The Transcription of Sentence Stress

“In the International Phonetic Alphabet (IPA), *global* rising and falling intonation are marked with a diagonal arrow rising left-to-right /↗/ and falling left-to-right /↘/, respectively. These may be written as part of a syllable, or

separated with a space when they have a broader scope: “*He found it on the street?*” /hi 'faʊnd_ɪt → ɪn ðə \ 'stri:t/ Here the rising pitch on *street* indicates that the question hinges on that word, on where he found it, not whether he found it. “*Yes, he found it on the street.*” /ˈjɛs || hi 'faʊnd_ɪt → ɪn ðə 'stri:t/ “*How did you ever escape?*” /ˈhaʊ ɪd jʊ → 'ɛvə → əˈskeɪp/ Here, as is common with *wh*- questions, there is a rising intonation on the question word, and a falling intonation at the end of the question “(Wikipedia, Intonation).” “More detailed transcription systems for intonation have also been developed, such as ToBI (Tones and Break Indices), RaP (Rhythm and Pitch), and INTSINT” (Breen, 2010).

2.2.11.7 The Uses of Sentence Stress

The uses of sentence stress can be divided into six categories:

1. Informational: For example, in English *I saw a \man in the garden* answers “Who did you see?” or “What happened?”, while *I \saw a man in the garden* answers “Did you hear a man in the garden?”

2. Grammatical: For example, in English a rising pitch turns a statement into a yes-no question, as in *He’s going ↗home?* This use of intonation to express *grammatical mood* is its primary grammatical use (though whether this grammatical function actually exists is controversial).

3. Illocution: The intentional force is signaled in, for example, English *Why \don’t you move to California?* (a question) versus *Why don’t you ↗move to California?* (a suggestion).

4. Attitudinal: High declining pitch signals more excitement than does low declining pitch, as in English *Good ↗morn↗ing* versus *Good morn \ing*.

5. Textual: Linguistic organization beyond the sentence is signaled by the absence of a statement-ending decline in pitch, as in English *The lecture was canceled* (high pitch on both syllables of “canceled”, indicating continuation); *the speaker was ill.* versus *The lecture was can↗celed.* (high

pitch on first syllable of “canceled”, but declining pitch on the second syllable, indicating the end of the first thought) *The speaker was ill.*

6. Indexical: Group membership can be indicated by the use of intonation patterns adopted specifically by that group, such as street vendors, preachers, and possibly women in some cases.

2.2.12 Sentence Stress Teaching Methodology

2.2.12.1 Why Teach Sentence Stress?

Although intonation is particularly difficult for learners of a second language to master, it is seldom taught systematically. Whereas much of the early work on intonation was didactic in nature, recent studies have tended to be more experimental and/or theoretically rigorous. “This has created a gap between intonation as it is used in teaching and intonation research, making it difficult for the results of such research to be of use to teachers of a second language. It is our aim to bridge this gap” (Grize, 2011).

As intonation can be as important as word choice—we do not always realize how much difference intonation makes. Awareness of intonation does aid communication. Incorrect intonation can result in misunderstandings, speakers losing interest or even taking offence! “Though it is unlikely our learners will need native-speaker-level pronunciation, what they do need is greater awareness of intonation in order to facilitate their speaking and listening. Sometimes we hear people whose language is ‘correct’, but something doesn’t sound right. Do they come across as boring or insincere? It may well be that their pitch range isn’t varied enough” (British Council, *Teaching Intonation*). “Apparently, sentence stress strongly depends on intonation” (Demirezen, 1986:119).

2.2.12.2 Awareness-Raising Techniques

There are some techniques which are useful for raising our learners’ awareness of intonation. We must provide them with models and not be afraid to exaggerate our own intonation patterns to dramatize the situation. Intonation doesn’t exist in isolation, so it makes sense to approach it together with other factors. Where patterns associated with intonation and grammar are predictable, they must be highlighted. Some exam-

ples are: Wh-word questions (falling intonation); Yes/No questions (rising intonation); Statements: (falling intonation); Question-Tags: (rising intonation).

“When dealing with such constructions, activities specifically focused on intonation must be practiced. For example, while doing question-tags, students in groups are assigned jobs to mime to each other. Students make notes about what they think each person’s job is. They then have to check that they have understood the jobs. Students use rising/falling intonation question-tags depending on how sure they are: /You’re a pilot ↘ aren’t you ↗/ At the end, students confirm their jobs” (British Council, *Teaching Intonation*).

2.2.12.3 Sentence Stress Attitude, Turn-Taking and Information Structure

It is important that students be aware of the strong link between intonation and attitude, even if it is difficult to provide rules here. The first thing is for learners to recognize the effect of intonation changes. I say the word ‘bananas’ — firstly, with an ‘*interested*’ intonation (varied tone); then ‘*uninterested*’ (flat). Students can identify the two and describe the difference. We then brainstorm attitudes, such as ‘enthusiastic’, ‘bored’, ‘surprised’, and ‘relieved’. The teacher says ‘bananas’ for instance. Students then do the same in pairs, guessing each other’s attitude. This can be developed by asking students to ‘greet’ everybody with a particular attitude. At the end, the class identify each person’s attitude. For younger learners, the teacher can use ‘Mr Men’ characters (Miss Happy, Mr Grumpy, Miss Frightened, etc.).

Each student is allocated a character and, as above, they greet the class with that character’s voice.

Mary: I'm ,LOOKing for 'MARgaret. She ,DIDn't go to 'SCHOOL.

Mother: She ,HAS a high 'TEMperature. She ,HAS to stay in 'BED.

The ,DOctor ,HAS 'ORdered it. She's ,ALso fast a,SLEEP.

Mary: She ,ASKED me to 'COME today. Please ,TELL her that I 'CAME (British Council, *Teaching Intonation*).

“One strange situation is that although their English pronunciation can be considered better than Indian students, some European nationals are often misunderstood or asked to repeat their utterances by their professors and classmates, while it is not the case for

those from India. After a certain period of time, they realize that Indian students' superiority to them is certainly not word pronunciation but rather word stress and sentence intonation, which results in their effect on professors' and classmates' understanding" (Van, Nguyen Thanh, 2010).

Paradoxically, "Pronouncing separate words in a sentence correctly leads to poor pronunciation," observes an experienced teacher. In his preface for the book *American Accent Training*, Cook (2000), states: "If you speak fairly quickly and with strong intonation, you will be understood more easily." This is based on the fact that English is an intonation language, a language which uses pitch to convey ideas or concepts.

"Students of English as a second language are not really aware of the importance of intonation in English communication. Additionally, their intonation practicing is somehow "cosmetic" and not sufficient enough for them to have a good command of English intonation" (Van Nguyen, 2010).

It is obvious that such a study cannot be successful without explicit data on participants' intonation skills and a suitable environment in which to study and develop these skills. Many authors of intonation practice books (e.g. O'Connor and Arnold in *Intonation of Colloquial English* or Cook in *Active Intonation* and *Using Intonation*) provide exercises where speech functions such as polite requests or confirmation questions dictate the intonation patterns which listeners should expect or speakers should employ. The following are some instances used to elicit rising tone:

"1. Echo questions, e.g. You what?

2. Challenging, e.g. On Monday?

3. Conciliation, e.g. Oh really?" (Van Nguyen, 2010).

Attitude: O'Connor and Arnold believe that **intonation** goes with **attitude**. "They list 500 different attitudes. They have four Main Tunes. Attitude is not conveyed by pitch alone. *There is more to context than just pitch.*" (London Style Nyelviskola)

Turn-taking: As for *turn-taking*, rise and fall are used as a signal for when to speak and when not to. People do tend to remain at a high pitch if they want to continue talking, and resort to falling pitch when completing.

Information Structure: O'Connor claims that major stress items pick out the most important words and point to new/unknown information in the sentence. Many linguists and teachers suggest that teachers should focus on teaching *stress* rather than *rise and fall* since there is a massive difference between how different people perceive an utterance. You need a machine to determine whether it is a rise or a fall. "At higher levels - for example, pronunciation sessions for learners involved in the language of negotiation or presentation in fields such as business or education, emphasis should also be given to *Topic Structure* - also related to turn-taking. For Topic Switching: start high. When people switch tack, they mark it with their voice" (London Style Nyelviskola). *Sentence Stress* and *Contrastive Stress* are teachable items. So we must distinguish between production and comprehension in our teaching. We can teach intonation in context, e.g. being angry, and use model dialogs to represent particular functions of the voice. Some practice in linking intonation patterns in dialogs to attitude will probably help in clearer communication of meaning.

Kelly (2000) described the teaching of intonation as the need to "examine the nature of these unconscious processes (perceive, understand and use intonation), bring them to the surface and show how we believe they work." In other words, the teaching of intonation consists of three main phases: careful examination and study of the nature of intonation acquisition, transformation of that nature into clear and understandable pieces of information and presentation of the information to students. Many problems are contained in each of the phases itself.

As stated in Vaissiere (2004), it is difficult to study intonation due to the lack of clear definitions, unified approaches and standardized methods. In addition, the values that linguistics and teachers often use for intonation, such as pitch level/ movement or prominence (loudness or stress), are only relative: one speaker's "mid" pitch could be another's "low" pitch. This example was demonstrated by Ranalli (2002) who stated that values do vary from speaker to speaker and from one situation to another (Mortimer, 2006).

Different ideas in the perception and functions of intonation are the determinants that create different approaches in the teaching of intonation. Traditionally, researchers dealt with intonation first and foremost, using grammatical or attitudinal approaches. Researchers with a *grammatical approach* tended to show connections between intonation patterns and a particular type of grammatical structure.

This can be seen from Kelly's (2000) *Grammatical Structure Intonation Pattern*:

1. Information questions (asked for the first time)- Falling.
2. Questions (expecting a yes/no answer)- Rising.
3. Statements- Falling.
4. Imperatives- Falling.
5. Question tags (expecting confirmation)- Falling Question tags (showing less certainty)- Rising.
6. Lists of items- Rising, rising and finally falling (Kelly, 2000).

This approach has been criticized by Bradford (1998) and McCarthy (1991) as there is no one-to-one relationship between sentence-type and tone of intonation. "Another traditional approach to teaching intonation was the *attitudinal approach*. This approach considered how intonation changed in accordance with the *speaker's attitude*" (Kelly, 2000). However, this approach received criticism from many researchers like Kelly (2000) and McCarthy (1991) because there were too many possibilities to be conveyed. Kelly (2000) pointed out that the same intonation pattern could be used to express different attitudes (e.g. a falling tone for a matter-of-fact or sense of relief). In addition, McCarthy (1991) argued that "almost any emotion can be expressed by any tone contour as displaying a particular attitude or emotion. However, both of these researchers agreed that the links between attitudes and intonation should be applied in teaching and practicing a particular set of utterances."

Recently, linguists have been more interested in an approach developed by Brazil (1995) named the interactive, or *discourse approach*. In this approach, "speech was viewed as a target status of shared understanding that both speaker and listener manage to reach; intonation was considered not only used by the speaker but also by the listener" (Cauldwell & Allen, 1997). "This approach could be summarized as Prominence: prominent, non-prominent syllables; Tone: rise-fall, fall, level, rise, fall-rise; Key: high, mid, low; Termination: high, mid, low" ("Intonation choices in discourse approach" Brazil, 1995, cited by Higuchi, 2000).

With the three approaches above, researchers and teachers have developed different methods and techniques in teaching intonation, which will be presented in the next part of this paper.

Modeling: teachers should provide models for the learners, and it is noticeable that teachers “exaggerate” their intonation so that students may acquire it more easily. Imitating: after giving models, teachers may ask students to imitate their intonation by humming only. Comparing two examples of the same phrase: this is done in two ways. In a receptive way, teachers may let students listen to the two examples, recorded or spoken by teachers themselves. In a productive way, teachers may ask students to practice two sentences in pairs, two minutes as robots without intonation and another two minutes with their normal speaking voices. With reference to Kelly (2000), Sabbadini (2006) also suggested some specific activities for teaching intonation using different approaches.

From the grammatical approach, Sabbadini (2006) offered an activity of using falling/rising tunes to convey their certainty about classmates’ jobs (the jobs were assigned to each student by the teacher). This activity was similar to the one in Kelly (2000) in which each student received a piece of paper with his/her nationality and the level of certainty about some other classmates’ nationalities. Their task was to use falling/rising intonation to ask the others about their nationalities.

With this approach, Scrivener, in his article “Skill: Teaching English Intonation”, suggested that the teacher model the intonation of every sample sentence when teaching a grammar point. From the attitudinal approach, Sabbadini (2006) provided a sample lesson. In the recognition stage, the teacher and students brain-stormed some attitude, such as “interested, uninterested, enthusiastic, or surprised.” Then, the teacher spoke a certain word, “banana” for example, with different intonations and asked students to guess the attitudes conveyed. In the production stage, the teacher assigned students with a particular attitude such as “Miss Happy, Mr. Grumpy or Miss Frightened” and had them speak some given words or phrases. A similar activity was introduced by Counihan (1998), when he asked his students to present different ways of saying “Hello” to a lovely six-month-old baby, to a strict teacher, and to a long lost friend. This activity could be repeated with other structures, other situations and attitudes.

“Greeting and thanking a particular person with different attitudes was also a technique used for a student drill” (Kelly, 2000). In this lesson, Kelly provided students

with a selection of role cards stating their previous relations with Mr. Johnson and asked them to say “Good morning, Mr. Johnson” in appropriate ways.

For students at a higher level, Scrivener let his students work in groups of three with some situation like “Two people think the third one is a thief” or “Today is one person’s birthday”. Each student would speak only the words/phrases written on his paper and simultaneously express his attitude to others. In the discourse approach, Sabbadini (2006) let students look at a scripted dialog between a waiter and two customers in a restaurant and then focus on the waiter’s intonation in new or shared information. This approach was also used to form a lesson by Kelly (2000) when he provided students with different examples of intonation for the same phrase and explained the discourses.

A basic model of the English intonation system must include the following basic features:

- a. The association of the highest tonal peak with the nucleus.
- b. The association of the nucleus with a content word.
- c. Pitch level differences from 3 to 4 to distinguish between neutral and emphatic sentences.
- d. Significant durational differences between stressed and unstressed syllables and words.
- e. Sentence focusing by means of the shifting of the pitch accent over the focused word (Chela-Flores, 2003).

In brief, stress is revealed by more respiratory force compared to the adjacent level of voice. A stressed syllable is usually combined with the characteristics of loudness, length and high pitch. Not necessarily all of these features may be found at every instance of stress. A mastery of the stress placements in English appears to be crucial for a learner of English as a foreign / second language; stress placement in English has significant, in fact, phonemic consequences for discourse. Change of stress placement does bring about a change in the meaning of the spoken word. In addition, a sizeable number of words in English undergo a change in their syntactic role in the case of a shift of stress from one syllable to another. Further, absence of stress in the appropri-

ate syllable in a word will perplex native speakers since they rely almost always on the stress pattern of a word to comprehend it.

In order to teach word stress to our students, we must first raise their awareness and then build confidence in its importance. We can mark the stressed syllables in words in a dictionary. A useful strategy is to focus on one word, putting the stress on its different syllables in turn. For example: /com'PUter/, /'COMputer/, /compu'TER/, and ask them to find the correct one. We can say a word in different ways for the students, really exaggerating the stressed syllable and compressing the unstressed ones. We can ask our students which version of the word sounds 'the best' or 'the most natural'. By hearing the word stressed incorrectly, students can more easily pick out the correct version.

A personalized and effective way of getting students to hear the importance of correct word stress is by using people's names as examples. I introduce word stress with my name: "How many parts/syllables are there in my name?" "Which is the strongest - the first or second?" "Is it /'EMma/ or /Em'MA/?" Then we can question students about their own names - this will give them a personalized connection to the issue of word stress, with a word they will never forget! Any work on aspects of pronunciation can take a long time to show improvement and can be challenging for both the students and the teacher, but working on word stress can be fun, and over time, will help your students to be better understood and more confident speakers.

The algorithm presented here represents a computationally efficient and accurate system for the task of assigning primary stress to English words. Combined with a set of letter-to-sound rules, it allows one to type in any English word and have as output a phonemic representation of the word with the location of the primary stressed syllable. The algorithm for the correct placement of stressing in polysyllabic words has been so designed that if there are any further changes that need to be made to increase the accuracy, this can be accomplished with great facility. However, the rules presented here constitute but the tip of the iceberg, as the full range of the English accentual system demands a more lengthy study and much patience and hard work (Guella, 2005). In spite of time and curriculum constraints, it is worth going to the trouble of systematically reinforcing the adoption of valuable attitudes and strategies by our students. Teaching students English stress placement is a daunting task and a big challenge, but this will certainly have a beneficial effect on their overall communication strategies. For this reason, the stipulation of English stress patterns and rules in the English Language curricula remains an urgent priority and an absolute requirement.

The general basic characteristic of compound and phrasal stresses are that compound stresses are right-headed and inherit their major properties from their head. Furthermore, compounds exhibit a regular compound-specific stress pattern differing systematically from that of phrases. As for the phrases, they are stressed on their second parts; in other words, they have their prominence on their last part. There are basically five elements summing up the compound and phrase stress rules:

1. Compounds combining two nouns have the stress on the first element.

e.g. /'TYPE,WRITer/, /'SUN,RISE/, /'TEA,CUP/, /'SUIT,CASE/

2. Compounds with an adjectival first element and –ed at the end have stress on the second word.

e.g. /,bad-'TEMpered/, /,heavy-'HANDed/

3. Compounds in which the first element is a number tend to have final stress.

e.g. /,THREE-'WHEELer/, /,SECond-'CLASS/, /,FIVE-'FINGer/

4. Compounds functioning as adverbs are usually final-stressed.

e.g. /,HEAD-'FIRST/, /,NORTH-'EAST/, /,DOWN'STREAM/

5. Compounds which function as verbs and have an adverbial first element take final stress.

e.g. /,DOWN-'GRADE/, /,BACK-'PEDAL/, /,ILL-'TREAT/

Natives make few mistakes in distinguishing between the two because they are naturally familiar with them; therefore, the teaching of such stress patterns to learners of English is very important for their progress in pronunciation skills. Such features can be taught by exercising on a list of minimal pairs or pictures representing a relevant compound or phrase and asking them to distinguish between the two. Students hearing a prerecorded tape with the names of the items learned may be asked to indicate which one it is that they have heard. The relevant syllables of the words may be marked with capitalized letters or their phonetic transcriptions may have suprasegmental features on them. Students can also be exposed to some sentences having these elements and asked to distinguish meaning differences based on stress distinction. Thus, the present study will serve its purpose to bring an awareness in students of the distinction between the compound and phrasal stress patterns of the English language in order to enable them to express their meaning more clearly.

Sentence stress along with pitch and rhythm are the main components of intonation, forming all together the music of spoken English. Like word stress, sentence stress can in turn help our students better understand spoken English, and at the same time express meanings and emotions more effectively. Sentence stress is what gives English discourse its rhythm or “beat”. It is this particular emphasis placed on the content words in a sentence that produces the effective articulation and indeed conveys the essential intent in an utterance. In order to teach our learners of English this basic skill of sentence stress, we must first deal with the forms and various functions of intonation, and practice many exercises to make sure that they realize its importance and actually use it in their oral performance.

In this section, a basic model of the English intonation system involving sentence stress features is offered for EFL/ESL programs. This model includes the following basic features:

- a. The association of the highest tonal peak with the nucleus.
- b. The association of the nucleus with a content word.
- c. Pitch level differences from 3 to 4 to distinguish between neutral and emphatic sentences.
- d. Significant durational differences between stressed and unstressed syllables and words.
- e. Sentence focusing by means of the shifting of the pitch accent over the focused word.

Reference has been made to many forms of sentences and grammatical structures such as Wh-questions, Yes-No questions, commands, exclamations, etc. Rhythm is suggested as the starting point of the instruction, together with intonational features such as the association of the highest tonal peak with the nucleus and the nucleus with the content word. The teaching technique suggested here forces the learner to focus on the phonological patterns without the normal segments and sequences with which they co-occur in language, so that the learner can more accurately discriminate the auditory effects of the suprasegmental features.

2.3. PITCH PHONEMES

2.3.1 What is Pitch?

“Pitch is one of the acoustic correlates of stress. From a physiological point of view, pitch is primarily dependent on the rate of vibration of the vocal cords” Cruttenden (1986). When the vocal cords are stretched, the pitch of voice increases. Pitch variations in speech are realized by the alteration of the tension of the vocal cords. The rate of vibration in the vocal cords is increased by more air pressure from the lungs. In an overwhelming majority of syllables that are stressed, a higher pitch is observed. Therefore, loudness, to a certain extent, contributes to the makeup of pitch. That is, higher pitch is heard as louder than lower pitch. Pitch brings music to intonation. Everyone has a different voice and in general, men’s voices are lower than women’s and children’s. Pitch range and key show our emotions, for they vary depending upon whether we are excited, worried, nervous, tired, and so on. Although pitch is relative to the individual voice, there are four pitch phonemes that are important for the non-native learner to master:

/⁴/ extra high pitch phoneme

/³/ high pitch phoneme

/²/ middle pitch phoneme

/¹/ low pitch phoneme (Celce-Murcia, 2010)

Normal conversation moves between middle and high pitch, with low pitch typically signaling the end of an utterance. The extra high level is generally used to express a strong emotion such as surprise, great enthusiasm, or disbelief, and it is the pitch level that is often used in contrastive or emphatic stress. English makes use of pitch variation over the length of an entire utterance rather than in one word. British English tends to use the extra high level more, and in this way a British speaker may sound rather dramatic to an American. Pitch is the most complex of the suprasegmental elements that apply to utterances. The concept of pitch is associated with its various forms and terms as pitch levels, pitch phonemes, pitch ranges, pitch keys, pitch contours, relative pitches, and perfect pitch or tone as the case may require. In order to improve the students’ pronunciation while teaching this particular suprasegmental feature, they are drilled in detail on different pitch patterns such as the fall, the rise-fall, the rise, and the fall-rise as well as the relationship of pitch with words, phrases, clauses, simple sentences, compound sentences, complex sentences, compound complex sentences and various pitch types such as contrastive and emphatic pitch.

By taking advantage of modern technology, computer-generated pitch-tracking software can also be effectively utilized to teach basic intonation contours. With the current emphasis on communicative and sociocultural competence, more attention should be paid to discourse-level communication as well as to cross-cultural differences in pitch patterns. “Hence, software programs must have the capability to distinguish meaningful intonation features with regard to changes in pitch, volume, and tempo. Such programs are envisioned as going beyond the sentence level, and addressing the multiple levels of communicative competence: attitudinal, grammatical, discourse, and sociolinguistic” (Celce-Murcia, 2010).

2.3.2 Phonemic Status of the Pitches in Minimal Pairs

The following two sentences carry the structure on the surface, but above the surface the second one is in a question form which is indicated by a question mark. That marks the change of meaning; thus, all of the pitches which are /¹/, /²/, and /³/ are separate phonemes in English, as dictated in the following pitch waves on Audacity program:



I got mud on my pants. (A declarative statement)
 /²I got mud on my ³pants¹/



I got mud on my pants? (A question)
 /²I got mud on my ³pants³/

Similarly, in the following two utterances, the statement form “Don’t yell at me.” carries a waveform like:



/²Don't ³yell at me¹/ (A statement)

Whereas its exclamation form “Don’t yell at me!” carries a waveform like this:



/²Don't ⁴yell at me¹/ (An exclamation)

It can be deduced from these two waveforms that the pitch phonemes /¹/, /²/, /³/, and /⁴/, which take place in these two utterances, are singled out as different pitch phonemes in English. Pitch phonemes with the accompaniment of junctures establish the *intonation contours* or *tones* in spoken utterances. These show the common ground that exists between speaker and listener as the area in which their world views converge. North “American English pitch has four levels: low /¹/, middle /²/, high /³/, and very high /⁴/. Normal conversation is usually at middle or high pitch; low pitch occurs at the end of utterances other than yes-no questions, while high pitch occurs at the end of yes-no questions. Very high pitch is for strong emotion or emphasis” (Celce-Murcia, 2010).

2.3.3 The Phonetic Nature of Pitch in Applied and Educational Phonetics

Pitch seems to be the common thread running through most definitions or descriptions of intonation. Cruttenden (1998) describes pitch as the perceptual correlate of fundamental frequency which, in essence, is the continuous variation in “the sounds we perceive as a result of the vibration of the vocal cords.” To be sure, the falling and

rising of tones can be sudden or gradual, and thus, may be grouped together in various combinations (rise-fall-rise, fall-rise-fall, etc.). It is common knowledge that speakers use pitch to send various messages. The following example illustrates the significance of pitch in everyday communication.

If Ali says: “There isn’t any salt on the table,” Layla might repeat the same words but with gradually rising pitch. This would have the effect of sending a message such as: “Are you sure? I am amazed. I am sure I put it there.” Alternatively, Layla might want to send the message: “There is salt somewhere, but not on the table,” in which case she could do this by using a falling then rising pitch on the word “table” (Saleh, 2004).

Prominence in an utterance is a syllable on which there is a major pitch movement. Tone pitch movements are distinguished by their particular direction or contour. Brazil (1985) suggests five movements: “falling, rising, fall-rise, rise-fall, and level.” Key is the relative pitch level chosen by speakers for each tone unit. Three choices are proposed: low, middle, and high.

Equally important is the increasing evidence that out of the four most common international functions (attitudinal, grammatical, accentual, and discourse) there is a noticeable movement towards adopting the discourse view of intonation (DI), particularly in teaching new language learners. This seems to be the case because according to Hewings (1995:251-265), “DI tends to view speech as a purpose-driven activity where speakers and hearers cooperate to reach the desired goal of shared understanding.”

It is equally important to stress any particular pitch level, pitch movement, and prominence to signal any *particular meaning*. For example, one speaker’s ‘mid’ pitch would be another speaker’s ‘low’ pitch. “Values do vary from speaker to speaker and in accordance to the context of the situation” (Ranalli, 2002). Underhill (1994) describes pitch as “one of the acoustic correlates of stress.” From a physiological point of view, pitch is “primarily dependent on the rate of vibration of the vocal cords” (Cruttenden, 1986). When the vocal cords are stretched, the pitch of the voice increases. “Pitch variations in speech are realized by the alteration of the tension of the vocal cords” (Ladefoged, 1982). The rate of vibration in the vocal cords is increased by more air pressure from the lungs. In an overwhelming majority of syllables that are stressed, a higher pitch is observed. Therefore, loudness to a certain extent contributes to the make-up of pitch. That is, higher pitch is heard as being louder than lower pitch. The most impor-

tant of all factors for the pitch of the voice is the vibration of the vocal cords. When the frequency of vibration increases, so does the pitch. Therefore, pitch is said to be “operative only on voiced sounds” (Demirezen, 1986). Pitch is never steady in a stream of speech, and it is in a continuous state of change, even in the pronunciation of a single syllable.

All languages have one or more ways to show the difference between *new* and *old information*, but English relies on intonation for this purpose more than most other languages because it is a *stress-timed* language. When a word becomes the focus of meaning, the stressed syllable of the word (the peak syllable) is marked by a major change in pitch. While the pitch change that marks the peak syllable in a thought group is usually a rise pitch (as in the examples above), it does not always have to be so. Each speaker has a natural baseline pitch for speaking, and varies from this baseline (either up or down) in order to call attention to the focus word.

Patel (2008) makes the following observation about the direction of pitch changes: “In intonation languages such as English (in which pitch does not distinguish lexical items, as it does in tone languages), the direction of the pitch change is seldom crucial to understanding.” For example, if a pitch movement is used to signal focus on a word, it may matter little to a listener if the movement is upward or downward, as long as it is salient and detectable.

In English, “pitch changes are the most important signal of *new information*, or information of *special importance*” (Bolinger 1986). The stressed syllable is lengthened in order to make the pitch change easier to hear. If there has been adequate practice in recognizing lengthened syllables in previous course work, adding pitch should be a manageable task at this point. However, unless students have been trained to pay attention to the contrastive signal, they are apt to fail to notice it, and therefore miss the point. For that reason, students should be taught to listen for the acoustic emphasis given to focus words. This helps them learn to listen selectively, rather than give equal attention to every word they hear. “Listening for emphasis guides listeners to the essence of the message” (Brazil et al., 1980; McNerney & Mendelsohn, 1992).

The pitch of a sound is an *auditory property* that enables a listener to place it on a scale going from low to high, without considering its acoustic properties. In practice, when a speech sound goes up in frequency, it also goes up in pitch. For the most part,

at the introductory level of the subject, the pitch of a sound may be equated with its fundamental frequency, and, indeed, some books do not distinguish between the two terms, using pitch for both the auditory property and the physical attribute. The pitch pattern in a sentence with the accompaniment of junctures is known as the *intonation*.

Children can also use the same intonation patterns as adults, although their voices have a higher pitch. “The absolute values are never linguistically important, but they do, of course, convey information about the speaker’s age, sex, emotional state, and attitude toward the topic under discussion” (Ladefoged, 2006).

Tonal events are not only associated with pitch direction and pitch accent but also with pitch height. ESL/EFL pronunciation textbooks have traditionally distinguished four levels of phonetic pitch for English. “A neutral declarative sentence would have one of the most common intonation patterns in English, usually referred to as the rising-falling contour” (Celce-Murcia et al., 1996), that includes four levels of phonetic pitch: He arrived with his ²COUSin. The intonation contour in neutral declarative utterances typically begins with a middle level (²), rising to a level three on the last content word and then finally falling to a bottom or low level (¹) which is usually the lowest that the speaker’s pitch reaches. “There is an extra pitch height or level (⁴) for situations where emphasis, contrast or strong feelings are to be expressed” (Celce-Murcia et al., 1996). We have original statements, clarification questions and repeated information. “To illustrate this pitch incident, the following dialogs are taken from” Chela-Flores (2001), but the working mechanism of the pitch patterns have been developed by the writer of this dissertation:

A: I’m going to New York / ²I’m going to ³New York¹/

B: WHERE? – New York! / ²³WHERE¹ – ²New ³York³/

Do you have Mary’s PHONE number? / ²Do you have Mary’s ³PHONE number³/

A: WHOSE? /²³WHOSE¹/

B: MARY’s. /²³MARY’s¹/

Another case:

A: Ted likes the BLUE one best. /²Ted likes the ³BLUE one best¹/

B: WHICH one? /²³WHICH one³/

A: The BLUE one! /²The ³BLUE one¹/

Another example:

A: I can't find the CAR keys. /²1 can't find the ³CAR keys¹/

B: WHICH keys? / ²³WHICH keys¹/

A: The CAR keys! /²The ³CAR keys¹/

Here is another application:

A: I'm taking my vacation in NoVEMber. /²1'm taking my vacation in No³VEMber¹/

B: WHEN? /²³WHEN³/

A: In NoVEMber. /²In No³VEMber¹/ (Chela-Flores, 2001)

In English, “the discourse context generally influences which stressed words in an utterance receive prominence, and these highlighted words co-occur with the tonal peaks in the intonation unit; thus, pitch and prominence can be said to have a symbiotic relationship with each other in English, and the interrelationship of these phenomena determines the intonation contour of a given utterance” (Celce-Murcia et al., 1996). There are various reasons that generally influence the speaker as to which word he/she wishes to highlight. Words representing *new information* in English are spoken with a stronger stress and higher pitch, whereas words expressing old or given information are spoken with a lower pitch.

Since pitch exists in all languages, it is one of the inherent qualities of human speech sounds. It is the frequency of vibrations of the human voice heard in highness and lowness of tones during the act of speech. Articulatorily speaking, this means that “if we impose more tension on the production of some sounds, they will carry higher pitches because the frequency of vibrations will be directly proportional to the tension of the physical rate” (Demirezen, 1986). “Pitch depends primarily upon the frequency of the sound pressure and the waveform of the stimulus” (Crystal, 1969). In other words, if a sound is stressed, it will obviously be heard in a high tone because the variations in stress co-occur in association with the position of the vocal cords in different articulation types. For this reason, there have been some complaints about the description of pitch: that it comes out as the acoustic results of speed of the vibrations of vocal cords in the voiced part of utterances; that it does not apply to voiceless sounds; and that it does not handle whispered speech. But the fact to be remembered here is that “in all languages, generally speaking, voiced segments outnumber the voiceless ones” (Demirezen, 1986).

So, the correlation between pitch and vibration is that of a one-to-one relationship. It follows from this statement that a high level of vibration of the vocal cords creates a high-pitched sound, while a slow vibration yields a low-pitched sound. Thus, “every speech possesses a fundamental pitch which determines the nature of such speech sounds as stops, fricatives, affricates, nasals, laterals, liquids, vowels, semi-vowels, obstruents, sonorants, creaky voice, and so on” (Demirezen, 1986). Variations of pitch are more easily produced using voiced sounds because of their regular wave form. “It is, however, possible to hear pitch contrasts in voiceless sounds” (Crystal, 1980). However, the pitch of voiceless sounds is not so loud, and therefore more limited. That is the reason we are more conscious of voiced sounds, which require stronger pitches for their phonation.

In acoustics, pitch is measured in cycles per second (c.p.s.) which are the number of times the vocal cords activate in a second by opening and closing. Since women have, anatomically speaking, shorter vocal cords, they have higher pitch than men, owing to the faster activation of the vocal bands. Articulatorily speaking, pitch is the capture of speech by the human hearing mechanism in fluctuations of up and down vibrations, which create what is called the relative pitch. “The relative pitch gives four different means of differentiation in the formulation of words: /¹/ low pitch phoneme, /²/ normal (mid) pitch phoneme, /³/ high pitch phoneme, /⁴/ extra-high pitch phoneme” (Demirezen, 1986).

In suprasegmental analysis, pitch has a distinctive place. Pitch is a specific activation in the larynx and is individual – specific. In other words, it reflects the personal features of the speech of individuals. In addition, the pitch of the voice usually indicates whether the speaker is male or female and, to some extent, his or her age. “In addition, it conveys a great deal of non-linguistic information about the individual’s emotional state- whether he is calm or angry, whether he is happy or sad” (Ladefoged, 1975). Such information, which is not measureable by any means of segmental analysis, is called paralinguistic and is made available via prosodic studies. “Paralinguistic features indicate the special modifications of a speaker’s voice quality for a particular effect, e.g.: he may use a whisper, a breathy or creaky voice, or a falsetto; he may be stimulated to accompany his utterance with a laughing or sobbing or whining feature” (Gimson, 1970).

In the processing of the pitch level characteristic of a simple statement, the voice begins with pitch /²/ which is the normal level to start with, and stays there till the primary stress is reached, then it rises to pitch /³/ (the distance up to here is the intended meaning of the sentence), and then drops to level one /²³¹/. In some instances, if we

want a special emphasis, the pitch level climbs up to pitch /⁴/ on the word we want to emphasize, as in /²Coffee ³please ² → ²⁴nothing else¹/

The pitches, therefore, combine into patterns to make meaningful melodies (or intonations) over the whole phrase or sentence. The melodies close down by using three methods of closure, which were previously referred to as terminal junctures. The first is known as the fading terminal juncture and is distinctly characterized by a rapid fade-away of the voice into word-final silence, as seen in the sentence below. The distribution of the pitch phonemes of an utterance, plus the terminal juncture, makes up the Intonation Contour. Every intonation consists of pitch phonemes rising to a single peak and falling from that peak to a terminal juncture. An example of intonation contour is: /²I ³went camping¹\./.

2.3.4 The Distributions of Pitch Patterns

2.3.4.1 The Fall Tone

A falling tone is by far the most commonly used tone of all. It signals a sense of finality, completion, and belief in the content of the utterance. By choosing a falling tone, a speaker offers the hearer a chance to comment on, agree or disagree with, or add to his/her utterance. Although this tone does not solicit a response, it is up to the hearer to produce such a response if he/she so desires. Nonetheless, it would be polite for the hearer to at least acknowledge in some manner that he/she is part of the ongoing discourse. Some of the areas in which a falling tone is used are in proclaiming expressions, e.g., I've spoken with the CLEANer. Questions that begin with 'wh-questions' are generally pronounced with a falling tone, e.g., Where is the PENCIL? Imperative statements also have a falling tone, e.g., Go and see a DOCTOR. According to Chahal (1999), "Arab students often face difficulties with the falling tones of the English language." "This usually arises from the fact that, since Arabic tends to use a narrower range of falling pitch over phrases or clauses, a native English speaker may interpret the spoken English of an Arabic speaker as indecisive or inconclusive for lack of the correct completion signals" (Saleh 2004).

The fall is the most common category in British English. The simple fall starts with the first syllable in the utterance and continues to the tonic syllable. Any syllables after the tonic remain on the same pitch level as the tonic. The initial pitch may be either high /³/

or extra high /⁴/, the difference in British English being that the extra high pitch may signify either greater certainty or more politeness. The tonic syllable is a definite low pitch /¹/, unless it is the first syllable in the unit, when it has high pitch /³/. The fall is a rather smooth one, although syllables with weak stress retain the pitch level of the previous syllable. The syllables after the tonic remain at the same pitch as the tonic itself (Ridgeway, 1999). The pattern is therefore /⁴/, /³/, /²/, /¹/ and it is used in the following situations:

+ Wh- questions:

Where are you GOing? /²where are you ³GOing¹/

How ARE you? /²How ³ARE you¹/

+ Suggestions:

How about TEA for breakfast? /²How about ³TEA for breakfast¹/

Let's go to the CINema tonight. /²Let's go to the ³CINema tonight¹/

(The American English pattern may coincide with that of declaratives.)

Imperatives:

Bring me a cup of tea! /²⁴BRING me a cup of tea¹/

Go! /²⁴GO¹/ or /²³GO¹/

(The American English pattern is either /231/ or /241/.)

Question tags expecting agreement:

It is, isn't it? /²It ³is² → ²³isn't it¹/ (Here, the speaker is sure.)

We aren't, are we? /²We ³aren't² → ²are ³we³/ (Here, the speaker is unsure.)

2.3.4.2 The Fall-Rise Tone /↘↗/

This tone, according and many others such as Kumaki (2003), usually signals dependency, continuity, and non-finality. It generally occurs in non-final intonation units or sentences. For example, when the words “city” and “presumably” are pronounced in the following context, they are said with a fall rise tone (the arrow → indicates a pause):

a. A quick tour of the CIty → would be nice.

/²A quick tour of the ³↘CIty↗³ → ²would be ³nice¹/

b) PreSUmably → he thinks he CAN? /²Pre³Sumably² → ²he ↘thinks he

³CAN↗³/

According to Brazil (1985) and Kumaki (2003), when an English complex clause has two intonation units, the first, or non-final, normally has a 'fall-rise', while the second, or final, has a falling tone. Therefore, the tone observed in non-final intonation units can be said to have a 'dependency' tone, which is 'fall-rise'. It should be noted that rising and fall-rise tones tell the hearer that the tone unit refers to a part of the message that both the speaker and the hearer know about already. For this reason these tones are called referring tones. When the speaker is telling something, a referring tone means that this part of the message is already shared. When the speaker is asking, it means that he/she assumes that this part of the message is shared but he/she wants to make sure by asking the hearer to confirm it. Referring tones carry the social meaning of togetherness or convergence in contrast with separateness or divergence.

The fall-rise is a subsidiary category of the rise (the pitch movement over the tonic and following syllables rises). The rise either conveys incompleteness or the authority of the listener, and is often connected with being polite. This generally starts with a high or mid-level pitch. The pitch drops suddenly on the tonic and rises to a mid-level pitch on the last syllable.

The items given above are simplified patterns for students and, as can be seen, there are a number of differences in this area between British and North American English. This means that it is difficult to teach an internationally acceptable standard, although more research in this area may reveal a way (Ridgeway, 1999). When students are thinking about the type of pitch pattern to apply they need to ask themselves about the function of the utterance, as well as whether it is a continuing or a terminating section of speech. Being confident in the placement of the tonic is crucial, for if this is wrong, the students will sound very strange when changing pitch in the wrong part of a sentence.

2.3.4.3 The Rise Tone /↗/

The rise tone is indicated by /²³³↗/ pattern with the accompaniment of the /rising juncture /↗/, the two of which make the rising intonation. According to Kumaki (2003) and Demirezen (1986), "the rising tone is used when seeking to lead or take control briefly in the course of a conversation where speakers and hearers have equal rights." Dominant speakers have a choice between using the rising tone to underline their present status as a controller of the discourse or refraining from doing so. Such speakers could be chairpersons appointed in advance, or even storytellers who hold the position by

unspoken agreement for the time being. Rising tones are also used in genuine ‘Yes/No’ questions where the speaker is sure that he/she does not know the answer, and that the hearer knows the answer. Such Yes/No questions are uttered with a rising tone. The following question, Isn’t he NICE? (²Isn’t he ³NICE³↗), uttered with a rising tone can have as its answer either Yes, No, or I don’t know.

The same question, which is uttered with a falling tone, can only have one appropriate answer, which is Yes. A rising tone is used if the tonic stress is uttered with extra pitch height. The rising pattern starts at the tonic and continues until the end. In British English this is particularly used to express uncertainty, surprise or even disbelief, and a rise to an extra high pitch adds strength to this expression.

2.3.4.4 The Rise-Fall Tone /↗↘/

Like the previous one, this tone is not the referring but the proclaiming type. Brazil (1985), in Kumaki (2003) states that proclaiming tones indicate that “the tone unit as a part of the message is not yet shared. When the speaker is telling something, a proclaiming tone means that he/she does not think the hearer has certain information that the speaker has. When asking, it means that the hearer has some information that the speaker does not possess. By asking the questions with the proclaiming tone, all the questions are considered to be asked without any expectations about the replies.” The use of the ‘rise-fall’ tone indicates not only the speaker’s exclamation, but also his intention of controlling the discourse, and his/her expectation of a certain reaction from the hearer.

Chun (1998) believes that “computer-generated pitch-tracking software can be effectively utilized to teach basic intonation contours. It is also believed that with the current emphasis on communicative and sociocultural competence, more attention should be paid to discourse-level communication as well as to cross-cultural differences in pitch patterns.” Hence, software programs must have the capability to distinguish meaningful intonation features with regard to changes in pitch, volume, and tempo. “Indeed, such programs are envisioned to go beyond the sentence level and address the multiple levels of communicative competence: attitudinal, grammatical, discourse, and sociolinguistic” (Saleh, 2004).

The rise-fall is a subsidiary category of the fall (the pitch movement over the tonic falls). In this pitch pattern the fall at the end indicates finality. The tonic is highlighted

by contrast with the prior syllables which are at a lower pitch. The general pattern is /²³³/↗ and /²³¹\↘/, although to express more emotive phrases the extra high pitch may be used. It occurs in these situations.

+ Declarative (and termination) statements:

Mother's not WELL. /²Mother's not ³↗WELL1↘/.

She's gone to the ³DOCTOR's. /²She's gone to the ³↗DOCTOR's¹\↘/

WhenEVER you prefer. /²When³↗EVER you prefer1↘/.

+ Termination of a continued list:

She went to the doctor's → and the dentist's.

/²She went to the ³↗DOCTORS²\↘ → ²and the ³↗DENTIST's¹\↘/

It was expensive → but good. /²It was ³↗EXPENSIVE²\↘ → ³but ³↗GOOD1↘/

+ Emotive statements:

We had SUCH a good time! /²We had ↗³SUCH↘ a good time¹/

It was a BRILLiant performance! /²It was a ³↗BRILLiant↘ performance¹/

2.3.5 Other Functions of Pitch

2.3.5.1 Contrastive Pitch

Contrastive pitch combines with contrastive stress to highlight different words in the intonation unit in order to give a specific meaning. It is crucial that the students are confident in identifying the tonic in contrastive stress and reply to questions on another situation where contrastive pitch is crucial (Ridgeway, 1999). Providing students are careful to focus the pitch change on the tonic, they should have no problem with this topic2.

“Children can use contrastive pitch accent in on-line processing. English-speaking adults interpret the L+H pitch accent as evoking a contrast between discourse items leading to an anticipatory fixation to a target referent” (Ito & Speer, 2008). “Other research suggests English-speaking children do not acquire an understanding of L+H until the age of 10” (Cruttenden, 1965) “even though they can produce utterances with L+H correctly as young as 4” (Wells et al., 2004).

2.3.5.2 Emphatic Pitch

In order to give emotive emphasis, extra high pitch will coincide with the tonic (Ridgeway, 1999). As previously mentioned, certain structures and emphatic words normally carry emphatic intonation. Here are some examples:

We had SUCH a good day! /²We had ⁴SUCH a good day¹/
You DO cook well. /²You ⁴DO cook well¹/
You MUST go to Egypt. /²You ⁴MUST go to Egypt¹/
He's in PRISon? /²He's in ⁴PRISon¹/ (Expressing shock as an echo question)
It was ABSolutely wonderful! /²It was ⁴ABSolutely wonderful¹/
It was absolutely WONderful? /²It was absolutely ⁴WONderful¹/

In the last two examples extra high pitch is possible in either position as both words are escapable of receiving the tonic. There is no significant difference in meaning; rather it depends on the style of the speaker. Students will need practice at emphatic pitch because they will probably find it dramatic and rather embarrassing. It is possible, however, to turn exercises into fun in the classroom.

2.3.5.3 The Difference between Pitch Words and Stressed Words

Pitch words are created similarly to stressed words. Both kinds of words have some or all of the following characteristics in their stressed syllable: altered pitch, lengthening, and increase in loudness. However, there are differences between stressed words and pitch words, both in their creation and their use. In short, the stressed syllables of pitch words are louder, longer, and have a greater change in pitch than the stressed syllables of stressed words. Pitch words also convey more information than stressed words. In the following sentences, the words *like* and *where's* are stressed words. The words *water* and *baby* are stressed words and pitch words: {I like some WAter.}, {Where's the Baby?} Stressed words are the important words of the sentence, the words that comprise the contents of the dialog and help the listener and speaker focus on the same information said with a slight pitch change, a little louder, or for more time than surrounding words used to create the underlying rhythm of English. As for the pitch words, they are the most valuable and relevant words, the words that allow the interpretation of the dialog said with a greater change in pitch, loudness, or length of time than stressed words (Pitch Words, Pronuncian.com).

2.3.5.4 Pitch on Words: Microanalysis for Teaching Methodology of Pitches

Every utterance contains a single peak of stress, a single peak of pitch and ends in a terminal juncture. The highest pitch phoneme usually falls on the syllable which has the primary stress. When words are uttered in isolation they use the same pattern as declaratives, i.e. /²³¹/. To demonstrate the tonic syllable, capital letters are used. Here are some examples:

/²³CAT¹/ /²³Educated¹/ /²un³CER¹tain¹/ /²eco³NO¹Mic¹/
/²³MOTHer¹/ /²³Alcoholism¹/ /²in³VARiable¹/ /²objec³TIVity¹/
/²³YESTerday¹/ /²be³LIEVE¹/ /²im³POSSible¹/ /²under³STAND¹/

Emphatic adjectives may retain their emphatic stress when uttered in isolation. The pattern for these words is therefore /²³¹/: /²³huge¹/, /²won³derful¹/, and /²hi³larious¹/. Compound and compound complex words follow the same pattern as ordinary words, i.e. /²³¹/: /²³sunflower¹/, /²³grand-daughter¹/, /²under³line¹/, /²north-³east¹/, /²³green-house gas¹/, /²³good-for-nothing¹/.

Although the pitch patterns for words are simple, students may have more problems with emphatic adjectives because of the extreme pitch movement. They also need to know word stress well in order to be confident about changing pitch at that point. Practice here will reinforce what they have already learned with regard to word stress.

2.3.5.5 Pitch Phonemes on Phrases

Phrases uttered in isolation will take the intonation pattern appropriate for the type of utterance. Many phrases in connected speech will be part of a longer utterance which may be separated off by commas; if so, they will therefore fall into the category of being part of an unfinished sentence or terminating a sentence. These are examples of phrases that do not contain commas. They are not too long (in terms of the number of strongly stressed syllables) and therefore no pause is required. They show the close relationship between pitch and pause juncture unit; the requirements of pitch may be even more important than punctuation or stress in dividing an utterance into such units:

/²out ³of date¹/ /²yesterday's ³fashions¹/ /²a ³dozen eggs¹/
/²as ³quick as a fox¹/ /²a ³young country¹/ /²a ³lot of people¹/
/²³just in time¹/ /²a ³zest for life¹/ /²a ³little water¹/

When a phrase becomes longer, or is connected to a simple sentence, pause junctures mean that more than one pitch pattern is allocated, as in the following examples:

/²The best days of his ³LIFE² → ²were nearly ³Over¹/

/²Gnashing his ³TEETH² → the ²viscous ³DOG² → ²pre³pared to fight¹/

/²He ran fast as ³LIGHTening² → ²away from ³the scene¹/

Phrases in appositions also follow this pattern: The student must be very careful to spot the place of the primary stress (or tonic stress) which magnetically attracts the pitch /3/ upon itself:

/²Their ³PARents² → ²Brenda and ³GEORGE² → ²have been married for fifty ³YEARS¹/.

As do short asides, which may be on a lower pitch to parallel their low information status:

/²You're ³RIGHT² → ²they should have said be³FOREhand¹/.

/²You ³KNOW² → ²of ³COURSE² → ²about the extra ³LESsons¹/.

Phrases are a minimal unit of information and so pitch is applied over the length of the phrase. The precise pitch pattern employed depends on whether it is continuing in or terminating a sentence. When terminating, it is important to consider whether it is a question, exclamation, etc.

2.3.5.6 Pitch on Clauses

Pitch applied to clauses depends upon the status, position and function of the clause. In this example, the clauses are separated by a comma; the first is the subordinate clause, an unfinished statement, and the second, the main clause which terminates the utterance. The example statements given below are taken from the *Longman Dictionary of American English* (2004); the words in capital letters carry the primary stress:

Noun Clauses:

/²All I ³WANT² → ²is a ³CUP of coffee¹/

/²³WHAT you see² → ²is ³WHAT you get¹/

/²What ³I need² → ²is a nice ³HOT bath¹/
/²Whoever gets ³there first² → ²can find a ³table¹/

Adverbial clauses:

/²When you go to ³ANKARA² → ²will you get me a ³BOOK³/
/²If¹ ³WERE you² → ²I'd rent a ³YACHT¹/
/²Whenever you're ³ANGry² → ²try to take a ³DEEP breath¹/
/²Even though she worked ³HARD² → ²she never seemed to ³LEARN much¹/
/²I like to listen to ³MUSIC → ² while I'm taking a ³BATH¹/
/²As she walked ³PAST² → ²I caught a ³WHIFF of her perfume¹/

Adjective Clauses

/²This is the ³BOOK² → ²which I ³TOLD you about¹/
/²That's the ³WOMAN² → ²who ³OWNS the house¹/
/²She asked her ³ENGLISH teacher² → ²who had ³ALSO studied Latin¹/
/²This is ³DENISE² → ²who'll be your ³GUIDE today¹/

It must be noted in all these examples that when the clauses are reversed, no comma exists, although a pause is normal in clear speech. The final clause in such cases will have a /²³¹/ pitch pattern, although sometimes there is a rise at the end. This rise is connected with the function of the utterance. "If I were you" is a structure used to give advice and the rise is connected with being polite. The yes / no question also rises at the end, to indicate that such an answer is expected. Other declarative utterances fall at the end, in the usual way:

/²Will you get me a ³book² → ²when you go to ³Ankara¹/
/²I'd rent a ³YACHT² → ²if ³I were you¹/
/²Try to take a ³deep breath² → ²whenever you're ³ANGry¹/
/²She never seemed to ³learn much² → ²even though she worked ³hard¹/

A terminating pitch pattern serves to highlight the main clause in a misleading sentence:

/²She ³moved on² → ²to the ³LEFT of the garden seat¹/
/²He went ³further in² → ²to the ³table¹/
/²They ³travelled further down² → ²under the ³moonlight¹/

When a change is made to and from direct speech, the termination of the actual words being quoted takes the appropriate pitch pattern for ending (question, exclamation, etc.) The subordinate clause does not use a high pitch, indicating that it is not part of the actual words being quoted:

/²I ³love the flowers² → ²she ³said² → ²they're really ³beautiful¹/
/It's a ³great place² → ²exclaimed the ³girl¹/
/²She ³shouted² → ²³Hey³ → ²Come ³here¹/

Students need to think carefully when applying pitch to clauses because they have to be aware of the functions of clauses and how this affects pitch, depending on the position of the clause in the sentence.

2.3.6 Pitch and Sentence Relations

2.3.6.1 Pitches on Simple Sentences

The sentence type and function determines the pitch pattern used, as previously explained. In short simple sentences with no internal pause junctures, the pitch patterns are simply applied to the sentence as a whole:

/²Where are ³YOU from¹/ (a wh-question)
/²I'm learning Japa³NESE¹/ (a declarative)
/²Can you swim very ³FAST³/ (a yes / no question)

When the sentence is long enough for a pause to break it up, the first sections will have the unfinished sentence pitch pattern and the last section the declarative statement:

/²The ³little green car² → ²drove ³SLOWly² → ²around the ³VILLage¹/
/²Was the ³PRETty² → ²fair/haired ³CHILD² → ²playing in the ³GARDen¹/
/²The smartly dressed ³MAN² → ²got out a ³shiny expensive looking² →
²leather ³wallet¹/

The pitch pattern can assist juncture in helping the listener to distinguish between an idiom and a choice:

/²Would you like ³one or two³/
/²Would you like ³one² → ²or ³two³/

Breaking a sentence into sections can alter the general pitch pattern for the type of sentence. Compare this short question and suggestion with the longer versions which include options. The end of a list of options is a termination pattern and the question pattern is lost:

/²Did you ³rent your car³/
/²Did you ³rent² → ²or ³buy ¹your car³/
/²Would you like ³tea³/
/²Would you like ³tea² → ²co³ffee² → ²or ³orange juice¹/

Applying pitch to simple sentences means thinking about the sentence type or function, and taking into consideration whether it is the termination of an utterance. Students will need practice at all the different sentence types in order to become confident in their choice of pitch pattern.

2.3.6.2 Pitch on Compounds

Sentences bound by co-ordinate conjunctions are automatically combined into an unfinished and an appropriate pitch pattern for the type of utterance:

/²He was ³BUSy² → ²and he was ³happy¹/
/²He was ³wise² → ²but was he ³WEALthy³/
/²He wasn't a good ³GARDener² → ²yet his lawn was ³beau¹tiful¹/

When sentences are compounded using a semicolon, where both sections have equal importance, the first takes rising intonation and the second falling intonation, thus creating a balance:

/²It was an ex³CI¹ting story² → ²it was a ³SAD story¹/

Where there is a main clause followed by a subsidiary clause, both take a declarative (terminating) pitch pattern:

/²I am not getting enough ³EXer¹cise² → ²I ought to join the ³SPORTS club¹/

When conjunctive adverbs are bounded by a semicolon and a comma, the main clause and the subsidiary clause, both take a declarative (terminating) pitch pattern, and the conjunctive adverbs an unfinished sentence pattern:

/²Janet's ³very tall² → ²more³Over² ²she dresses ³SMARTly¹/
/²He lost his leg in an ³accident² → ²ho³wever² → ²he gets around ³wel¹/

Some sentences are combined by using a colon. Again the main clause takes a declarative pattern, with the other sections taking unfinished or terminating patterns as appropriate:

/²Things I must ³buy²: → ²³bread² → ²a ³newspaper² → ²and ²cigaRETTEs¹/

But, if a rising juncture phoneme is used, according to Childs (2003), a /²³³/ pitch pattern possible in NAE, as in:

/²Things I must ³buy²: → ²³bread³ ↗ ²a ³newspaper³ ↗ ²and ³cigaRETTEs¹/

Students need to take care that they use terminating patterns correctly in compound sentences, and so practice at identifying such sentence types is necessary.

2.3.6.3 Pitch on Complex Sentences

At least two clauses are necessary in a complex sentence, and where a pause juncture is possible, pitch is allocated to each intonation group separately. The rules previously outlined in the section on Pitch and Clauses also need to be carefully applied here where clauses and intonation groups may be appropriate. Here are some examples where the main clause comes first in the sentence. Once again the students must be cautioned that words in capital letters carry the primary stress, which is based on the meaning that the speaker intends:

/²I couldn't ³iMAGine² → ²what she would ³LOOK like² → ²at the ³BALL¹/
/²You don't have to ³conFIRM² → ²unless the ³MANager asks you to do so¹/
/²He wears very ³SMART designer clothes² → ²because he's very ³RICH¹/

Here are some examples where the main clause comes last in the sentence:

/²If I'm not ³WRONG² → ²she'll have her kittens ³toMORrow¹/

/²When he sings those ³AWful songs² → ²I go ³crazy¹/
/²Whatever you ³DO² → ²remember ³ME²/

Here are some examples of non-defining relative clauses:

/²My ³SISter² → ²who has ³TWO children² → ²is studying ³acCOUNTing
in her spare TIME¹/
/²The house ³OPposite² → ²which is up for ³SALE² → ²hasn't been ³LIVED
in for five years¹/

Here are some examples of defining relative clauses:

/²Women who have babies ³LATer in life² → ²live ³LONGer¹/
/²The handsome men who live in ³THIS town² → ²are all ³MARried³/

Once students are confident about pitch in complex sentences, they should have no problem with compound complex sentences.

2.3.6.4 Pitch on Compound-Complex Sentences

Compound complex sentences, which consist of at least two clauses and a subordinate clause, are reasonably simple once complex sentences have been mastered, providing care is taken in the placement of pause junctures not indicated by punctuation. Here are some examples; the capitalized syllables in some words carry the tonic or primary stress:

/²Mobile ³TELEphones² → ²which are becoming in ³CREASingly popular²
→ ²can be ³DANgerous² → ²for ³example² → ²they can cause serious ³DAM-
ages to plane engines² → ²if they are ³NOT switched off in an aircraft¹/

/²The other ³NIGHT² → ²when ³Yavuz BİNgöl came to give a free concert²
→ ²did you go there with your ³GIRLfriend³ → ²or did your father ³for-
BID it³/

/²The ³LADY who lives next door asked² → ²if I could ³LEND her some
money for the weekend² → ²³OTHERwise² → ²she wouldn't have
enough ²MONEY² → ²and she would ³HAVE to stay at her friend'shouse¹/

2.3.7 Further Functions of Pitch Phonemes

2.3.7.1 Key

Intonational studies embody the concept involving key and range of pitch, consisting of patterns of pitches in intonation units. Choices in pitch range play a crucial role in revealing various speaker attitudes, moods, and so on. A description of pitch phenomenon is followed by an identification of meaningful key levels. The term key can be described as utterance pitch, i.e., specific and/or meaningful sequences of pitches in an intonation unit. “Keys that are linguistically meaningful and significant are an area worth studying. For a key to be significant, it should be under the speaker’s control, it should be perceptible to ordinary people and it should represent a contrast” (Roach, 1983). “Usually, three keys are identified: high, mid and low” (Brazil et al., 1980).

For each intonation unit, the speaker must choose one of these three keys as required for a conversation. Most of the speech takes place at the mid (unmarked) key, employed in normal and unemotional speech. In contrast, high and low keys are marked: the high key is used for emotionally charged intonation units, while the use of the low key indicates an existence of equivalence (as in apposite expressions), and a relatively less significant contribution to the speech.

2.3.7.1.1 The Function of Key

O’Connor (1973) points out that “the enormous use we make of intonation in marking attitudes is constantly acting upon and modifying the basic meanings of the words we use.” He goes on to add that “intonation as an attitude marker is of greater importance than the words (meaning) of an utterance. For instance, speakers rely on the intonation and key rather than the words or grammatical structure of an utterance if there happens to be a conflict between the word meanings and intonation.” “What have you DONE?” is an interrogative statement, syntactically. If this intonation unit is spoken however with anger, disappointment, frustration, that is, using a high key, then it ceases to be a question; it then functions as an exclamation. This exclamation serves to indicate disapproval of the speaker for whatever has been done by the addressee: In another example, “Thank you very MUCH” can be said in different key choices. With a normal tempo and mid key, it is an expression of gratitude. However, a faster tempo and high pitch renders the utterance an expression of frustration, bitterness, resentment and so on.

“Usually three levels of pitch range (contrasts) are identified: high, medium (mid) and low” (O’Connor, 1973; Brazil et al., 1980). Ordinary speech tends to take place in the medium range of pitch height. Generally, the high pitch range is associated with the acts of shouting, yelling, screaming and so on, whereas the low range is associated with whispering and murmuring, and the mid (medium) range is used in normal, unemotional speech. For instance, a sentence such as “It’s just starting to rain” could be expressed and understood as excited, meaning “hurry up and come inside” if it is spoken in the high range, as unemotional or reporting a fact if spoken in the mid range, and calm, meaning “I knew it would” when spoken in the low range.

2.3.7.1.2 High key

2.3.7.1.2.1 Exclamation

Exclamation is usually the general term used to refer to actions described by verbs such as cry, scream, shout, wail, shriek, roar, yell, whoop, bellow, bark, thunder, howl, echo, and so on. Speakers use these to express their strong feelings such as excitement, surprise, anger, irritation, rage, fury, wrath, agitation, cheerfulness, merriment, gaiety, fun, etc. Speakers generally exploit high pitch when they exclaim: (statement) Have you GUESSED? (mid) he whispered at last (low). — O God! (high) burst in a terrible wail from her breast. (low). Another example: There is NO one, NO one / unhappier than YOU in the whole world (all high) Oh, you were wrong, you were wrong, (all high) cried Sonya in anguish. Watch OUT (high), that chimney’s falling DOWN (mid).

2.3.7.1.2.2 Contrastivity

It is high pitch that is generally used to indicate contrastivity. Brazil et al. (1980) note the following: “It is proposed as a general truth that the choice of high key presents the matter of the tone unit as if in the context of an existentially-valid opposition.” “Consider the following adapted examples in which the word uttered with a high key (pitch) has contrastive stress” (Brazil et al., 1980). Examples: We’re going to MAR-gate this year, not (mid) BOGnor (high), I’m going to HARvard / not (mid) YALE (high). I wonder how it’ll do in the west END (mid). SOME will like it. (high –with unbelief that none will like it) SOME will like it. (low with prediction or an express of hope)

2.3.7.1.2.3 Echo/Repeat

The act of echoing / repeating is almost always done with high pitch. It may involve a genuine attempt to recover unrecognized or unheard information, an indication of disbelief, etc. Consider the following exchange, where a case of disbelief is in question: A: Four THOUsand (high), said Barney sadly. (mid) B: Four THOUsand (low)? But it's just a shack! (mid); A: I'm taking up TAXidermy. (mid) B: Taking up WHAT? (high)

2.3.7.1.2.4 Change of Addressee

Change of pitch level may indicate a change of addressee in a setting of discourse involving a third party. A higher pitch is used to call the attention of the new addressee, who is usually further away than the current addressee. For instance, a passenger in the back seat is talking to his friend sitting next to him and also gives directions to the driver as he talks: I've been in difficult situations beFORE (mid); turn LEFT here (high). Or another example: A high key is used to indicate that the addressee is someone other than the current one: We'll disCUSS that later (mid); WAITer (high).

2.3.7.1.3 Low Key

A low key or pitch sound relates to its perception by the hearer. The higher the frequency of sound the higher its pitch, likewise the lower the frequency of sound, the lower its pitch as in the example "a low-pitched" whistle.

2.3.7.1.3.1 Co-reference, Appositives

Lower pitch is used to indicate co-referential, additional or supplementary information. Examples: I TOLD you already (mid) DUMmy! (low); We gave it to our NEIGHbours (mid) the ROBInsons (low)

2.3.7.1.3.2 Non-defining Relative Clauses

The type of information uttered in low pitch may be non-defining relative clauses, parenthetical statements, expressions of dis/agreement, reduced clauses, etc. Examples: My DOctor (mid) / who is a neuROlogist (low) / is very WELL-known (mid); *Intonation and its Uses* (mid) / written by BOLinger (low) / is a significant WORK. (mid)

2.3.7.1.3.3 Statements of Opinion

There are times when statements of opinion, involving clarification, certainty / uncertainty, are attached to promotional statements. Examples: The Government (high) / I'm sure (mid) / will agree with our deMANDS (high). / I MEAN (low) / this isn't really a VIEW (mid) / Our blessed Event (mid) / you MEAN (low); You CAN'T have it (mid) / not that I MIND (low).

2.3.7.1.3.4 Misery, Whispering, Boredom

Low pitch is also used to express boredom, misery, depression, sadness, anxiety, nervousness, worry, whispering and so on. Examples: Have you gone out of your mind or something, puppy? (low); You don't know her HEART / not one of you is worth her little ... (low) FINger / NOT one of you – NOT one / NOT one. (low)

2.3.7.1.4 Key and Attitude

Through tone and choices, speakers can reveal certain attitudes appropriate in the context. In uttering the following statements to his patient, a dentist has at his disposal at least two different tone levels (O'Connor, 1973): It ²won't ⁴HURT. With a rising tone, he provides encouragement while with a falling tone he expresses a factual prediction: You'll ⁴FALL! This utterance may be spoken in two different tones; it may be a statement of warning accompanied with a fall-rise whereas it may be a statement of fact, of prediction with a fall tone.

Celce-Murcia et al. (1996) explain that “normal conversation moves between middle and high pitch, with low pitch typically signaling the end of an utterance. The extra-high level is generally used to express a strong emotion such as surprise, great enthusiasm, or disbelief, and is the pitch level often used in contrastive or emphatic stress.” English makes use of pitch variation over the length of an entire utterance rather than in one word. This is generally true, although British English tends to use the extra-high level more and in this way a British speaker may sound rather dramatic to an American. “Turkish learners often concur with Americans on this issue, possibly because a wide pitch range within a single utterance is not normal in Turkish” (Ridgeway, 1999).

Pitch patterns in English differ from stress placement in that they not only highlight the tonic, but are also essential indicators of the type of communicative function. They can help the listener to distinguish between a statement or a question, or understand the certainty or politeness of an utterance. For example, the sentence “You’re going to Paris” said with a rising-falling tone is a statement, but with a rising tone it becomes a spoken question and if the rise is extreme the speaker is expressing shock. Trench (1996) summarizes the connection between communicative function and falling or rising pitch movements in British English as follows: “Statements (with fall) yes / no questions (with rise) wh- questions (with fall) question tags (with fall) (with rise) commands (with fall) interjections (with fall).”

This clearly shows that the majority of pitch movements in British English are falls, and that rises are connected with uncertainty (wh-questions, while requesting information, assume partial knowledge). “The description of pitch movement varies quite a lot from writer to writer. There are two main reasons for this. Firstly, there are a number of differences between British and American pitch patterns, and secondly, some writers refer to the pitch movement over the intonation unit as a whole, whereas others focus on the pitch movement over the tonic syllable. British pitch patterns are described and a reference made to the American Standard where any difference is known” (Ridgeway, 1999). The following is by no means a complete analysis of pitch in English, but a description of the most important categories for the learner of English to master.

2.3.7.1.5 Pitch Patterns

According to Kreidler (1989), there are two approaches which linguists adopt when describing pitch patterns in English: the levels approach and the contour approach. The levels approach uses a scale which is similar to a musical scale. This approach is based on a set of various pitch levels. Linguists who use this approach maintain that there are four different pitch levels or phonemes which are numbered from 1 to 4 - from lowest to highest pitch — and are named: /⁴/ extra high, /³/ high, /²/ middle, /¹/ low. The intonation of an utterance can also be graphically represented with lines at four levels in respect to the line of print. Alternatively, Kreidler (1989) states that “the intonation of an utterance can be shown with letters or numbers interspersed in the line of print. Thus, the utterance “I’m going home” might appear in the numerical form as: ²I’m ³going ¹home. This example indicates that the utterance begins at the speaker’s

middle range, rising to a high note at the beginning of the word “home”, and dropping to low during the pronunciation of that word.”

Crystal and Ladefoged identify four basic tones: rise, fall-rise, fall, and rise-fall. O’Connor and Arnold propose only two: rise and fall. Brazil and Roach endorse five tones: fall, rise, rise-fall, fall-rise, and level. Cruttenden himself recognizes seven tones: high-fall, low-fall, high-rise, low-rise, fall-rise, rise-fall, and mid-level.

Generally speaking, the building blocks of English intonation involve three basic tones—high, mid, and low. What makes a tone ‘rise’ or ‘fall’, or otherwise, is the direction of the pitch movement on the last stressed (tonic) syllable. If the tonic syllable is in a non-final position, the glide continues over the rest of the syllables. A fall in pitch on the tonic syllable renders the tone as ‘fall’. A ‘rise’ tone is one in which the tonic syllable is the start of an upward glide of pitch (Saleh, 2004). This glide is of two kinds; if the upward movement is higher, then it is ‘high rise’; if it is lower, then it is ‘low rise’. ‘Fall-rise’ has first a pitch fall and then a rise. To further our knowledge of tones, a brief explanation of the basic ones is in order.

There are two main patterns of intonation, a fall and a rise. Within the fall there is a rise-fall and within the rise there is a fall-rise, the movement of pitch over the tonic being significant in determining the category. Because pitch is superimposed on the stress pattern, stress must be placed first (and juncture before that). Where pitch movement occurs in the tonic syllable itself there are two methods that can be employed. A glide over the vowel of the tonic serves to lengthen the tonic syllable, thereby intensifying the effect of stress (Ridgeway, 1999). The alternative is to set the pitch at the syllable break. If there are no syllables after the tonic, a glide must be used; otherwise the choice is left to the individual as there is no significant difference. The exception to this rule is where an upward glide at the end of an utterance indicates politeness.

2.3.7.1.6 Narrative in Intonation Teaching

In order to illustrate various pitch patterns, a fable by Aesop could be used in the classroom setting. Learners may have different ways to realize the tone meanings presented here (Jenkins, 1998:119-126) - but the four-way distinction would provide learners with an understanding of the basic choices that enable us to read narrative aloud.

Reading aloud is an effective way to focus on intonation. In preparatory work on a reading passage learners can:

1. Divide the text into tone units.
2. Identify tonic syllables on significant information.
3. Identify information that is already known and therefore non-prominent.
4. Identify familiar elements of a narrative, such as time expressions or reporting phrases that take a Low Rise
5. Identify points where the storyline changes direction – where the High Fall (new information) or the Fall-rise (familiar information, given a new twist) should be used.
6. Identify items of information that are ‘additive’ - simple contributions to the story that do not mark any shift in viewpoint, and may therefore take a Low fall.
7. Identify new sections of the story, where the voice may shift to a higher key. The teacher’s role in this activity could be to encourage students to offer interpretations, and show how alternative readings may arise from differing interpretations of what is expected, unexpected, familiar background knowledge and so on (Jenkins, 1998).

Chapman (2007:3-11) reports that similar pre-listening activities in which learners are encouraged to predict intonation patterns in a text greatly aided them in listening to the actual intonation patterns.

2.3.7.1.7 The Voice’s Contribution to the Conversation

When we talk with people we notice that our voice changes as we try out different emotions or states of mind. We could have sad voices, happy voices, joyous voices, defeated voices...”all kinds of voices. Frequently, actresses impose a voice upon their character without exploring pitches with possible ranges” (Redbirdstudio, 2012). In order to teach various pitch features we could read to our students the following dialog first in an “angry” voice:

Rachel: Jacob!

Rachel: Jacob - and Daniel - not - not even cold in his grave...

Rachel: You're crazy!...

Rachel: Jacob, you are crazy. Stark crazy. It's awful, just awful! Even if I hadn't just buried your brother...

Rachel: How can you say that to me? Me! I was a faithful and dutiful wife to your brother all his years! I won't talk to you!...

Rachel: I don't want to understand. This is madness, raving madness...

Rachel: Get out of my way! (Barlow, 2009)

Many actresses would have shouted the lines. Initially, to many people, "angry" means "GET LOUD". Many times it does. But there is also a quiet anger. A spitting, hissing anger, a glaring, searing, piercing anger, a rigid, taunted, in total control anger, there is a sweet and melodious anger. Depending upon the character and the circumstances of the moment, there are many ways to express anger other than raising the decibel level of one's voice. All these ways of verbally expressing anger need to be explored. In fact, we need to explore the dialog with the full range of vocal possibilities, to see how things sound, to see what our voice has to say about the lines, words, phrases - independent from how our mind thinks those lines, words and phrases should sound (Redbirdstudio, 2012).

A simple way to help our students sound more interesting when they speak is to add some intonation features. We could ask them to focus on pitch (sometimes called key). This is the height of the voice and can be high (for interest, surprise, shock etc.), mid (for information, neutrality) or low (for boredom, disinterest etc.) - it's all to do with how you feel about what you are talking about. Here are some ways of encouraging the students to sound more interesting. Make sure that it is not what they say, but how they say it, in their oral communication (Awol, 2010):

1. Explain that they sound uninteresting, and ask them how they would react to a speaker like that. If they do not believe you, then tape them and play it back to them.

2. Talk to your students in the same monotone way, and they will soon get the message!

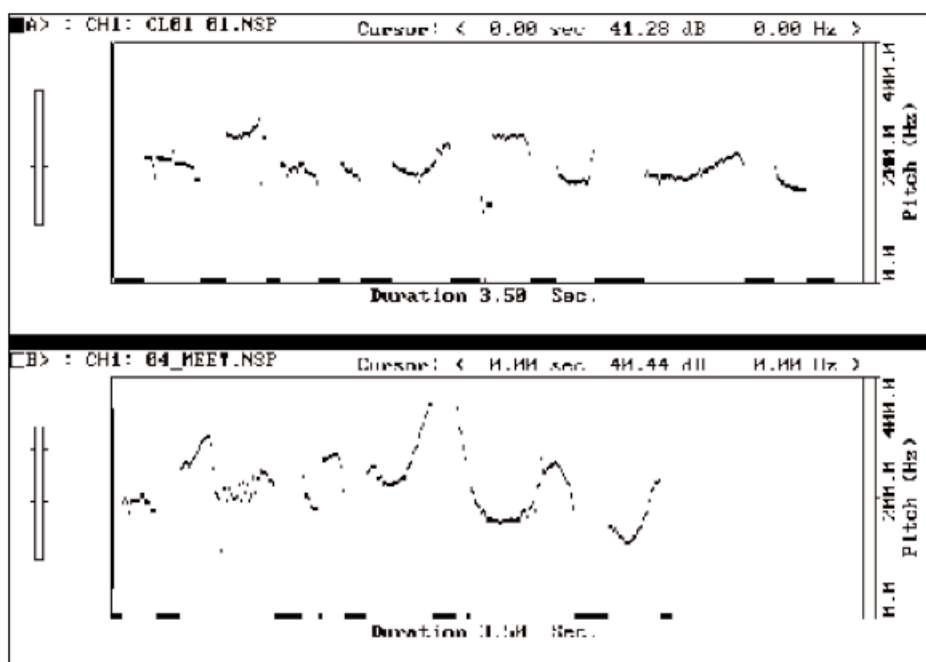
3. As you monitor them, mimic them and tell them to sound more interesting.
4. Tape several short conversations, and have the students identify whether the speakers are using a high, mid or low pitch. Then in groups of three, have two students read a two-line dialog and the third student identify the pitch they are using - rotate speakers and identifier to give all a go.
5. In listening activities, focus on the feelings of the speakers. A classic extensive task is to identify how many speakers there are, the relationship between them, and how they feel.
6. Put a sentence on the board and have the students say it together in different ways: surprised, bored, astonished, impressed, and so on.
7. Compare the pitch of your students' native language with English. If they use a narrow range in their own language, then make them aware of the difference with English.
8. Use role play, and not only assign the roles, but also how they should feel.
9. Use mime role play. Give students role cards with a scene on it and three adjectives to incorporate into the given scene. The students practice and then mime the scene in front of the class, who then try to guess the three adjectives.
10. Give an 'opposite mood' role play. One student is happy about a few things and the other is unhappy about the same things, so they have to convince each other to change to their moods.
11. Contrast informal and formal language. Play two conversations, one informal (usually higher pitch) and the other formal (usually lower pitch), but with the wrong pitch. Have the students discuss the differences, and then they can have the conversation with the script, using the right pitch, and carry on the dialogs (Hadfield, 1997).

2.3.7.1.8 Using Visual Feedback While Teaching Pitch

“Pitch is defined as the relative height of speech sounds as perceived by a listener and is what we hear when we refer to a voice being “high” or “low”. The varying pitch levels throughout an utterance form what we hear as intonation: the “falling” or “rising” of the voice” (Cruttenden, 1986:4). Prominence is what we hear when a word “stands out” from those around it, as in the example of the prominent word “I” in “I am”, a possible answer to “Who’s coming?”, compared with the prominent word “am” in “I am” answering perhaps “You’re not coming, are you?” The primary physiological cause of both pitch and prominence in speech is the varying rate of vibration of the vocal folds, the acoustic correlate of which is fundamental frequency (F0). The correlation between pitch and fundamental frequency is non-linear; the frequency difference between two tones, necessary for listeners to judge that the higher tone is twice as high as the other, is much greater at high absolute frequencies than at low. However, “as F0 frequencies are relatively low, that is, below 500 Hz, pitch can for practical purposes be equated with F0” (Cruttenden, 1986:4). Indeed, the vertical axis of the CSL-Pitch display is labeled “Pitch”.

A number of pitch contours generated during a certain utterance project common features of student pronunciation. It can be seen that on occasion, students are unable to approximate the model’s suprasegmental pattern with any accuracy, while more success is achieved with others.

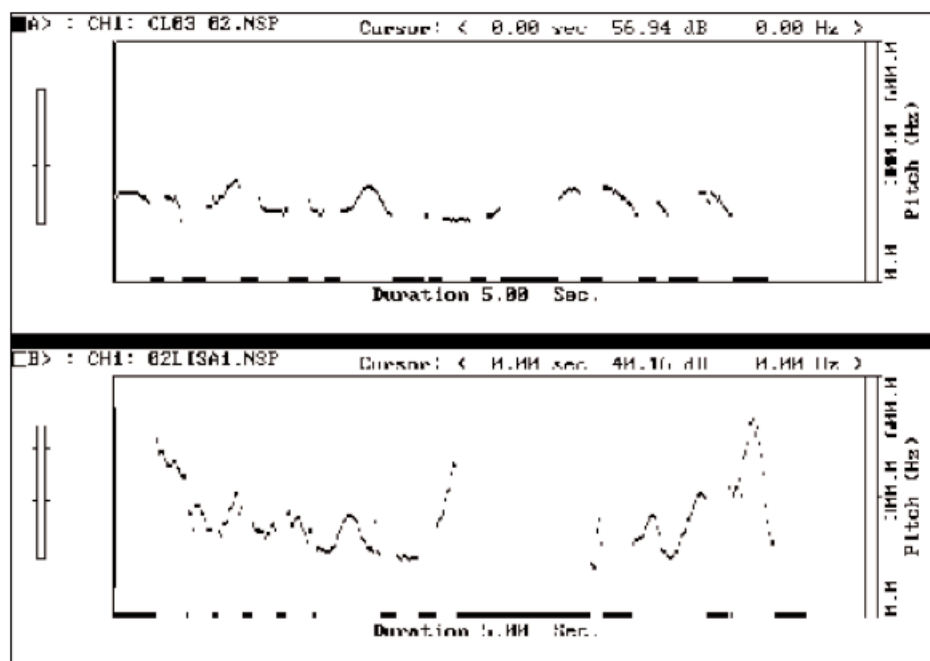
Figure 1: Target utterance (TU): *r* I’m AFRAID. *p* I have to go to a MEETing. *r* On WEDnesday (Stibbard, 2012).



This figure shows the bouncy intonation common to much student speech, in which each high peak reaches much the same level. It can be seen that the uniquely high F0 peak on the word “meeting”, as spoken by the model, is not replicated successfully by the student, whose pitch rises on each content word. This lack of variation in F0 leads to the perception that no prominence has been given to any particular word, and thus to the impression that the speaker has not reacted to or is not aware of the context of interaction. In addition, the word “Wednesday”, spoken by the model with a clear fall-rise tone, is spoken by the student with a fall. This is a very common feature in real student discourse and again gives the impression that the speaker has not reacted appropriately to the situation, in which the idea “Wednesday” is clearly common ground between speaker and hearer and thus should carry a referring tone.

Finally, although not a matter of suprasegmental features, it will be noted from the phonetic transcription that the learner makes a number of errors at the segmental level. Using the editing features of the CSL-Pitch, students can easily highlight such errors. “It is this kind of speech, in which segmental and suprasegmental inaccuracy combine, that leads to poor performance in interactive situations” (Stibbard, 2012).

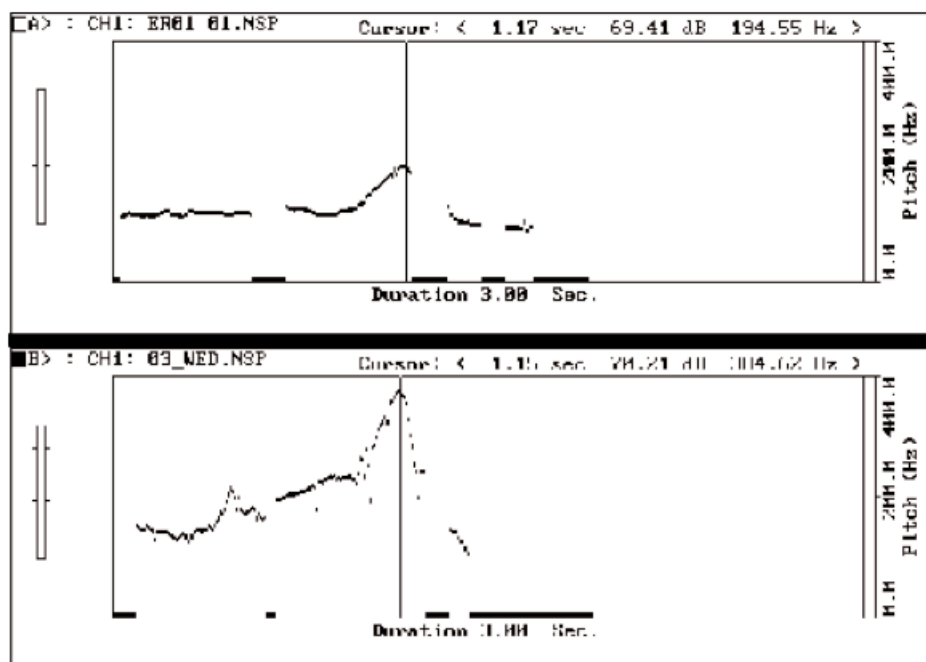
Figure 2: TU: *p* WELL, there’s no point in WORRying about it. *r* What’s DONE, *p* is DONE.



A related problem is seen in Figure 2, where the student fails to produce enough F0 variation, this time leading to a not incorrect, but nevertheless intonationally different

pronunciation of the idiomatic phrase “What’s done is done”. The student’s low falling tones give an impression of fatalism, of the utter hopelessness of the situation, whereas the model’s higher, livelier-sounding intonation is indicative of optimism, of “putting the past behind one”. Again, “there are a number of mispronunciations at the segmental level, which could hamper communication” (Stibbard, 2012).

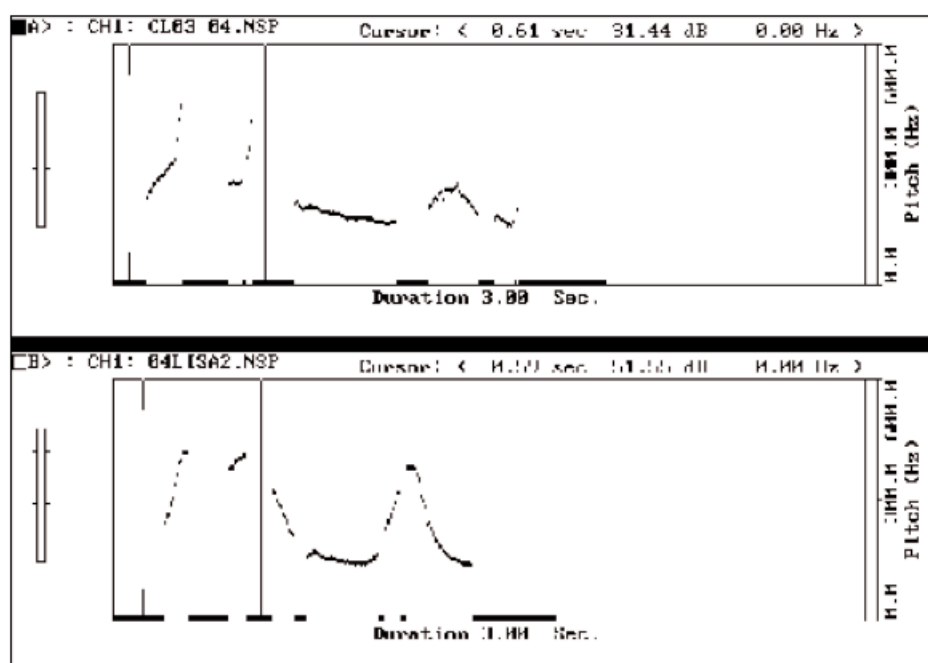
Figure 3: TU: Why don’t we go on Wednesday then?



In this example, the student’s vocal range, from 81 Hz to a peak of 194 Hz at the cursor, is clearly insufficient to bring out the prominence on “Wednesday”. In contrast, the model’s pitch range is much broader, from a low of 105 Hz to a peak at the cursor of 384 Hz. Such speech as that of the student sounds boring and certainly fails to bring out the lively enthusiasm intended in the example.

“Negative impressions which a learner’s speech may give, such as boredom, rudeness, or a failure to react to the situation appropriately, are a primary reason for work on suprasegmental features of pronunciation, for they are more subtle and pernicious than shortcomings at the segmental level, interfering as they do on a subconscious level with cultural and social expectations” (Stibbard, 2012).

Figure 4: TU: What DID you wear, *p* ANYway?



Just such a subtle effect is shown by the contour of the student's utterance in Figure 4. Here, although the F0 reaches a high enough peak, the contours of the pitch on both the words "what" and "did" rise extremely sharply; in the model's version, only the word "what" has a comparably sharp rise. "This sharp upwards moving contour is characteristic of the Cantonese pronunciation of monosyllabic words, with a final stop consonant and could, in an utterance such as this, give a listener an unintended impression of brusqueness or rudeness. It is thus on sociolinguistic grounds an area of concern and deserves the students' and teacher's attention. Again, without a facility such as the CSL-Pitch, it is extremely hard to isolate such features" (Stibbard, 2012).

In contrast to this, Figure 5 on the next page illustrates a strikingly successful student modeling of the utterance "Why don't we go on Wednesday then", showing a high pitch peak on the stressed syllable of the word "Wednesday", which, at 373 Hz, is almost the same as that of the model (385 Hz) and follows an almost identical contour. This example shows the positive feedback the CSL-Pitch provides on satisfactory suprasegmental pronunciation.

Figure 5: TU: “Why don’t we go on Wednesday then?”

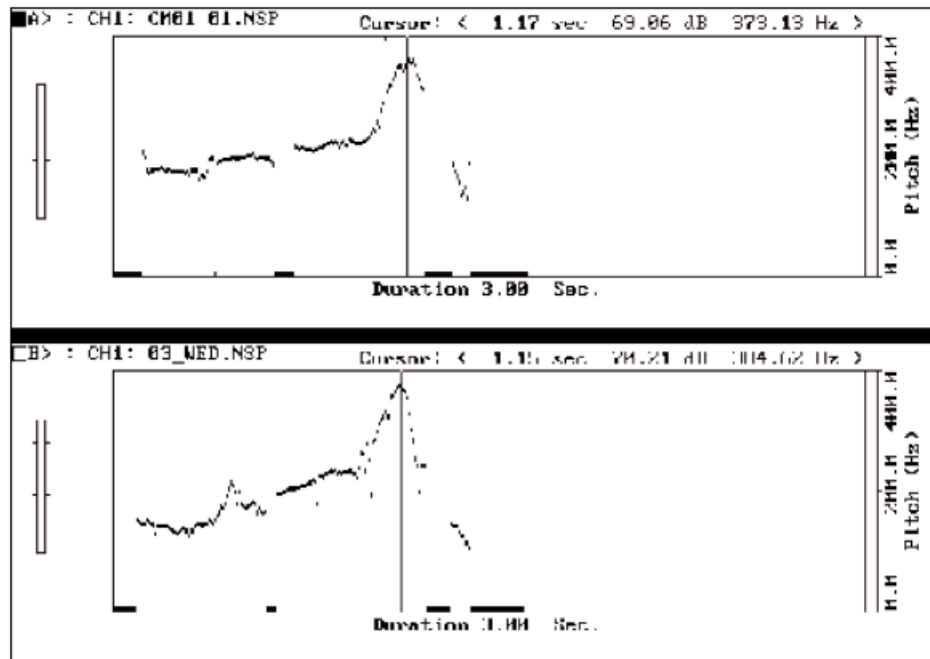


Figure 6: TU: I MANAGED to answer all the QUESTIONS.

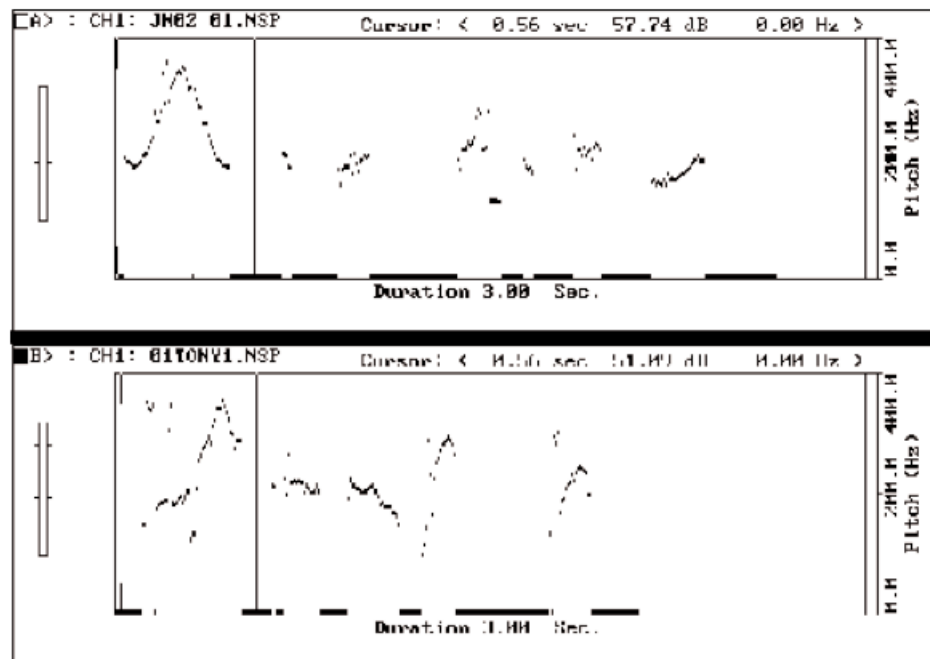
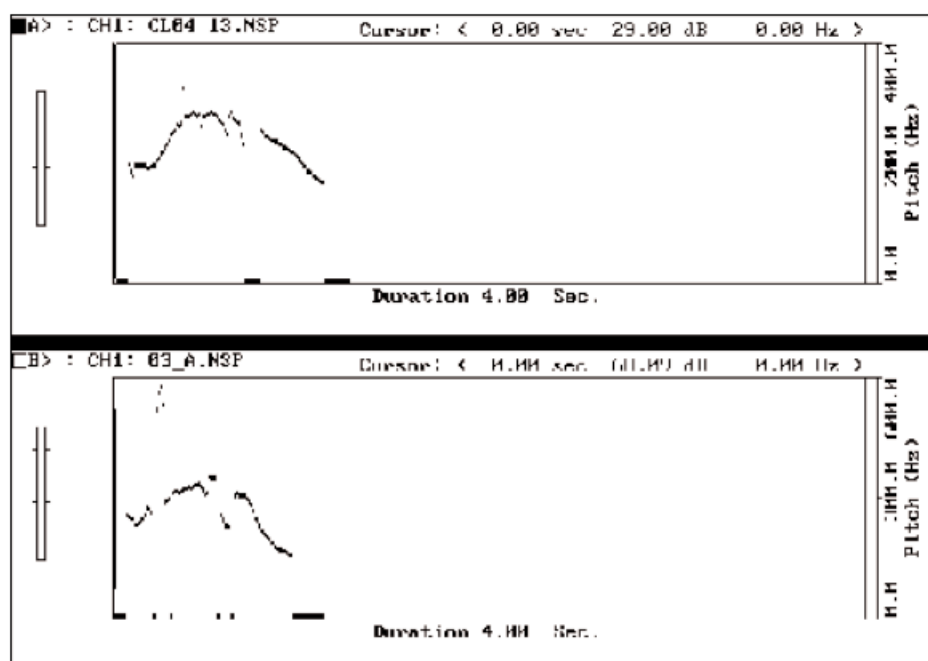


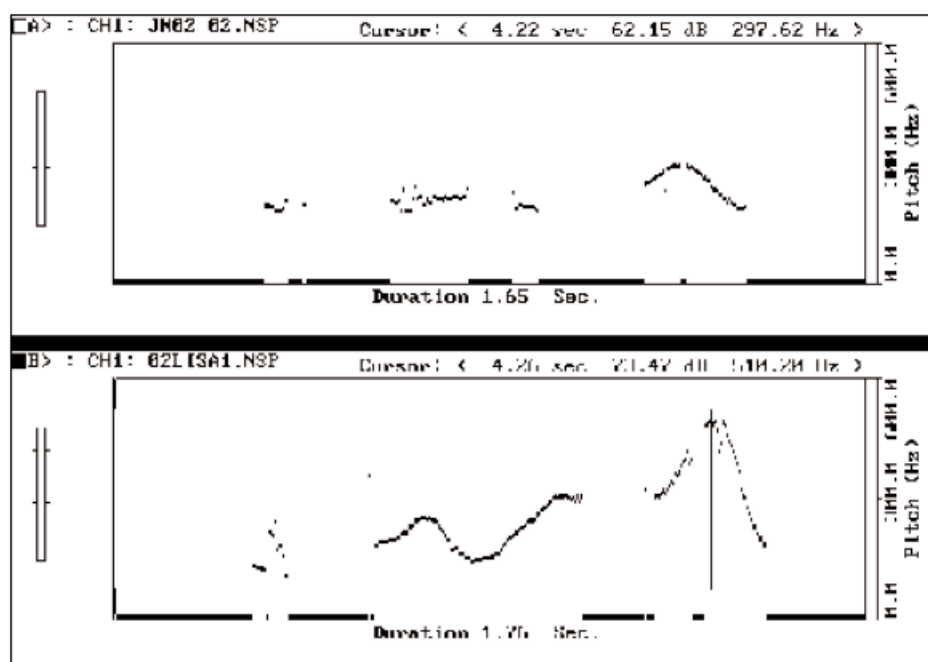
Figure 6, too, shows “satisfactory prominence on the word “managed”, with a high pitch peak and very similar contour patterns, although it will be noted that the pitch contour on the tonic syllable does not match that of the model” (Stibbard, 2012).

Figure 7: TU: I RANG the BELL.



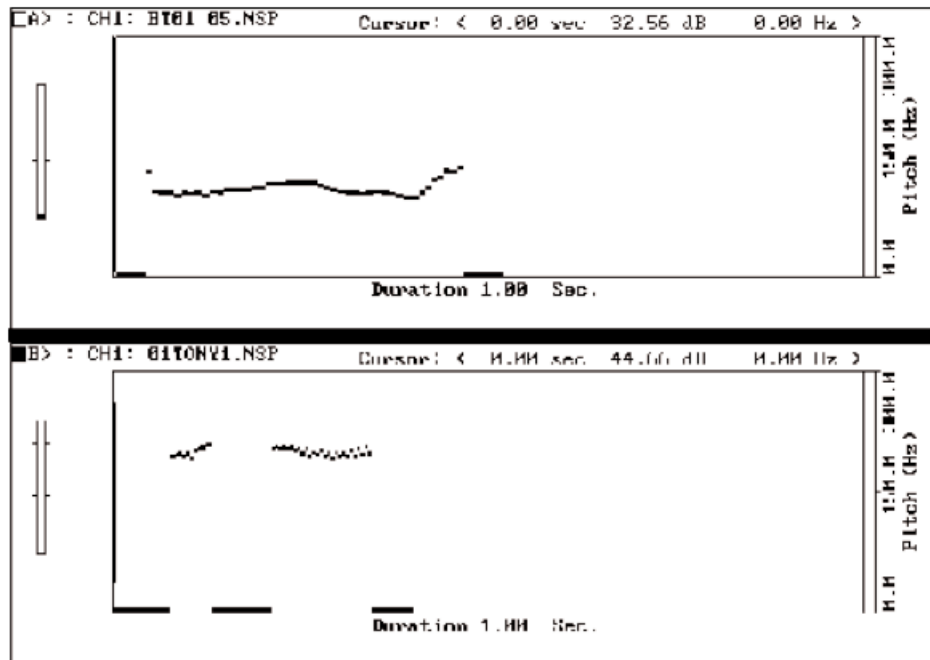
This example shows good control of F0 and duration. “The falling tone, as illustrated here, generally causes fewer difficulties to students than do the other tones, and so provides a good introduction in the early stages of intonation practice while students are experimenting with the CSL-Pitch and with how to control their own voices” (Stibbard, 2012).

Figure 8: TU: // r What’s DONE // p is DONE.



Notice the student's maximum pitch peak, at 297 Hz, as opposed to that of the model at more than twice that height. It is most common to find that the students' maximum pitch reaches only about half that of the model.

Figure 9: TU: *p* I MEAN.



In this example, the student takes 30% longer to say the words “I mean” than does the model, and also makes a slightly exaggerated fall-rise tone instead of a falling tone.

Figure 10: TU: *r* COULD I have a WORD with him?

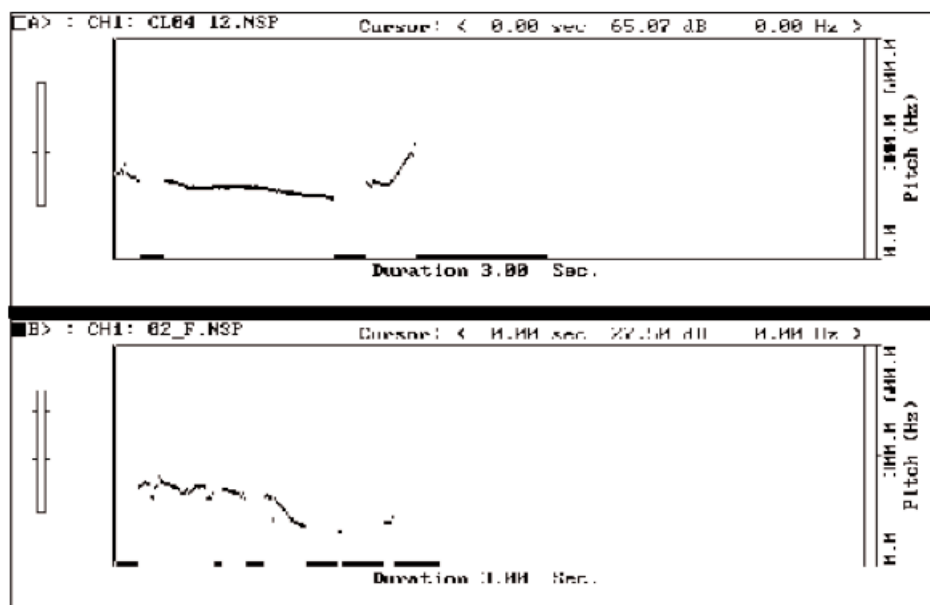


Figure 10, above, shows a more noticeable failure to match the intonation contour, resulting in a very exaggerated fall-rise tone and a greatly exaggerated duration on “word”.

Figure 11: TU: *r* It SHOULDn’t be LONG now?

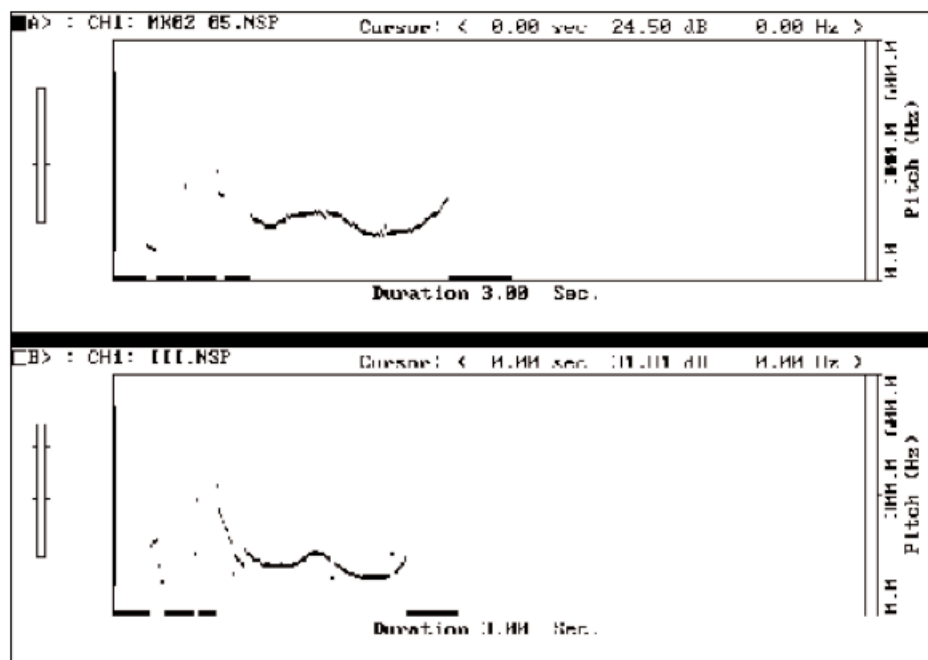


Figure 11 shows an exaggerated fall-rise tone exacerbated by undue duration on the words “long now” (Stibbard, 2012).

Chun (1998) believes that “computer-generated pitch-tracking software can be effectively utilized to teach basic intonation contours.” It is also believed that with the current emphasis on communicative and sociocultural competence, more attention should be paid to discourse-level communication as well as to cross-cultural differences in pitch patterns. Hence, software programs must have the capability to distinguish meaningful intonation features with regard to changes in pitch, volume, and tempo (Saleh, 2004). Indeed, such programs are envisioned as going beyond the sentence level and addressing the multiple levels of communicative competence: attitudinal, grammatical, discourse, and sociolinguistic.

All in all, the success of such techniques marks only a beginning. Chun points out that it is one thing to achieve accurate imitation of native intonation in the controlled environment of a language laboratory, but it is another thing to transfer this ability to a free and unhindered conversation. It goes without saying that the application of appropriate native contours in free conversation by non-native speakers is something

quite coveted but not yet easily or fully realized. Intonation, the non-grammatical, non-lexical component of communication, is an inseparable component of vocal communication. "Speech without intonational features is no more than a machine-like output" (Saleh, 2004). Recent work in language perception and understanding has shown that listeners pay particular attention to intonation when they are trying to understand a sentence. Correct intonation usage is therefore essential if non-native speakers are to make themselves understood. Equally important, if non-native listeners are to understand native speakers, then a good understanding of the workings of intonation is paramount. Careful and sustained attention to this phonological issue should produce high rewards in terms of understanding and being understood.

In brief the pitch contour, phoneme durations, and spectral features of an utterance all contain cues for the classification of a speech style, albeit their separate influence is not dominating the rest of the information sources of a speech style. The exchange of the entire prosody (pitch, duration, and energy) between spontaneous and read utterances reverses the judgment of the listeners about the speech style of the utterances. When the pitch contour is made monotonous in an utterance, the remaining information still contains enough cues to properly classify the original speech style, although the classification is relatively difficult to do. Therefore, foreign language students will need adequate practice at identifying which patterns to apply, as well as practice at speaking them in order to be better evaluated by their target language audience. The use of a wide range of pitch in the same utterance could be acquired through practice exercises, and thus they can become more confident in speaking and reading a text aloud. Three keys are identified as pitch patterns: high, mid, and low. Most speech takes place at the mid (unmarked) key, employed in normal and unemotional speech. The high key is used for emotionally charged utterances: exclamations (anger, irritation, cheer, merriment, etc.). Intonation units that involve contrastive information are uttered using a higher pitch range. Echoing expressions are also uttered in the high key. The use of the low key indicates an existence of equivalence in information, and relatively less significant contribution to the speech. Co-referential and appositive expressions are spoken with a lower key than that which follows them.

In addition, non-defining relative clauses, statements of opinion, and additional comments are best uttered in a low key. Thus, key choices are conditioned by several factors such as the nature of the message (reporting, emotional, exclamation), the physical and the non-physical atmosphere the speaker and the listener are involved in (misery, boredom, agony), the physical as well as social proximity of the speaker to the listener (change of addressee, whispering), the nature of a piece of information in relation to

others (non-defining relative clauses, co-referential and contrastive information), the effect the speaker wishes to create on the listener (shouting, yelling), and so on. Therefore, in addition to the stress, pause, and tone, the term intonation should cover meaningful contrasts of key choices in discourse. While teaching this particular suprasegmental feature in order to improve students' pronunciation, they should be drilled in detail on different pitch patterns as the fall, the rise-fall, the rise, and the fall-rise, as well as the relationship of pitch with words, phrases, clauses, simple sentences, compound sentences, complex sentences, compound complex sentences and various pitch types such as contrastive and emphatic pitch.

Following the modern technology, for example, computer-generated pitch-tracking software such as the PRAATS program which is always available on the internet, can also be effectively utilized to teach basic intonation contours. With the current emphasis on communicative and sociocultural competence, more attention should be paid to discourse-level communication as well as to cross-cultural differences in pitch patterns. Hence, software programs must have the capability to distinguish meaningful intonation features with regard to changes in pitch, volume, and tempo. It goes without saying that the application of appropriate native contours in free conversation by non-native speakers is something quite coveted, but not yet easily or fully realized. Intonation, the non-grammatical, non-lexical component of communication, is an inseparable component of vocal communication. Speech without intonational features is no more than a machine-like output. Recent work in language perception and understanding has shown that listeners pay particular attention to intonation when they are trying to understand a sentence. Correct intonation usage is therefore essential if non-native speakers are to make themselves understood. A good understanding of the workings of intonation is equally important, indeed paramount, if non-native listeners are to understand native speakers.

Careful and sustained attention to this phonological issue should produce high rewards in terms of understanding and being understood. During their pronunciation lessons, students can acquire an awareness of the importance of several pitch features through a pretest. They are then given relevant background information and drilled on the key functions of pitch. After their recognition and proper performance of these skills, covering stress, juncture and intonation, their utterance is hopefully brought to a native-like level. Finally, it must be noted that the text-to-speech labs, Audacity downloading programs, PRAATS intonation analysis programs, and "accent reduction" or "accent breaking" programs have lessened the importance of the language labs which were integral parts of the audio-lingual and the mim-mem-methods, as well as in the lexical repetition, imitation, and reinforcement theories. Now, a single laptop notebook can do their job in a very short time.

CHAPTER THREE: METHODOLOGY

This dissertation is a descriptive study whose aim is to develop and apply practice materials on pronunciation and intonation instruction via listening comprehension exercises to be used by Education faculties English language education students taking the *Dinleme ve Sesletim* (Listening and Comprehension) I and *Dinleme ve Sesletim* (Listening and Comprehension) II courses. Apparently, there are no available study texts and practice materials in audio form for these two courses in the programs of the English Language Education departments of the Turkish Education faculties. Unfortunately, these two courses are the most neglected lessons in Turkey, and there is an urgent need for standardised teaching texts for pronunciation and intonation instruction. Since the publication of Morley's classic, *Improving Spoken English* (1979), there has been increased worldwide attention focused on the use of pronunciation materials to train students to monitor their production through the teaching of formal rules, feedback and reflective activities.

3.1 Some Features of the Research in this Dissertation

1. Listening comprehension and text development are two closely-related areas on the topic of this study. It must be borne in mind that listening is the very first skill for comprehension. For that reason, "it is presumed that listening, perhaps including more authentic listening tasks with a variety of accents will continue to play a large part in pronunciation training" (Jones, 2002:112).
2. Explicit teaching of pronunciation and intonation is a must because interference from the learners' first language affects the acquisition of the second language sound system more than other systems; for this reason, pronunciation and intonation are very difficult to learn for the non-native learners of English. It is impossible to treat the production of specific sounds and sound contrasts and intonation forms divorced from the natural stream of speech; therefore, suprasegmental features of non-native accents in terms of juncture, pitch and stress cannot be ignored.
3. For the intonation analysis, the following phonemes are studied and applied in the analysis and practice exercises:

Juncture phonemes	Sign
Open juncture	/+/
Close juncture	/-/
Falling terminal juncture	/↘/
Rising terminal juncture	/↗/
Sustained terminal juncture	/→/
Falling-rising terminal juncture	/↘↗/
Rising-falling terminal juncture	/↗↘/

Stress phonemes

Primary stress phonemes	// / or /' /
Secondary stress phoneme	/^/ or /, /
Tertiary stress phoneme	/ \ / or / . /
Weak stress phoneme	/ ~ /

Pitch phonemes

Extra high pitch	/4/
High pitch	/3/
Mid pitch	/2/
Low pitch	/1/

4. According to Wrembel (<http://www.icphs2011.hk/resources/:64>), a “pitch, volume and rate control technique can be used: producing sound sequences or whole passages progressively louder or softer and at different rates of delivery; practising (i.e. singing, humming, chanting) sentences like “I can make my voice go really high / fall really low” with a gradually falling or rising intonation.” In addition, ‘vocal warm-ups,’ since they help to exercise the muscles of the mouth and the tongue, contributing to a greater articulatory agility and clearer speech, are very practical to apply. They include popular tongue-twisters (e.g. She sells sea shells on the sea shore), chants and raps. Also, pitch, volume and rate control: producing sound sequences or whole passages.”

5. Pitch, stress, and juncture combinations are used to show intonation variation.

6. As it was expressed before, apart from the principles of the Prague, London and American Schools, the methodology of this dissertation depends mainly on the Inter-

lingual Approach, the Model Approach, the Behaviorist Approach and its exercises in elocution, imitation drills and reading aloud side by side with the Imitation Theory, the Repetition Theory, and the Reinforcement Theory (Fromkin et al., 2007).

7. In close relation to the above methods, the use of the following foreign language teaching methods may map the new sound and intonation system of a foreign language onto the students' L1 sound system:

Audio-lingual Method	Praats Program
Audioarticulation Model	Audio-visual Method
Mim-mem Method	Neuro-Linguistic Programming
Total Physical Response	Multisensory Modes
Native Speaker Model	Model Approach

8. According to Celce-Murcia et al. (1996), “imitations of a native-speaker model can be effectively used, but it must be noted that the benefits of imitation drills may depend on the learners' aptitude for oral mimicry”:

- Mouthing – miming a dialogue without words
- Mirroring – repeating simultaneously with the speaker and imitating his/her gestures and facial expressions
- Tracing – repeating simultaneously without mirroring the speaker's gestures
- Echoing – repeating slightly after the speaker.

9. At this point, follow-up activities such as self or peer monitoring can also be helpful; these activities were observed while students were doing the exercises in class.

10. Each one of the above methods can be used alone or in conjunction with other methods when necessary and at the right time. According to Wrembel (<http://www.icphs2011.hk/resources/:64>), these exercises are designed to release tension, as stiff bodies impair our breathing and consequently, decrease voice control. They include assuming a correct posture, basic stretching exercises and relaxation of face muscles (e.g. by smiling broadly or tensing and relaxing facial muscles by making the face as big and then as small as possible). The main aim is to relax and warm up the organs of articulation for further training.

11. Over the last decade, along with traditional tools for teaching pronunciation, there have also been developments in speech recording and articulation technology (Table 1). Thus, the Audacity and Text-to-Speech programs are easily utilised to record and download materials for teaching pronunciation and intonation. The materials can then be employed for instructional purposes through a myriad of teaching techniques. Some common techniques are presented in Table 2.

Table 1. Some of the tools for teaching pronunciation

Two native speakers (Americans) as informants
Tape recorders (MP3, MP4, Wav forms)
Audacity downloading programs
Text-to-Speech Labs Neospeech program
Acoustic analysis by Audacity programs
Sentences from dictionaries in audio form
British and American Accents
Self-Access Language Learning (SALL)
Accent-breaking techniques
PowerPoint presentations

Table 2. Some pronunciation-enhancing techniques

Sound charts	Cue cards
Diagnostic tests	Substitution tests
Sound discrimination tests	Voice setting
Minimal pair tests	Drama voice techniques
Phoneme discrimination tests	Bingo games
Metacognitive reinforcement	Hot Potato
Articulatory warm-up	

12. Furthermore, some materials writers have begun to recognize the importance of other modalities (e.g. visual and kinesthetic) in pronunciation training, combining pictures, gestures and physical activities (like the stretching of rubber bands) with drills, along the lines of Total Physical Response (Acton, 1984; Gilbert, 1993; Pennington, 1996). On logical grounds, the activities in the language classroom should actually involve meaningful interaction and the transfer of pronunciation and intonation information beyond one or two sentences. Therefore, contemporary materials for the teaching of pronunciation, while still retaining many of the characteristics of traditional audio-lingual texts, have begun to incorporate more meaningful and communicative practice, an increased emphasis on suprasegmentals, and other features which reflect current research into the acquisition of second language phonology, such as consciousness raising and self-monitoring.

3.2 The Purpose of the Study

Ever since Morley's classic book entitled *Improving Spoken English* was published in 1979, there has been increased worldwide attention focused on pronunciation materials that train students to monitor their production through the teaching of formal rules, feedback and reflective activities (Jones, 2002: 103). To the best of the researcher's knowledge, however, there are no available study texts and practice materials in audio form for the **Listening and Pronunciation I** and **II** courses in the present curriculum of English-language teacher-education programs at the Education faculties in Turkey. It is apparent that these are two of the most neglected courses and that standardised teaching texts for pronunciation and intonation instruction are urgently needed in Turkey. As a consequence of this lack of recognition and coverage in the literature, the present study has aimed to fill the gap in this respect by developing and applying practice materials on pronunciation and intonation instruction for the students of English-language teacher-education programs at Turkish Education faculties. To this end, the following research questions were formulated:

1. Do pre-service English teachers perceive the designed instructional materials as practical, learnable and applicable?
2. Are there statistically significant differences in perceptions among the participants by gender and age?
3. Do pre-service English teachers develop an awareness of the significant role of intonation in foreign language teaching?

3.3 The Materials and the Methods

3.3.1 Participants and Setting

The participants in this study included a total of 135 pre-service English teachers enrolled in the Listening and Pronunciation I course in the Department of English Language Teaching at Hacettepe University in the year 2012 in Ankara. As indicated in Table 3, the great majority of participants (N = 101, 74.5%) were females. Only 34 student teachers (25.2%) were males. In addition, most participants were between 18-19 years old and only 56 participants (41.5%) were aged 20+.

Table 3. Background information of the participating students

Age	Frequency	Percentage	Gender	Frequency	Percentage
18-19	79	58.5	Male	34	25.2
20+	56	41.5	Female	101	74.8%
Total	135	100	Total	135	100

3.3.2 Instruments

In order to determine whether pre-service English teachers view the designed instructional materials as practical, learnable and applicable, a Questionnaire consisting of 12 statements on a 5-point Likert scale was developed by the researcher relying on the experts opinions in this field. (see Appendix A). The questionnaire, which was evaluated before its administration by three experts in the field of study, was designed to collect data for the research questions. The internal consistency of the items in the questionnaire was measured using Cronbach's alpha. The reliability of the questionnaire was found to be 0.801, which is an acceptable level.

3.3.3 Materials

The exercises developed for the purpose of the present study involve consciousness-raising activities which sensitize learners to the differences between the L1 and L2

systems. They can alert the teachers to ‘special problems’ of habit formation in acquiring L2 phonology likely to be encountered by particular L1 speakers. It must be borne in mind that “for learners without ‘good ears’, drills may cause production to stabilize before reaching the target” (Kenworthy, 1987). Therefore, the materials in the study should also enable students to become much more aware of their own interlanguage.

In the current study, exercises presented and practised by means of PowerPoint presentations made the rules of pronunciation and intonation more memorable to learners and increased their awareness by providing an opportunity for communicative practice as learners interacted with their peers on their own with speaking exercises. In addition, the exercises in this study attempted to integrate pronunciation and intonation practice into broader communicative activities via fully-equipped sentences, dialogues, discourse situations, and reading passages in native speakers’ voices.

It is important to note that writers of pronunciation-teaching materials in the coming years will probably pay more attention to the learners’ sociolinguistic situations and the political implications of attitudes towards non-native accents. They should also increasingly find ways of dealing with the psychological aspects of pronunciation training and integrate confidence-building and reflective activities into their courses. More attention should also be given to the order in which phonological principles are presented, with increased focus on the broader, more communicative aspects of pronunciation, like ‘voice quality’ (Jones & Evans, 1995). In our postmodernist times, *Self-Access Language Learning* (SALL) cannot solve the problems in learning the pronunciation and intonation of the target language (Gardner & Miller, 1999). The present study assumes that the guidance of a professional pronunciation coach is still needed.

3.3.4 Procedures

In the following stages of pronunciation and intonation teaching, “the explicit teaching of rules must remain, nevertheless be tempered with more and more opportunities for free practice, and training the monitor continue to be emphasized with exercises in self-assessment (Jones, 2002:112). The sample lessons for this dissertation have been conducted in a sound-proof language laboratory. Exhortation was the beginning

point in the study process. In the study process, all of the exercises were speaking exercises; the students heard the teaching materials from the voices of native speakers. The students were given model sentences by the teacher to which they had to listen very carefully. The length of the utterances was organized from shorter to longer expressions. Then, the teacher asked the students to repeat. The repetition was conducted in small doses by each student or by groups of students. Peer evaluation was also made. Imitation, repetition, substitution and discrimination drills are patiently exercised in the class. Imitation, repetition, substitution, and discrimination drills had an important place in the teaching of pronunciation as a means to help articulation become more automatic, so as to pave the way for communicative practice.

The exercises used in this dissertation could be presented by means of any method. The 'listen and repeat' approach has been persistently used in the teaching of pronunciation and intonation, even though it is the oldest approach. It must be noted that this skill had to be established first so that the mastery of it could be achieved. Listening and repeating was compared to a two-way street: focused listening improve oral production and practice in oral production improved auditory perception (Pennington, 1996). Materials which claim to be communicative were found only to offer a variation on this approach in which simple dialogue reading or practice with minimal pairs passed off as 'communicative' (Gilbert, 1993).

3.3.5 Data Collection and Analysis

All of the exercises created on juncture, stress, and pitch suprasegmental phonemes of English intonation in this study were administered to 135 English Language Education freshmen in the Faculty of Education at Hacettepe University during the two terms of the year 2012, as study materials for their first and second mid-term examinations. They studied these exercises before completing the first and second mid-term exams. Later, the participants were administered a questionnaire consisting of 12 statements on a 5-point (from strongly disagree to strongly agree) Likert scale and the results can be seen in Appendix A. Both descriptive and inferential statistics were employed to analyse the data.

4. ANALYSIS AND INTERPRETATION OF RESULTS

This section presents the results of the study in terms of descriptive and inferential statistics, together with discussions.

RQ1. What are the overall attitudes of the participants towards pronunciation and intonation exercises by means of power-point presentations and electronic speaking dictionaries in teaching English as a Foreign language?

As indicated in Table 4, descriptive statistics such as frequency and percentage were calculated in order to understand the participants' overall opinions and thoughts about the materials. As to the overall attitude of the participants, the results of descriptive statistics demonstrated that the great majority of the participating students (78.2%) expressed positive attitudes towards the materials designed for pronunciation and intonation, whereas 16.7% of them were neutral and only 5.04% disfavored the materials under discussion. More specifically, most students stated that the materials improved their *pronunciation* (90.37%) (Figure 13) and *intonation* (80.74%) (Figure 14). Further, 82.96% of them acknowledged that the materials also improved their awareness on problem-causing suprasegmental English phonemes (Figure 15).

The exercises we studied on by means of PowerPoint presentations and electronic speaking dictionaries in class on juncture, stress, and pitch phonemes of English intonation		Frequency*			Percentage*		
		Neg.	N	Pos.	Neg.	N	Pos.
1	improved my pronunciation	0.00	13.00	122.00	0.00	9.63	90.37
2	improved my intonation skills	3.00	23.00	109.00	2.22	17.04	80.74
3	improved my awareness on problem-causing suprasegmental English phonemes for Turks.	6.00	17.00	112.00	4.44	12.59	82.96
4	lessened the fossilized suprasegmental problems in my intonation.	7.00	32.00	96.00	5.19	23.70	71.11

5	improved my fluency in spoken English.	12.00	40.00	83.00	8.89	29.63	61.48
6	made me sensitive toward my fossilized intonation errors.	2.00	20.00	113.00	1.48	14.81	83.70
7	are practical.	4.00	19.00	112.00	2.96	14.07	82.96
8	are learnable.	5.00	18.00	112	3.70	13.33	82,96
9	are applicable.	4.00	12.00	119.00	2.96	8.89	88.15
10	promoted my motivation on intonation learning.	12.00	31.00	92.00	8.89	22.96	68.15
11	made me notice the importance of having good intonation in foreign language teaching profession.	2.00	14.00	119.00	1.48	10.37	88.15
12	are hard to learn.	25.00	32.00	78.00	18.52	23.70	57.78
	Average				5.04	16.70	78.20

* *Neg.* = Negative, *N* = Neutral, *Pos.* = Positive

Table 4. Descriptive statistics for students' perceptions of the materials designed for pronunciation and intonation

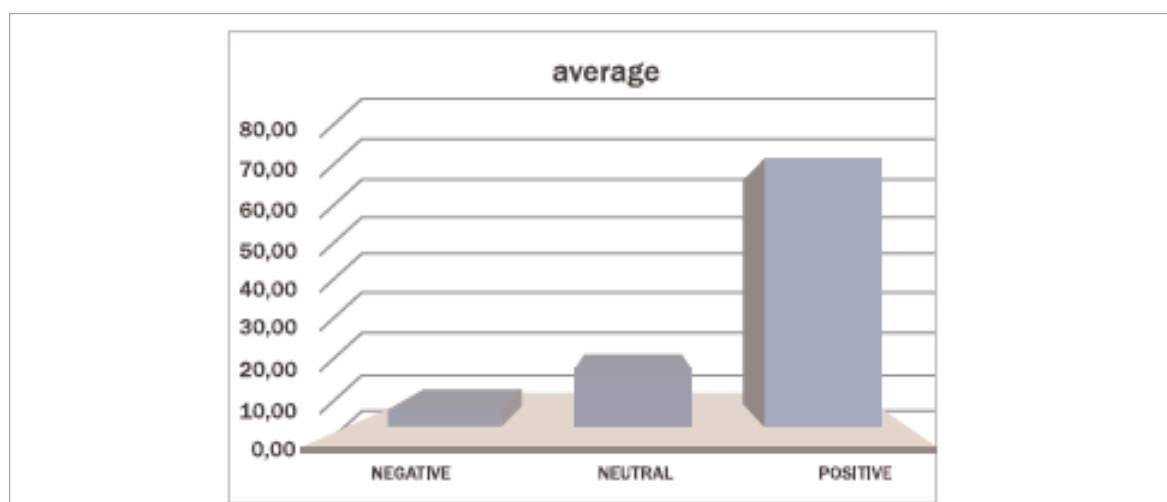


Figure 12. Participants' average attitudes toward the study.

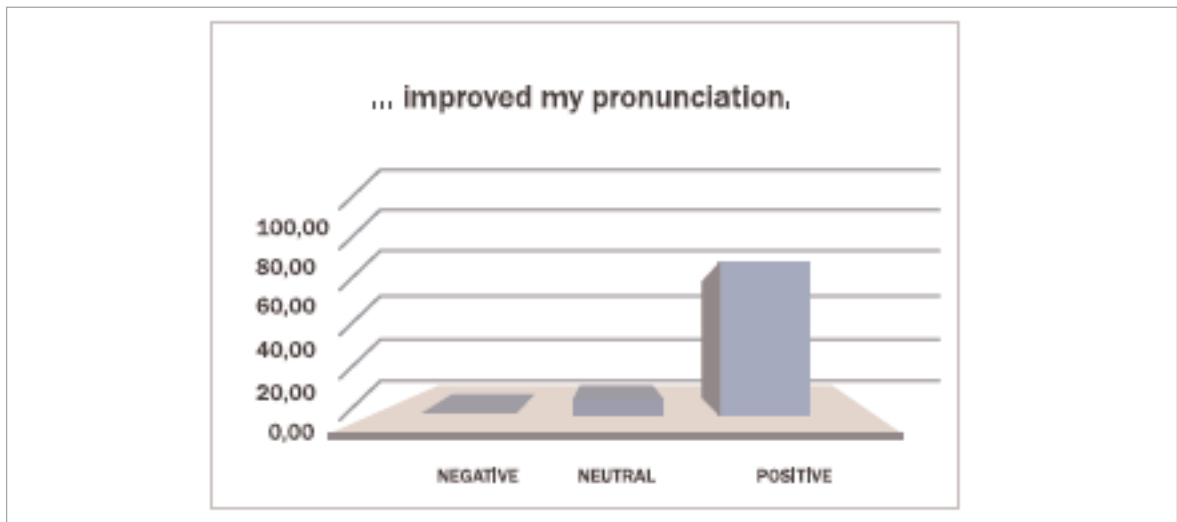


Figure 13. Participants' attitudes toward pronunciation.

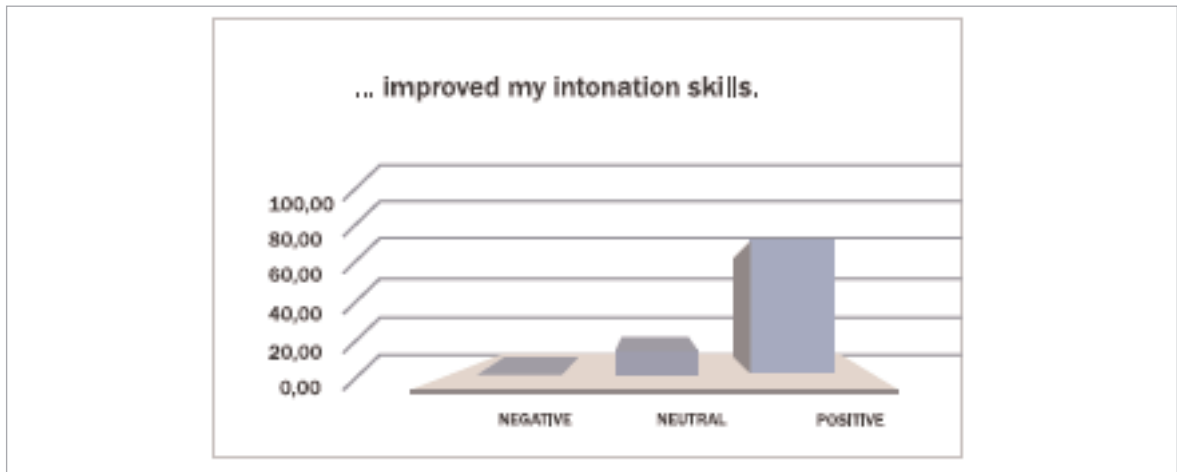


Figure 14. Participants' attitudes toward intonation.

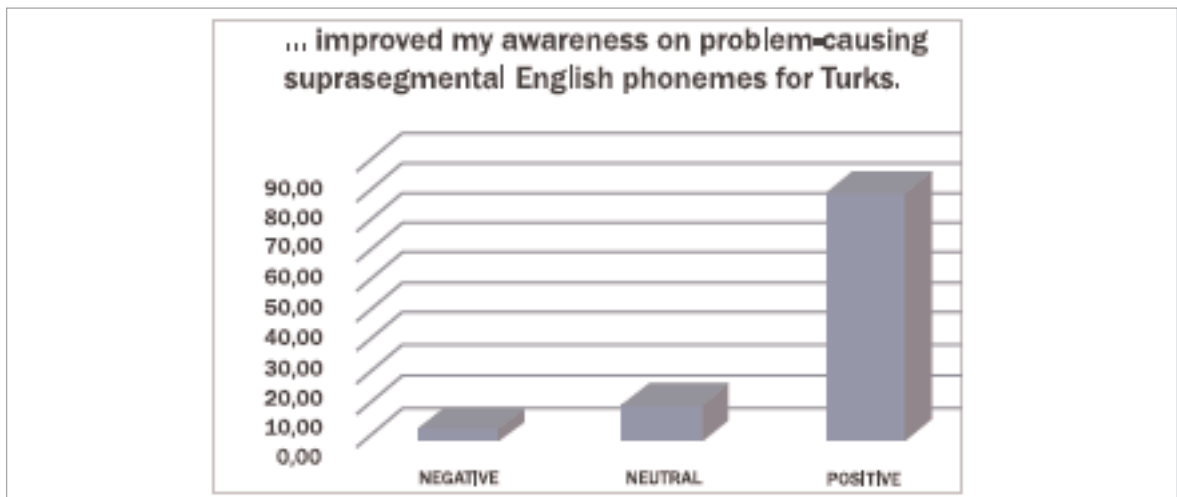


Figure 15. Participants' attitudes toward problem-causing suprasegmental English phonemes.

Another striking result that has been obtained in the study is that the participants (61,48%) have reported that these exercises carried out by the researcher for the purpose of the study improved their fluency in spoken English to a certain extent (Table 4 above and Figure 16 below).

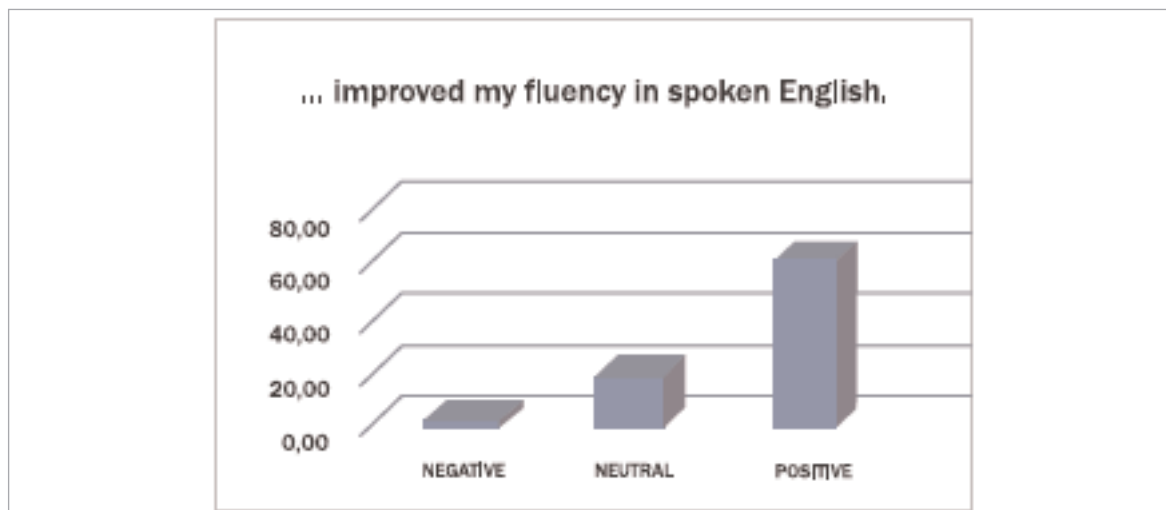


Figure 16. Participants' opinions on their fluency.

Following the above result another significant finding of this study help researchers see that these exercises help the participants (68,15%) to increase their motivation on intonation learning (Table 4 above and Figure 17).

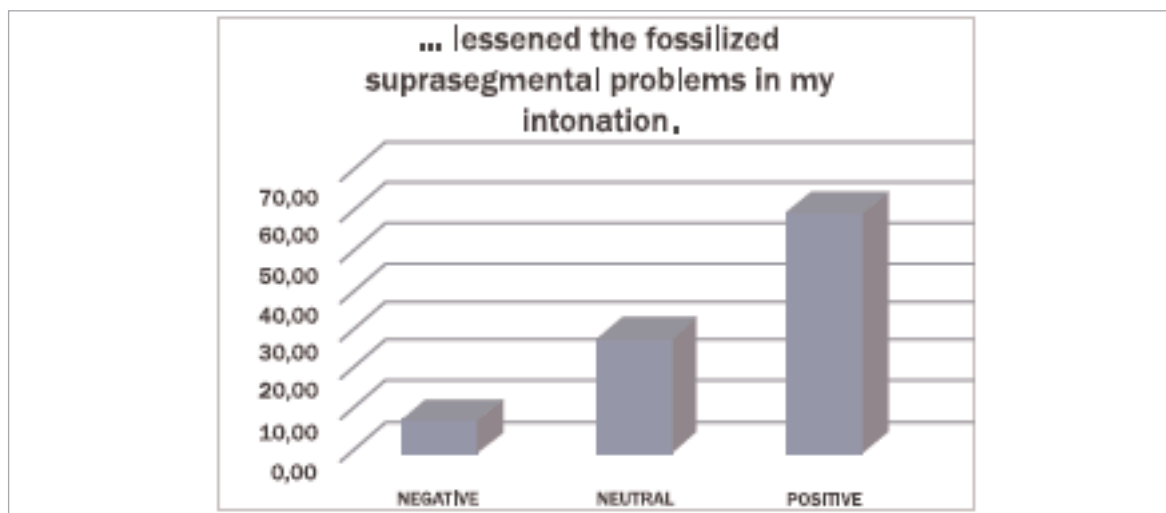


Figure 17. Participants' satisfaction.

Last but not least, the finding concerning whether the exercises make it hard to learn intonation in foreign language teaching, 57.78% of the participants agree with this item (Figure 18). This result indicates that these participants hardly have negative attitudes towards learning intonation through the above mentioned exercises.

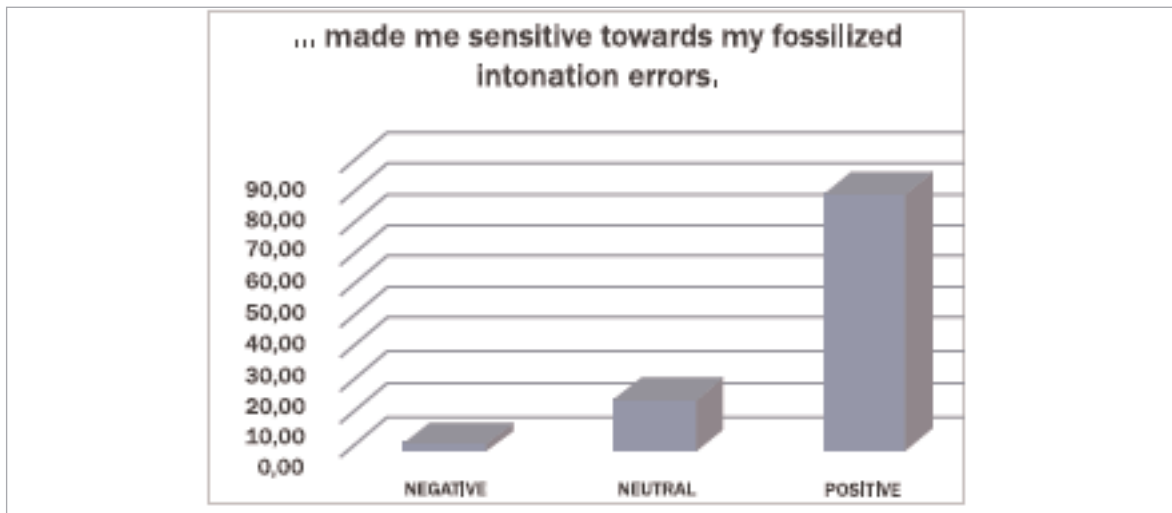


Figure 18. Participants’ opinions on their sensitivity.

*RQ2. Do pre-service English language teachers perceive the designed instructional materials as **practical, learnable** and **applicable**? (Items 7, 8 and 9)*

The results obtained in this research the participants have highly positive attitudes towards (a) practicality (82,96%), (b) learnability (82,96%), and (c) applicability (88.15%) of these materials used in teaching pronunciation and intonation. To sum up, pre-service English teachers demonstrated their positive perceptions and opinions about the materials designed for pronunciation and intonation instruction (Figures 19, 20, & 21).

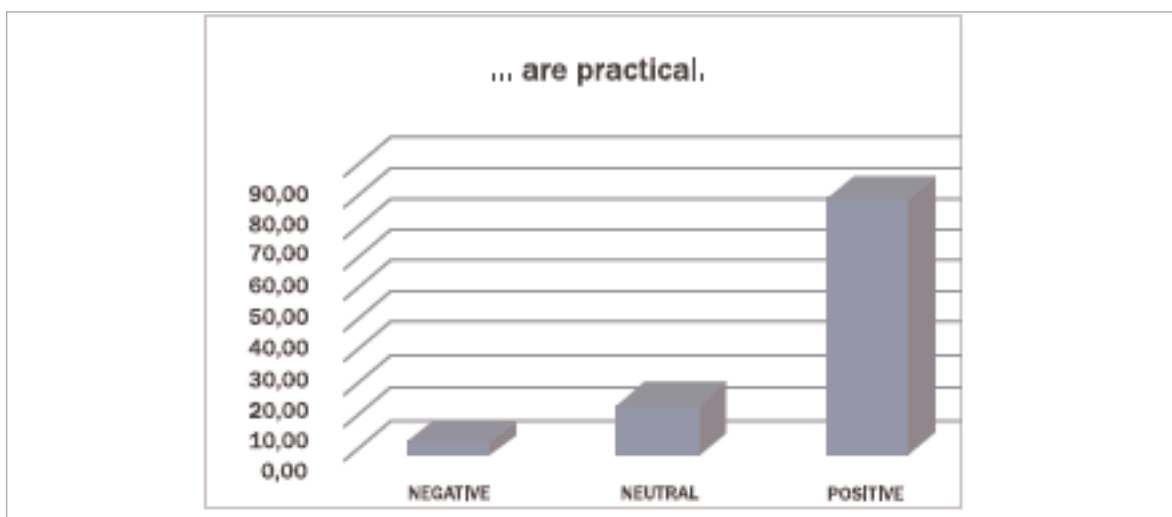


Figure 19. Participants’ attitudes toward practicality.

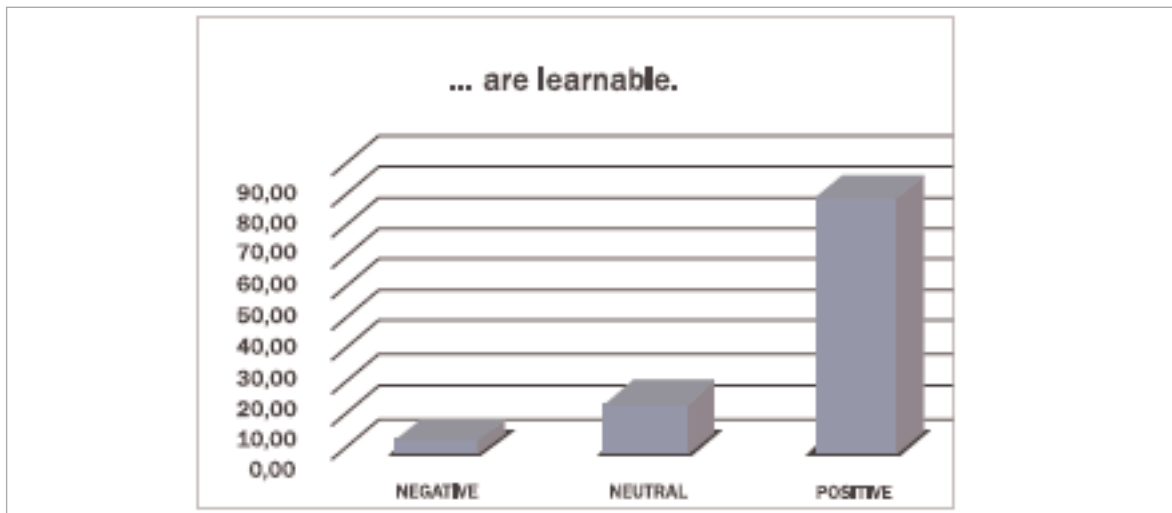


Figure 20. Participants' attitudes toward learnability.

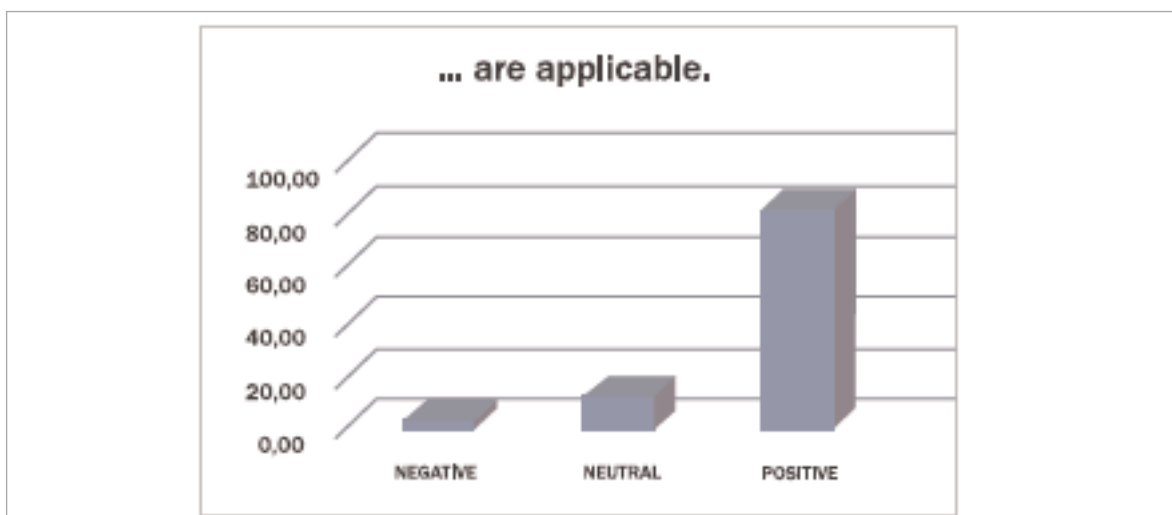


Figure 21. Participants' attitudes toward applicability.

RQ3: Are there statistically significant differences of perceptions among the participants by gender and age?

The results of independent-samples t-test indicated that there was a statistically significant difference of perceptions between males and females ($p = .002 < .05$) with regard to the materials designed for pronunciation and intonation instruction (Table 5). Interestingly enough, females favor the course more than males.

Gender	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2- Tailed)
Male	34	38.358	.48957	.08396	.002
Female	101	41.477	.42751	.04254	

Table 5. Group statistics for gender differences.

In addition, an independent-samples T-test was also computed to find out whether there were any differences between age groups. The results of the test revealed that there was a statistically significant difference of perceptions between students who were 18-19 years old and those who were 20+ years ($p = .025 > .05$), indicating that the older students repeating the course favored the materials designed for pronunciation and intonation instruction more than the younger ones who took the course for the first time (Table 6). This difference can be ascribed to the fact that older students who had previously undergone instruction developed a keen awareness of pronunciation and intonation instruction as compared to younger ones.

Age	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2- Tailed)
18-19	79	3.9968	.49146	.05529	.025
20+	56	4.1711	.40057	.05353	

Table 6. Group statistics for age differences.

RQ4: Do pre-service English teachers develop an awareness of the significant role of intonation in foreign language teaching?

In order to see if the materials improved the participants' awareness of the significant role of intonation in foreign language teaching a percentage study was utilized and the findings obtained in this study (Table 4 above and Figures 22, 23, & 24 below) indicated that 88.15% of them reported that the exercises utilized in the classroom instruction increased their awareness of having good pronunciation. Moreover, this awareness help them become sensitive toward their fossilized intonation errors (82,96%), and finally lessened the fossilized suprasegmental problems in their use of intonation (71.11%).

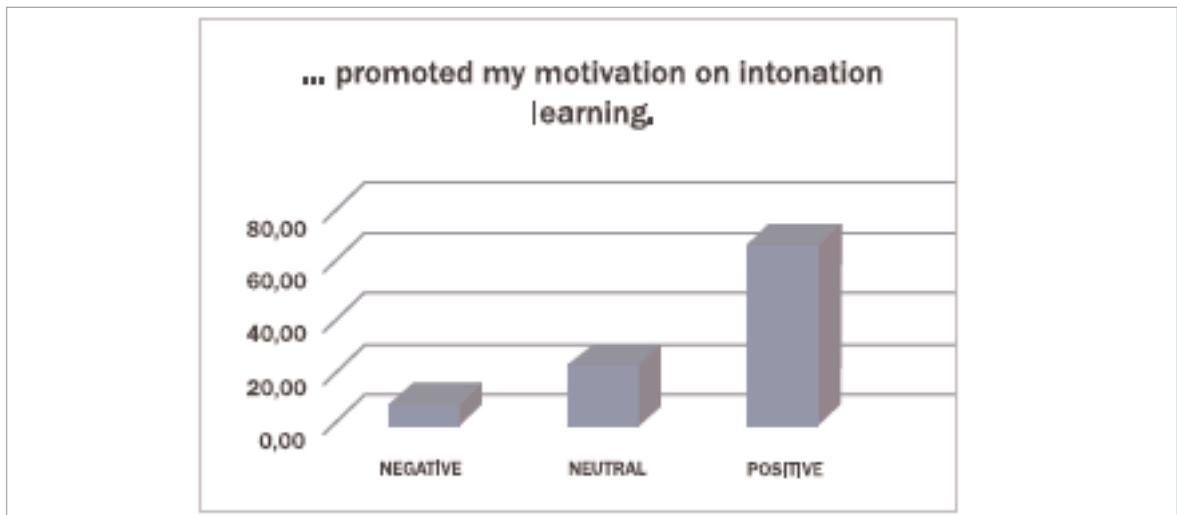


Figure 22. Awareness of the importance of good intonation.

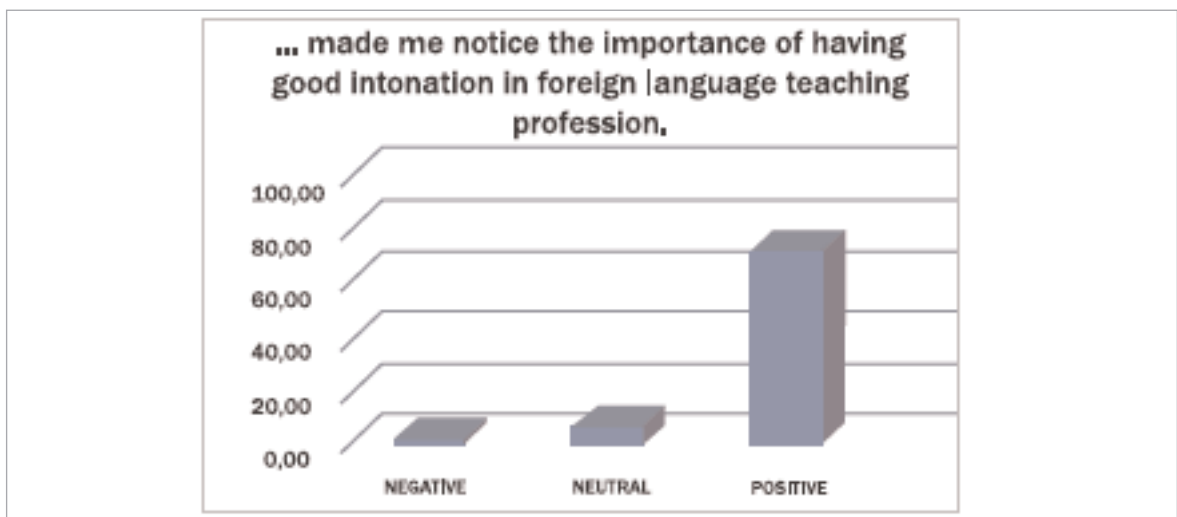


Figure 23. Sensitivity toward fossilized intonation.

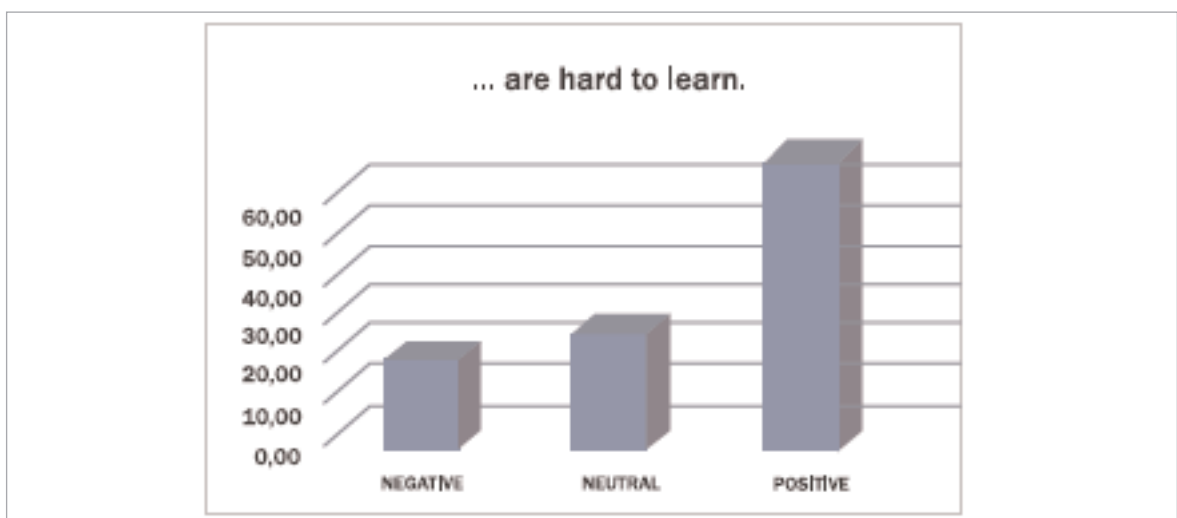


Figure 24. Conviction of the fossilized suprasegmental problems.

Consequently, the results of this research indicate by means of descriptive and inferential statistics that Turkish pre-service English language teachers perceive the designed instructional materials very beneficial for their improvement in English language. Since the the designed materials developed in this dissertation are prepared in form of speaking exercises, it is hoped that they will promote their pronunciation and intonation at least to the level of near native-like. By utilizing the audacity programs, neospeech program, and text to speech labs, it is also hoped that they can create their own instructional materials by themselves.

CONCLUSIONS AND PEDAGOGICAL IMPLICATIONS

Applied phonology is an integral part of grammar, and since there is just not one grammar of a language, different approaches to the syntactical phonology of a language should be considered. Whichever approach an analyst adopts should be based on the motivation for the analysis and the kind of result expected. The Imitation Theory, Repetition theory, Reinforcement theory, Audio-visual method, audio-lingual method, mim-mem method, and the like cannot completely discard the ideas of its precursors. In this doctoral dissertation, three elements of intonation, which are *juncture phonemes*, *stress phonemes*, and *pitch phonemes* are explored to create study materials for the Turkish students of English language education departments and for the teachers who work at the schools of Ministry National Education. It must be noted that there is a scarcity of study materials in this area of applied phonology. Due to the large contexts of tempo, rhythm, and melody elements of prosody are not handled in this study. Mainly, the fossilized errors of Turkish students and teachers of English are taken under inspection so as to develop remedial teaching practices via educational phonetics and phonology. Transcription of intonation is the hardest part: in this dissertation, 7 juncture phonemes, 4 stress phonemes, and four pitch phonemes are designed to achieve the transcription of English intonation.

Although *intonation* is particularly *difficult* for non-native learners of a second language to master, it is seldom taught systematically. The goal of this dissertation is to popularize its teaching systematically by means of exercises that can be easily studied by Turks. The exercises utilized in this dissertation in speaking forms are taken from Longman Dictionary of Contemporary English: (2009) and Longman Dictionary of American English: (2004). The exercises are downloaded in WAV from these dictionaries via *Audacity Program* of 1.2.3 version. Some portion of these exercises are prepared by the writer of this dissertation, and they were recorded by text to speech labs programs from the internet again by *Audacity Program* of 1.2.3. The longer texts were recorded from the voices of two native speakers of American English. In the application and analysis of the exercises produced in this study, the principles, techniques, and methods of Prague school, American School, and London school of England are utilized to advance study materials for teaching of juncture, stress, and pitch phonemes, which are collectively called intonation. In other words, techniques and methods the structuralist schools like Prague, America, and London are cooperatively and concurrently used with the current applications from the internet: *audacity programs*, *text to speech labs*, and *Practicals* programs are used to design practical and applicable

materials on the teaching of junctures, stress, and pitch phonemes in the intonation of English. The texts and exercises written on paper do not teach much because they are silent, which gets to be very ineffectual to handle the spoken forms of English language. The exercises produced in this doctoral dissertation are talking exercises which can be played in a computer very easily, and such a practice increases their applicability and learnability by the students.

135 freshmen are given a questionnaire with 12 questions to explore their evaluations on the issues of pronunciation and intonation. In terms of findings in this dissertation in relation to general averages, participants have shown the following indications:

The participants indicated that they had a power of noticing the importance of having good intonation in foreign language teaching profession (90%). The other calculations in relation to 12 questions come up as follows: pronunciation improvement (90%), the applicability of the exercises (88 %), creation of **awareness** on problem-causing suprasegmental English phonemes for Turks (83%) , The exercises are practically **learnable** (82%) that can develop intonation skills (80%), They improved their **motivation** on intonation learning (78 %), **lessened** the fossilized suprasegmental problems in their intonation (70 %), improvement of **fluency** in spoken English (60 %). In terms of fluency, there are also further elements of intonation like rhythm, tempo, melody, and prosody, which are not researched in this dissertation since they deserve a separate research, additionally contributing to the learning of intonation.

The participants evaluated the 12 questions in the questionnaire within a **80%** positive preference in general: this result demonstrates that the exercises specially designed in this dissertation are beneficial to the prospective teachers of English. Since each exercise is given by means of at least near native-like intonation to the students, the learning process has become more attractive to them. In the creation of exercises the use of powerpoints, Audacity downloading programs, neospeech and text to speech programs attracted the attention of the students.

Suprasegmental features are mainly stress, juncture, pitch phonemes, and linkers. Stress is the prominent element in a word. Prominent syllables are referred to as strong, and those unstressed as weak. Strong syllables are stressed, weak syllables are unstressed. Stress in any form is perhaps the most important element of the English pronunciation enabling communication. Thus fossilized errors in stress are a common cause of misunderstanding, as stressing the wrong syllable in a word or a different

word than intended can make comprehension extremely difficult (Scribd, 2012). *That's why the term intonation is difficult to delimit precisely.*

The application of the material developed in this dissertation indicated that while remedying stress problems, students should be taught general rules of stress placement by emphasizing on primary and secondary stresses, by using various forms pitch to give emotions into their utterances, and by taking shorter and longer pauses between meaningful thought chunks through juncture phonemes, and by solidifying such suprasegmentals through constant exercises in dialogues as models by videos. As for junctures, students who never pause between words or those pausing inconsistently are drilled on pausing at short or long intervals between “thought groups” in their sentences (Edwards, Harold T., 1997). Thus L2 students can either learn such suprasegmental skills or remedy their fossilized errors and acquire correct habits of articulation leading to expressing more understandable utterances and successful communication. Observers say that natives react more violently to unacceptable suprasegmental errors rather than segmental ones, thus speakers neglecting such important pronunciation elements risk harming their image and the quality of their communication despite all their good intentions. So in order to avoid any misunderstanding, learners of English should consider the good old cliché “*It's not what you said, it's how you said it*” in mind if they want to have effective communication with their audience.

Suprasegmental elements such as stress, pitch, juncture phonemes are uttered naturally and correctly in the mother tongue without prior training but need to be learned systematically in the target language. Therefore, it is vitally important in order to establish the intended communication in the language learned and taught such techniques of pronunciation alongside with segmental issues. Experience has clearly shown that one of the most visible areas of weakness in Turkish students learning English is stress placement. Turkish students of English must note that sentence stress along with pitch and juncture phonemes are the main components of intonation. In connected speech, linking, stress, pausing and intonation along with weak and strong forms of grammar words (for example saying “does” /dʌz/ rather than /dəz/ or contractions “I'll”, “he's etc. are less likely to cause a communication breakdown. Rather, they impart to the speaker a heavy foreign accent (Lev-Ari, 2010). Without good linking, good stress or pausing and the versatility of intonation patterns, stretches of words become unclear chunks that interfere with communication.

It must be once again noted that sentence stress in the structure of intonation involves giving greater prominence in a sentence to some more words than others. For instance,

as content words express the essential meaning and carry information they are therefore typically stressed. As for function words, as they are also termed as structure or grammar words, they serve to connect words in order to complete the sentence and are not normally stressed. Stress highlights the most important words in the message, a rhythmical approach to English pronunciation will help the foreign listener to concentrate on the meaningful words in the message and to strengthen the links between pronunciation on the one hand and grammatical structure and meaning on the other. This approach encourages the understanding of language as communication rather than a set of isolated segments (Sabater, 1991).

Most often variations in the melody of English speech are “alien” to those language learners who use monotonous, flat, or chopped patterns of intonation. Before practicing intonation of the language, the learners must be exposed to it so that intonation becomes embedded subconsciously in their memory bank. Most people do not make a conscious effort to learn this melody of speech, however after having practiced certain speech items a number of times, it becomes another asset to their image and confidence when they start speaking. Even this only can explain why suprasegmental errors are just as important as segmental errors for their great influence on conveying meaning. The prosody of a language should be seen as its basic structure. The major difficulty of acquisition lies in the fact that two different languages have differences at the suprasegmental level (Institut numerique, 2012), and English and Turkish are no exceptions. Turkish learners automatically reproduce L1 prosodic features, and the resulting errors have a devastating effect on intelligibility, just as segmental errors do. Native speakers are often unaware of intonation and its role in their language.

While native English speakers can easily recognize the grammatical and pronunciation difficulties faced by non-native speakers and make allowances for their segmental errors, they are unable to do so for intonation. As the intonation errors made by non-native speakers may not be recognized hence may lead to misunderstanding. When non-native speakers mistakenly use intonation patterns this is considered by non native hearers as unintended notes of rudeness (Al-Sibai, 2004). Unaware of their possible intonation errors, native hearers may then take the perceived rudeness to be deliberate. “Natives often react more violently to... intonational meanings than to ...lexical ones; if a man’s tone of voice belies his words, we immediately assume that the intonation more faithfully reflects his true linguistic intentions” (Atoye, 2012). Therefore, intonation is one of the most important aspects of having native (or near-native speech), not that it is necessarily a realistic goal.

Most of the suprasegmental errors occur on the stress level since Turkish comes from a syllable-timed language origin. Some students neglect to place prominence on the relevant syllable, some do not reduce the unstressed syllable to /ə/, yet some others place prominence on the wrong syllable which all cause misunderstanding of meaning and giving wrong impression of one's intention. The misplacement of stress occurs often on compounds such as /SUN glasses/ or /BUS stop/ and phrasals as /take it OUT/ or /clean it UP/ and polysyllable words /interNATional/ /DICTionary/ and more often in full sentences. /You NEVer know what you can DO till you try. / As for the sentence stress some students place the focus on the wrong word or not indicate it at all. A total ignorance of juncture (pausing in the wrong place) and linking (between words) prevails among English learners which cause great inconvenience of communication with their audience. The general observation of professional phoneticians is that most learners of English can hardly distinguish between the primary and secondary degrees of stress in a sentence. Luckily there is remedy to these ills but "prevention is always better than cure" in correcting suprasegmental errors as it is in other pronunciation problems.

The main cause of suprasegmental errors in English is that most EFL, ESL, and SLA learners are not aware of such concepts as stress, pitch, juncture and linkers forming prosody and the intonation of the language; students seriously *struggle with* intonation. They neither recognize nor express the distinction between unstressed syllables and stressed ones let alone differentiating primary and secondary stressed syllables, and simply articulate them all with equal effort. They do not separate the "thought groups" in chunks and separate them in shorter and longer pauses in their sentences. They do not reflect in their utterances the emotions their words are loaded with. Their pronunciation teachers basically tend to focus on segmental features leaving all suprasegmental elements unattended. Therefore while correcting such suprasegmental errors, the remedy should come from exactly where the problem was caused and the solution was neglected. Thus students should first be made aware of and briefed on various functions of suprasegmentals to start with. Their phonetics teacher should teach them how to make stressed syllables prominent in their words and sentences by making them raise their voice where relevant.

Pedagogical implications

The misuse of intonation leads to the acquisition of a foreign accent, which must be avoided by the non-native students of English language education. Therefore, students should be taught which words are stressed and which are not. They should keep in

mind that ‘content words’ such as nouns, principle verbs, adjectives and adverbs are stressed and ‘function words such as determiners, auxiliary verbs, prepositions, conjunctions are not. As they try to grasp several related stress rules, their pitch will automatically go up and they will start lengthening the vowels on the stressed syllables. They will eventually realize that correct stress and intonation are the keys to their speaking English fluently. Their teachers will also teach them some stress paradigms by allowing them to compare minimal pairs representing compound words and phrasals and asking them to tell the difference between the two. They will also learn to realize the importance of reducing the unstressed syllable to schwa /ə/ (e.g. /com'PLETE, pro'FESSor/) by making the neighboring stressed syllable stand out. They will be able to distinguish between the primary and secondary stress in multi-syllabic words such as /,MANifes'TATion/ and /,NATio'NALity/. They will remember to place stress on the first syllable on “nouns” and final on “verbs” and stress the prefixes and suffixes. In “compounds” they will be focusing on the first words and in “phrasals” on the second. In sentence stresses they will be dividing the sentences in thought chunks and place shorter and longer junctures or pauses in between. While correcting their errors in pitch, their teachers will remind them that in statements, wh-questions, imperatives and interjections they must use a “falling pitch” /↘/, and for “nonfinality”, “incompleteness” or an “invitation” to continue the conversation they should use a “rising pitch” /↗/. For “commas” a “shorter sustained juncture” /→/ and for “colons”, “semi colons” and “periods” “longer sustained juncture” /→ →/ should be used to identify pauses they should make.

Suprasegmentals can be one of the most difficult parts of English for learners to master and one of the least favorite topics for pronunciation teachers to address in the classroom (Florez, 1998). This explains the inefficacy of most of the learners of English as a second language when it comes to their oral communication, which causes much misunderstanding and inconvenience. It is observed that limited suprasegmental skills can undermine learners’ self-confidence, restrict their social interactions, and negatively influence estimations of a speaker’s credibility and abilities (Morley, 1998). Suprasegmentals produced unconsciously by native speakers and provide crucial context to determine meaning must be carefully studied during the early stages of foreign language learning process (Celce-Murcia, Brinton, & Goodwin, 2010). Suprasegmentals dealing with such aspects of pronunciation as stress, rhythm, connected speech and the rising and falling of the voice pitch must assume a more prominent place in pronunciation instruction curricula by using various teaching materials in order to instill in the learners relevant suprasegmental features and correct existing errors (Morley, 1998).

Thus teachers, wishing to improve their students' oral performance, need to spend more time teaching them such rules for word intonation (pitch, stress, and juncture phonemes) in English as much as they focus on teaching individual sounds. Because prosodic features of language—word stress, intonation, and rhythm—are extremely important for comprehensibility, correcting fossilized pronunciation errors should not be restricted to the field of individual problem-causing phonemes and sounds only. Thus, teachers should include prosodic training in their instruction (Iyere, 2012). Teachers should also concentrate in pitches during their listening activities (e.g., listening for rising intonation in yes/no questions) and then have their learners compare question intonation in English with that of their native languages and then have them imitate dialogues, perform plays, while watching videos in which yes/no questions are used. They should lead perception exercises on duration of stress, loudness of stress, and pitch, do exercises on recognizing and producing weak, unstressed syllables, present pronunciation rules for stress and finally teach them juncture meaning how to break words in a sentence to make meaningful thought chunks

Consequently, learning the intonation of English happens to be the most difficult part of English (Cruttenden, 1997; Demirezen, 1986, 87; Gilakjani, 2012; Mennen, 2006; Kurita, 2012) to learn by the Turkish students. First of all, research on intonation is difficult to conduct because the differing nature of vowels, semi-vowels, diphthongs, and consonants, and voiced versus unvoiced consonants give hard times even to computers while measuring human pitch and intonation tones accurately. Moreover, intonation does not occur in regular steps. Intonation contours get into blending into the next in the stream of speech by gradation, which makes the perception very difficult. Intonation is highly relative because one person's high pitch may be another person's mid-range pitch. In English connected speech, intonation does not have syntactic rules governing its use even though it is based on syntax. Also, vocabulary and grammar (morphology and syntax) are relatively rigid in English, but intonation is not. In addition, intonation is extensively emotional, and therefore it is difficult to be measured.

Suprasegmentally oriented fossilized errors cannot be neglected because they are doing irreparable harms to the learning and acquisition of a foreign language like English in Turkey. In EFL, ESL, and SLA, fossilized errors based on intonation may be connived at, but not in professional teacher training institutions at faculty of Education in the department of English language education where prospective English teachers are trained for professional performance in foreign language teaching. Yet there is a high scarcity of teaching materials on stress, juncture and pitch elements of intona-

tion in Turkey. Therefore, it was the primary purpose of this dissertation to design and apply the related examples of exercises as practise materials for the professional students of English, who will be the prospective teachers in Turkey. The teaching of English intonation in terms of juncture, stress, and pitch suprasegmental phonemes is often perceived as a difficult task, but the success rate that is made available by the questionnaire of this dissertation indicates that it is not an impossible task. But still it must be noted that *intonation is* the most *difficult* part in learning to speak a in foreign language because it carries paralinguistic functions.

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APPENDICES

APPENDIX A. QUESTIONNAIRE

The following questionnaire containing 12 questions has been set up to find out whether the exercises studied on by means of powerpoints and electronic speaking dictionaries in class on *juncture, stress, and pitch phonemes* of English intonation have any effect on the improvement on phonetic skills. Please answer in terms of how well the statements describe you. Do not answer as how you think you should be, or what other people think you do. There is no right or wrong answer to these statements. The results will only reveal the effectiveness of the study in your own case.

Gender:	Male: <input type="radio"/>	Female: <input type="radio"/>			
Grade:	Freshman <input type="radio"/>	Sophomore <input type="radio"/>	MA <input type="radio"/>	PhD <input type="radio"/>	OTHER: _____
Did you take up the course called Dinleme ve sesletim I in your BA program?		YES <input type="radio"/>	NO <input type="radio"/>		
Mehmet DEMİREZEN and Metin Yurtbaşı A questionnaire on “ juncture, stress, and pitch phonemes in the intonation of English Language .”	Strongly agree 5	Agree 4	Neither agree nor disagree 3	Disagree 2	Strongly disagree 1
The exercises we studied on by means of powerpoints and electronic speaking dictionaries in class on juncture, stress, and pitch phonemes of English intonation....					
1. improved my pronunciation .	5	4	3	2	1
2. improved my intonation skills	5	4	3	2	1
3. improved my awareness on problem-causing suprasegmental English phonemes for Turks.	5	4	3	2	1
4. lessened the fossilized suprasegmental problems in my intonation.	5	4	3	2	1
5. improved my fluency in spoken English.	5	4	3	2	1
6. made me sensitive towards my fossilized intonation errors .	5	4	3	2	1
7. are practical .	5	4	3	2	1
8. are learnable .	5	4	3	2	1
9. are applicable .	5	4	3	2	1
10. promoted my motivation on in tonation learning.	5	4	3	2	1
11. made me notice the importance of having good intonation in foreign language teaching profession.	5	4	3	2	1
12. are hard to learn .	5	4	3	2	1

APPENDIX B. JUNCTURE EXERCISES

*This dissertation, intended to serve as teaching material for English suprasegmentals, is supported by a set of exercises on various aspects of juncture, stress and pitch. The exercises on **juncture** deal with 12 aspects of the topic, from minimal pairs of individual words to full sentences, from sustained, to rising to falling junctures. Then five dialogs and five paragraphs have been added. The exercises on **stress** deal firstly with word stress and gradually proceed to primary-secondary stress distinction and to sentence stress. Finally, the exercises on **pitch** deal with pitch in words, phrases and sentences. The answers to the questions and exercises have been added to the special exercises section, and are accompanied by original voice recordings of two native speakers of American English.*

Suggested exercises:

A. Establish minimal pairs on open terminal juncture in the following phrases:

1. a) a node b) a note c) a name d) an ode e) a nine
2. a) why choose b) wide shoes c) wife choose d) white shoes e) wine choose
3. a) a nice cake b) a night ache c) a ninth ace d) an ice cake e) a nice take
4. a) my train b) may tram c) mine train d) my ram e) might rain
5. a) he lies b) heal lice c) heal eyes d) heel ice e) heel lice
6. a) car track b) car trap c) cart rap d) cart rapt e) cart rack
7. a) how strained b) how strange c) house train d) house trained e) how trained
8. a) a great tape b) a grey ape c) a great ape d) a grape ape e) a grey tape
9. a) more ice b) more rice c) mow rice d) mall ice e) mall rice
10. a) keep sticking b) keeps ticking c) keep ticking d) keeps sticking e) keep sticking
11. a) a name b) an name c) a nanny d) an Annie e) an aim
12. a) that's stuff b) that's tough c) that is stuff d) that's a stuff e) that stuff
13. a) night train b) night tray c) night rate d) nigh train e) nitrate
14. a) I scream b) I cream c) ice scream d) ice cream e) I screamed
15. a) it wings b) its swings c) it swings d) it's winged e) its wings
16. a) might turn b) my earn c) a) my turn d) might earn e) my earn

17. a) all this I am today b) all those I have today c) all these I love today d) all that I'm after today e) all the time after today
18. a) grey eyes b) great ties c) great eyes d) great tiles e) grey ties
19. a) play nice b) playing ice c) played ice d) plays ice e) plain ice
20. a) receding b) re-seeded c) recedes d) re-seed e) recede

B. Place the falling juncture into the related part of the sentence:

1. Dad usually takes a nap in the afternoon.
2. She has a very narrow view of life.
3. They narrowly escaped death in the accident.
4. Matt has been saying some nasty things about me.
5. When people come together, intentionally or unintentionally.
6. We are having a meeting on Monday.
7. He's in a meeting, try again soon.
8. The meeting did not go so well.
9. When many people come together as a group.
10. There is a gathering of protesters in front of the City Hall.
11. I only see him in social gatherings.
12. The gathering of candidates in Washington retied the bonds.
13. A large and formal meeting where a lot of people talk about important matters, especially when it spreads over a few days.
14. The United Nations held a conference on solar energy.
15. We are attending the Conference on Child's Rights.
16. He will be a guest speaker at the conference next month.
17. A formal meeting to talk about business matters.
18. After a long conference with the rest of the board, he decided to reject the offer.
19. You should be in the conference room at 5 o'clock.
20. Please do not disturb us, we will be in conference.
21. We will not give up the freedom of assembly.
22. The principle gave a speech at school assembly.
23. They are attending the Auto Assembly in November.
24. When representatives of different groups meet to discuss different matters it is natral that difference of opinion a rise.
25. There was a lot of action at the national congress of the party.

26. The International Congress of Dentists will take place in London.
27. The Third Annual Fund Raising Congress was a success.
28. He's attending a teachers' convention in Rome.
29. The convention on human rights was an important step forward.
30. The city's new convention center will hold a convention for science fiction fans.
31. The live video chat session is starting now.
32. In this session, we will answer some questions from the audience.
33. Be quiet! There is a recording session in progress.

C. Place the rising juncture into the related part of the sentence:

1. Is Andrea a native of Brazil?
2. Is it natural for a four-year-old to be so quiet?
3. Would you like to live nearer to the ocean?
4. Is there a bank near here?
5. Knowing that I know now, what would I have done differently?
6. If it is good for you, why would it not be good for others?
7. Do you know where bees go in winter?
8. You didn't finish your meal, did you?
9. Can you guess what happened today at school?
10. Is my dog going to die, doctor?
11. How can someone tell you what you can't do if he hasn't done it himself?
12. What if the dinosaurs come back while we're all asleep?
13. If winning isn't everything, why do they keep score?
14. How do you spell relief?
15. Wasn't he here at the party?
16. Don't you want any tea or coffee?
17. I do not mean to pry, but you don't by any chance happen to have six fingers on your right hand, do you?
18. Do you always begin conversations this way?
19. How much do you love me?
20. What would you do if I went off the air?
21. Why do people fear death so?
22. How do you know how to do all that?

23. If a word in the dictionary were misspelled, how would we know?
24. Will you travel by train or by boat?
25. Where do you want to go today?
26. Now, who wants to save the world?
27. What is the use of a house if you haven't got a tolerable planet to put it on?
28. Are you a good witch or a bad witch?
29. If you knew you were going to die today, what is the one thing that you would do before you left the world behind?
30. What do you think is the most important thing to remember about what it means to be an American?
31. Why is it so easy to give good positive advice to others, but you can't seem to follow your own advice when you need to?
32. Do you not agree that the book is always better than the movie?
33. What do you think is the gravest problem with the current education system and how can it be resolved?
34. If you could go back and change just one thing, what would that one thing be?
35. Do you think your vote counts?
36. Who inspires you?
37. If you were a road sign, what would you say?
38. What song are you listening to now?
39. Should marijuana be legalized?
40. Why is gasoline so high?
41. Why are all our rights being taken away?
42. Why is it legal for police to come and take anything of value out of your homes and leave with it?
43. When dog food's flavor is new and improved, who is the person that determines this?
44. What do you have hidden in your undies drawer?
45. What makes a person rich?
46. Love or money?
47. What is your favorite old movie, and by old I mean black and white?
48. How do you define high maintenance, and what qualities does this include?
49. If you could choose only one word that describes you perfectly for your epitaph, what would that one word be?

50. If the police were beating on your door now, what would you do?
51. What is your motto?
52. What did you always want to be when you grew up?
53. How do you show support for your troops?

D. Place the sustained juncture into the following sentences:

1. From the beginning, James has maintained his innocence.
2. I wasn't hungry, but I made myself eat something.
3. "I'm so tired!" "Yeah, that makes two of us."
4. Don't worry - we'll manage somehow.
5. I have this nagging feeling that he's lying.
6. Jackson nailed his final shot, and the Bulls won the game.
7. Beer, whiskey, wine - you name it and I've got it!
8. The movie won two Oscars, namely "Best Actor" and "Best Director."
9. Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime.
10. Follow glory and it will flee, flee glory and it will follow thee.
11. Giving up doesn't always mean you are weak; sometimes it means that you are strong enough to let go.
12. Promises mean everything, but after they are broken, sorry means nothing.
13. God grant me the serenity to accept the things I cannot change, courage to change the things I can, and wisdom to know the difference.
14. Be more concerned with your character than your reputation, because your character is what you really are, while your reputation is merely what others think you are.
15. Our character is what we do when we think no one is looking.
16. Knowledge speaks, but wisdom listens.
17. The longer the explanation, the bigger the lie.
18. Appear weak when you are strong, and strong when you are weak.
19. Speak when you are angry, and you will make the best speech you'll ever regret.
20. Do not go where the path may lead, go instead where there is no path and leave a trail.

21. Experience is not what happens to you; it's what you do with what happens to you.
22. For beautiful eyes, look for the good in others; for beautiful lips, speak only words of kindness; and for poise, walk with the knowledge that you are never alone.
23. By three methods we may learn wisdom: First, by reflection, which is noblest; Second, by imitation, which is easiest; and third by experience, which is the bitterest.
24. If you're trying to achieve, there will be roadblocks. I've had them; everybody has had them. But obstacles don't have to stop you. If you run into a wall, don't turn around and give up. Figure out how to climb it, go through it, or work around it.
25. The only true wisdom is in knowing you know nothing.
26. A wise man is superior to any insults which can be put upon him, and the best reply to unseemly behavior is patience and moderation.
27. A good head and a good heart are always a formidable combination.
28. The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails.
29. A fool flatters himself, a wise man flatters the fool.
30. I'd rather regret the things I've done than regret the things I haven't done.
31. Wisdom begins in wonder.
32. The teacher who is indeed wise does not bid you to enter the house of his wisdom but rather leads you to the threshold of your mind.
33. A man must be big enough to admit his mistakes, smart enough to profit from them, and strong enough to correct them.
34. If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language, that goes to his heart.
35. Honesty is the first chapter in the book of wisdom.
36. Winners never quit and quitters never win.
37. Discipline is the bridge between goals and accomplishment.
38. It's not what you look at that matters, it's what you see.
39. Adopt the pace of nature: her secret is patience.
40. When it is obvious that the goals cannot be reached, don't adjust the goals, adjust the action steps.
41. Always keep an open mind and a compassionate heart.

42. A mistake is simply another way of doing things.
43. Beware of false knowledge; it is more dangerous than ignorance.
44. If you only have a hammer, you tend to see every problem as a nail.

E. Place the rising-falling juncture into the following sentences:

1. What is the brand of your pen? The brand of my pen is Bic.
2. What is your sister's name? My sister's name is Emily.
3. What state do you live in? I live in Florida.
4. Where do you work? I work in an office.
5. What's your name? My name is John.
6. Do you think he is funny? No.
7. Is your father handsome? Yes.
8. Can you sing? Yes.
9. Is this your school? Yes.
10. Do you eat pasta? No.
11. Is that girl sitting at the bank your sister? Yes, she is.
12. You came here at six, right? Yes.
13. Is your mother a Turk? Yes.
14. Have you been to China? No.
15. Have you got a watch? Yes.
16. Is that your school? Yes.
17. Is your mother old? No.
18. Where did you learn English? In America.
19. Who is the US President? Barrack Obama.
20. Are you Moslem? Yes.

F. Place the falling-rising juncture into the following sentences:

1. Everybody's gone home. Yes?
2. Nobody here speaks French. Right?
3. Nobody phoned. Yes?
4. You don't know me. Do you?
5. You never drink coffee. Right?
6. That's no excuse. Is it?
7. Let's go for a walk. Shall we?

8. Nothing ever changes. Does it?
9. You hardly smoke anymore. No?
10. You didn't see me, right?
11. Sean never goes to bed until really late. Does he?
12. Let's go to Mexico this summer. Shall we?
13. The sun hardly shone all summer. Did it?
14. Somebody called you yesterday. Yes?
15. It's never too late to learn. Is it?
16. There's no homework tonight. Is there?
17. You all enjoyed the party. Right?
18. You are from Florida. Yes?
19. Pretty weather. Right?
20. That cat's yours. No?

G. Place the related junctures into the following compound sentences:

1. The little girl agreed that they should eat more pizza, but her friend disagreed.
2. Jenny hid under the bed, while Lenny hid in the cabinet.
3. Sam went shopping, so Shelby played tennis.
4. I tried to speak Spanish, and my friend tried to speak French.
5. Meg brought the food, so Kate set the table.
6. I went hiking, but my friend went jogging.
7. My dog likes to eat grass, even though she's not allowed.
8. My family is very caring, even though they may get on my nerves sometimes.
9. The dog likes to play fetch, while the cat likes to roll in the grass.
10. I got an A on my test, even though I did not have a lot of time to study.
11. As for racism, much progress has been made, but there is still much to do.
12. It did rain a lot, but altogether it was a good trip.
13. Some mothers are committed to their careers; by the same token, some fathers want to spend more time with their families.
14. John bought some new shoes, and he wore them to a party.
15. Lydia liked her new house, but she didn't like the front yard.

16. We can go see a movie, or we can get something to eat.
17. The two stopped to eat, for the work had made them hungry.
18. The afternoon had been long, and hours had gone by since lunch.
19. There was no house nearby, nor did they have any food with them.
20. They wanted to pick blueberries as a snack, but a bear growled at them from the berry patch.
21. Should they leave now, or should they wait awhile?
22. The job was not done, yet they needed to rest and eat.
23. They were starving, and it was getting dark, so they went home.
24. We do not buy our food straight from the farmer or fisherfolk.
25. In a big supermarket you can buy all types of food.
26. The commander-in-chief gave secret orders.
27. Mark's sisters-in-law are thoughtful and kind.
28. Good stepfathers are hard to find.
29. Trust, but verify.
30. I have opinions of my own, strong opinions, but I don't always agree with them.
31. You can put wings on a pig, but you don't make it an eagle.
32. I used to be snow white, but I drifted.
33. A man may die, nations may rise and fall, but an idea lives on.
34. Tell the truth, work hard, and come to dinner on time.
35. I have often wanted to drown my troubles, but I can't get my wife to go swimming.
36. Any jackass can kick down a barn, but it takes a good carpenter to build one.
37. I celebrated Thanksgiving in an old-fashioned way. I invited everyone in my neighbourhood to my house, we had an enormous feast, and then I killed them and took their land.

H. Place the related junctures into the following complex sentences:

1. Because the world is getting warmer, polar bears are in danger of becoming extinct.
2. I ate the meal that you cooked.
3. I enjoyed the apple pie that you bought for me.
4. I ate breakfast before I went to work.

5. I was scared, but I didn't run away.
6. The dog that you gave me barked at me, and it bit my hand.
7. I went to office after my daughter's admission procedures were over.
8. Juan and Maria went to the movies after they finished studying.
9. While he waited at the train station, Joe realized that the train was late.
10. Because Mary and Samantha arrived at the bus station before noon, I did not see them at the station.
11. After I came home, I made dinner.
12. We visited the museum before it closed
13. After they left on the bus, Mary and Samantha realized that Joe was waiting at the train station.
14. It's sad that these students don't get the help they need.
15. I'm not sure I can answer that question to your satisfaction.
16. If you ask a question, you'll get an answer, even if it's "I don't know."
17. It was clearly evident that she was unhappy.
18. After he came home, he read his newspaper..
19. We visited the museum before it closed.
20. Because the bridge wasn't properly maintained by the government, it fell down.
21. Although he ate a really big dinner, now he wants to eat cake for dessert.
22. Whenever they eat at this restaurant, they order a hamburger and fries.
23. He'll be able to maintain a healthy weight if he keeps exercising.
24. The students are studying because they have a test tomorrow.
25. When he handed in his homework, he forgot to give the teacher the last page.
26. The teacher returned the homework after she noticed the error.
27. There are dreams that cannot die.
28. The house which Abraham Lincoln was born in is still standing.
29. The expert who examined this scroll said that it was more than one thousand years old.
30. My friend invited me to a party, but I do not want to go.
31. Writing evolved when picture symbols changed to letters.

32. Unless you study hard, you will fail.
33. As he was industrious, he came out successful.
34. Although my friend invited me to a party, I do not want to go.
35. Because the soup was too cold, I warmed it in the microwave.
36. Consumers buy fewer goods when prices rise.
37. The woman who called my mom sells cosmetics.
38. She washed the dishes after they all had their dinner.
39. The book that Jonathan read is on the shelf.
40. The town where I grew up is in the United States.
41. Because it was expensive, we were not able to buy the necklace.
42. The player who ran the wrong way misunderstood the signal.
43. A boy who is diligent is sure to succeed in life.

I. Place the related junctures into the following compound-complex sentences:

- 1 Many buildings collapsed during the earthquake, so we plan to sell the property just before the real estate market collapses.
2. I'm not going to worry about it; I'll just take each day as it comes.
3. The phrase "come on" is used in order to tell someone that you know that what s/he said was not true or right.
4. When I try to explain, it comes out all wrong, and she gets mad.
5. Even though my wife objected, I had committed myself and there was no turning back from my decision.
6. The term "commonwealth" indicates a group of countries that are related politically or economically; it commonly indicates the group of countries that have a strong relationship with Great Britain.
7. "I'll stay here to keep you company" means I will be with you so you are not alone.
8. I have to make some preparations: you have to remember that we're having company tonight, so you must be back home by five.
9. I have never had good luck in my jobs; my last job was so boring that this one seems great by comparison.
10. Last year we sold twice as many computers as our main competitor, but still we must bear in mind that advertising is a highly competitive and costly industry.
11. She called at six, but by that time we had already left.
12. She does the same job as I do, but in a bigger company.

13. Even though he prefers to eat with a fork, he chooses to use chopsticks in Chinese restaurants; however, they aren't easy to use.
14. I usually use a pick whenever I play the guitar, or I just use my fingers.
15. If Barack Obama is re-elected this November, he'll serve another four years, but it won't be an easy contest to win.
16. Although I enjoy shopping, I haven't been to the mall in two weeks, and I am broke.
17. If I earn money from my chores, I will buy a new purse, but I don't get my allowance today.
18. I want to play in the snow, but unless I can find my gloves, I can't.
19. Annie lived in the north, but Sheena, who did not like the cold, lived in the south.
20. Though her answers were proven to be correct, one of our classmates said they weren't; our teacher also said they were wrong, which means neither of them really understood the sentences.
21. Glenda thought Eunice was angry with her, but Eunice thought Glenda was the one who was angry, so in the end they realized that they were really the best of friends.
22. Travis went to play football, while Ryan went to play basketball, and afterwards they both went home and watched a movie.
23. Cody resides in St. Claire and Levi resides in St. Mary, but even though they are far from each other, they are still good friends.

J. Place the related junctures into the following proverbs:

1. Do unto others as you would have them do unto you.
2. If life gives you lemons, make lemonade.
3. Lightning never strikes twice in the same place.
4. It's better to have loved and lost than never to have loved at all.
5. Man proposes but God disposes.
6. Marry in haste, and repent at leisure.
7. When the cat is away, the mice will play.
8. If you don't have anything nice to say, don't say anything at all.
9. A staff is quickly found to beat a dog.
10. The remedy is worse than the disease.
11. Where there is a will, there is a way.
12. The voice of the people, the voice of God.

13. The cow knows not what her tail is worth till she hath lost it.
14. The mouse that hath but one hole is quickly taken.
15. What is bred in the bone will not out of the flesh.
16. Where your will is ready, your feet are light.
17. Better a mistake avoided than two corrected.
18. We may give advice, but we cannot give conduct.
19. The wolf eats often the sheep that have been told.
20. What is sauce for the goose is sauce for the gander.
21. Don't kill the goose that lays the golden eggs.
22. All that glitters is not gold.
23. Give every man your ear, but few your voice.
24. The grass is always greener on the other side.
25. One rotten apple will spoil the whole barrel.
26. The apple never falls far from the tree.
27. A candle loses nothing by lighting another candle.
28. Paddle your own canoe.
29. A chain is only as strong as its weakest link.
30. A burnt child dreads the fire.
31. Children are uncertain comforts but certain cares.
32. Who has not served cannot command.
33. Better to be alone than in bad company.
34. A man is known by the company he keeps.
35. Better the devil you know (than the one you don't.)
36. Discretion is the better part of valor.
37. Fools rush in where angels fear to tread.
38. An apple a day keeps the doctor away.
39. A rotten apple injures its companions.
40. When all men say you are an ass it is time to bray.
41. Don't throw the baby out with the bathwater.
42. Beggars can't be choosers.
43. Better is the enemy of good.
44. Beware of the false prophets, who come to you in sheep's clothing,
and inwardly are ravening wolves.
45. Don't bark if you can't bite.
46. You can't have your cake and eat it too.
47. When the going gets tough, the tough get going.
48. Eavesdroppers hear no good of themselves.

49. Great events cast their shadows before them.
50. Great spirits have always encountered violent opposition from mediocre minds.
51. Drumming is not the way to catch a hare.
52. The road to hell is paved with good intentions.
53. Don't look a gift horse in the mouth.
54. Insanity is doing the same thing over and over, expecting different results.
55. Keep your mouth shut and your eyes open.
56. Give a dog a bad name and hang him.
57. When one door closes, another door opens.
58. Better an egg today than a hen tomorrow.
59. An empty vessel makes the most noise.
60. Everyone talks about the weather, but nobody does anything about it.
61. All cats love fish but hate to get their paws wet.
62. A friend in need is a friend indeed.
63. A man of words and not of deeds, is like a garden full of weeds.

K. Place the related junctures into the following 5 dialogs:

Dialog 1. Appointment with a Doctor:

Caller 1: Dr. Peterson's office. How may I help you?

Caller 2: I'd like to make an appointment to see the doctor.

Caller 1: Certainly, are you ill at the moment?

Caller 2: Yes, I'm not feeling very well.

Caller 1: Do you have a fever, or any other symptoms?

Caller 2: Yes, I have a slight fever and aches and pains.

Caller 1: OK, Dr. Peterson can see you tomorrow. Can you come in the morning?

Caller 2: Yes, tomorrow morning is fine.

Caller 1: How about 10 o'clock?

Caller 2: Yes, 10 o'clock is fine.

Caller 1: May have your name?

Caller 2: Yes, it's David Lain.

Caller 1: Have you seen Dr. Peterson before?

Caller 2: Yes, I had a physical exam last year.

Caller 1: Yes, here you are. OK, I've scheduled you for ten o'clock tomorrow morning.

Caller 2: Thank you.

Caller 1: Drink plenty of warm fluids and get a good night's sleep!

Caller 2: Thank you. I'll do my best. Goodbye.

Dialog 2. Dental Check-up

Sam: Hello, Doctor.

Dr. Peterson: Good morning, Sam. How are you doing today?

Sam: I'm OK. I've been having some gum pain recently.

Dr. Peterson: Well, we'll take a look. Please recline and open your mouth.... that's good.

Sam: (after being examined) How does it look?

Dr. Peterson: Well, there is some inflammation of the gums. I think we should also do a new set of X-rays.

Sam: Why do you say that? Is something wrong?

Dr. Peterson: No, no, it's just standard procedure every year. It looks like you may have a few cavities as well.

Sam: That's not good news hmmm

Dr. Peterson: There are just two and they look superficial.

Sam: I hope so.

Dr. Peterson: We need to take X-rays to identify tooth decay, as well as check for decay between the teeth.

Sam: I see.

Dr. Peterson: Here, put on this protective apron.

Sam: OK.

Dr. Peterson: (after taking the X-rays) Things look good. I don't see any evidence of further decay.

Sam: That's good news!

Dr. Peterson: Yes, I'll just get these two fillings drilled and taken care of and then we'll get your teeth cleaned.

Dialog 3. Tomorrow's Meeting

Alice: We're having a meeting tomorrow. Can you make it?

Kevin: When is it taking place?

Alice: We're planning on 10 o'clock. Is that OK?

Kevin: Yes, that'll be fine.

Alice: We're going to go over last quarter's sales figures.

Kevin: Good. I have some input I'd like to make.

Alice: Frank is also going to make some suggestions on improving the bottom line.

Kevin: That'll be interesting. He's got keen insights.

Alice: Yes, he's going to outline some new sales strategies.

Kevin: Is Alan attending?

Alice: No, he's flying to San Francisco and won't be able to make it.

Kevin: Oh well, maybe He'll phone in.

Dialog 4. Customer Service

Representative: Hello, Big City Electricity, how may I help you today?

Mr. Peters: I'm calling concerning my electricity bill.

Customer Service Representative: May I have your account number?

Mr. Peters: Certainly, it's 4392107.

Customer Service Representative: Thank you, is this Mr. Peters?

Mr. Peters: Yes, this is Mr. Peters.

Customer Service Representative: Thank you, what can I help you with?

Mr. Peters: I think I've been overcharged for the past month.

Customer Service Representative: I'm sorry to hear that. Why do you think we charged you too much?

Mr. Peters: The bill is 300% higher than last month.

Customer Service Representative: I'm sorry to hear that. Let me ask you a few questions and then I'll see what I can do.

Mr. Peters: OK, Thank you for your help.

Customer Service Representative: Of course, thank you for calling this to our attention. Now, how much do you usually pay for your electricity?

Mr. Peters: I usually pay about \$50 a month.

Customer Service Representative: Thank you. and how much did we charge on this bill?

Mr. Peters: \$150. I can't understand why.

Customer Service Representative: Yes, Mr Smith. Was your usage different in any way?

Mr. Peters: No, it was an average month.

Customer Service Representative: I'm sorry there certainly seems to be a mistake.

Mr. Peters: Well, I'm happy you agree with me.

Customer Service Representative: I'll contact a service representative to come out and check your meter. What's your address Mr Peters?

Mr. Peters: 223 Flanders St., Tacoma, Washington 94998

Customer Service Representative: ... and what's your phone number?

Mr. Peters: 408-533-0875

Customer Service Representative: I'm terribly sorry about the misunderstanding. We'll do our best to change this as quickly as possible.

Mr. Peters: Thank you for your help in clearing this up.

Dialog 5. Two good friends chatting on the telephone

Angie: Hello?

Brenda: Hi, Angie?

Angie: Yeah?

Brenda: This is Brenda, Brenda Rivers.

Angie: Brenda Rivers? I haven't seen you since high school. How have you been?

Brenda: I've been great!

Angie: Are you still living in San Diego?

Brenda: No. I moved to Chicago two years ago. I got a job at a big company here as a writer for a fashion magazine.

Angie: Really?

Brenda: Yeah. I've worked at Fashion Now magazine since I moved here.

Angie: Wow! That sounds like an exciting job.

Brenda: Oh. It's great. I've always loved fashion. It's really exciting. I've met a lot of famous designers already. Actually, I'm calling because I'm in love and I'm getting married.

Angie: Wow! Good for you. How did you meet the guy?

Brenda: He works for Fashion Now magazine too. He's a photographer. We're going to get married in September and I want you to be the maid of honor.

Angie: Me? Wow! I'd love to.

Brenda: You'll have to fly out here to get measured for a bridesmaid's dress.

Angie: Ok. I have some vacation time available. I could go next month.

Brenda: Great! I'll show you around Chicago while you're here. You'll love it.

Angie: I've always wanted to see Chicago.

Brenda: Well, I need to go. We're meeting with the pastor tonight to plan the ceremony. E-mail me and let me know about your life. My e-mail is brivers@fashionnow.com.

Angie: Ok. I can't wait to see you.

K. Place the related junctures into the following 5 paragraphs:

Paragraph 1. The Description of a Gentleman

Hence it is almost a definition of a gentleman to say he is one who never inflicts pain. This description is both refined and, as far as it goes, accurate. He is mainly occupied in merely removing the obstacles which hinder the free and unembarrassed action of those about him; and he concurs with their movements rather than takes the initiative himself. His benefits may be considered a parallel to what are called comforts or conveniences in arrangements of a personal nature, like an easy chair or a good fire, which do their part in dispelling cold and fatigue, though nature provides both means of rest and animal heat without them. – J.E. Newman.

Paragraph 2. The Road

The Road is one of the great fundamental institutions of mankind. Not only is the Road one of the great human institutions because it is fundamental to social existence, but

also because its varied effects appear in every department of the State. It is the Road which determines the sites of many cities and the growth and nourishment of all. It is the Road which controls the development of strategies and fixes the sites of battles. It is the Road that gives its framework to all economic development. It is the Road which is the channel of all trade, and, what is more important, of all ideas. In its most humble function it is a necessary guide without which progress from place to place would be a ceaseless experiment; it is a sustenance without which organized society would be impossible, thus the Road moves and controls all history. – Hilaire Belloc.

Paragraph 3. Poetry (William Hazlitt)

Poetry is the language of the imagination and the passions. It relates to whatever gives immediate pleasure or pain to the human mind. It comes home to the bosoms and businesses of men; for nothing but what comes home to them in the most general and intelligible shape can be a subject for poetry. Poetry is the universal language which the heart holds with nature and itself. He who has a contempt for poetry cannot have much respect for himself, or for anything else. Wherever there is a sense of beauty, or power, or harmony, as in the motion of a wave of the sea, in the growth of a flower, there is poetry in its birth.

Paragraph 4. Last Night (Kenneth Beare)

Yesterday evening I got home from work at 6 o'clock. My wife had prepared dinner which we ate immediately. After I had cleaned up the kitchen, we watched TV for about an hour. Then we got ready to go out with some friends. Our friends arrived at about 9 o'clock and we chatted for a while. Later we decided to visit a jazz club and listen to some music. We really enjoyed ourselves and stayed late. We finally left at one o'clock in the morning.

Paragraph 5. Thomas Wilson

The famous English detective Thomas Wilson was actually a great lover of music; he often played the violin and even composed some music. He would sometimes spend a whole afternoon listening to music, and this would make him extremely happy. On such occasions he grew gentle and dreamy, quite unlike the sharp, clever and rather frightening detective that everybody knew him to be. But such a mood rarely lasted long and when it left him, he was more alert and businesslike than ever.

Paragraph 6. Florence Nightingale

During the Crimean War, Florence Nightingale showed extraordinary qualities of determination and organization ability. In the English hospital where she worked, conditions at first were terrible. Dirt and disease probably caused more deaths among the soldiers than the wounds received in battle. Still, under these circumstances, Florence Nightingale gradually built up a highly-disciplined nursing staff and, together with more adequate medical supplies, she was able to improve conditions and be of real service to the soldiers. However, the work was hard, and, as a result, her own health suffered.

Paragraph 7. Summer Holiday

This year our holiday turned out to be all we had hoped for. The rooms we rented were clean and pleasant. We managed to find really good rooms at reasonable prices. I like to go somewhere different each year. But best of all we soon found lots of friends and soon became a part of a lively group of young people.

Paragraph 8. Venice

Venice is the most romantic of all the Italian towns. It is built entirely on islands. It has canals instead of streets. In fact, modern Italian culture has derived a lot from ancient Roman culture. So, quite naturally, instead of the wheeled traffic of an ordinary town, it has motor boats and steamers as well as the graceful gondolas.

Paragraph 9. Choosing Holiday Destinations

Obviously, different people like to spend their holidays in different ways. Some are only really happy by the sea. In fact everyone loves to go swimming in the summer. Others like to take their holidays in winter and go skiing. Still others think the best holidays are those spent exploring new places.

Paragraph 10. The Growth of Population

The growth in the population of the world has produced many problems. One of them is the problem of producing enough food for everyone. Agricultural workers everywhere agree on this matter. This problem must be solved if we want there to be peace in the world. For, as everyone knows, a hungry world is never a peaceful world.

APPENDIX C. KEY TO JUNCTURE EXERCISES

Suggested exercises:

A. Establish minimal pairs on open terminal juncture in the following phrases:

1. a) a node b) a note c) a name d) an ode e) a nine
2. a) why choose b) wide shoes c) wife choose d) white shoes e) wine choose
3. a) a nice cake b) a night ache c) a ninth ace d) an ice cake e) a nice take
4. a) my train b) may tram c) mine train d) my ram e) might rain
5. a) he lies b) heal lice c) heal eyes d) heel ice e) heel lice
6. a) car track b) car trap c) cart rap d) cart rapt e) cart rack
7. a) how strained b) how strange c) house train d) house trained e) how trained
8. a) a great tape b) a grey ape c) a great ape d) a grape ape e) a grey tape
9. a) more ice b) mall rice c) mow rice d) more rice e) mall ice
10. a) keep sticking b) keeps ticking c) keep ticking d) keeps sticking e) keep sicking
11. a) a name b) an name c) a nanny d) an Annie e) an aim
12. a) that's stuff b) that's tough c) that is stuff d) that's a stuff e) that stuff
13. a) night train b) night tray c) night rate d) nigh train e) nitrate
14. a) I scream b) I cream c) ice scream d) ice cream e) I screamed
15. a) it wings b) its swings c) it swings d) it's winged e) its wings
16. a) might turn b) my earn c) a) my turn d) might earn e) my earn
17. a) all this I am b) all those I have c) all these I love d) all that I'm e) all the time
 after today after today after today after today after today
18. a) grey eyes b) great ties c) great eyes d) great tiles e) grey ties
19. a) play nice b) playing ice c) played ice d) plays ice e) plain ice
20. a) receding b) re-seeded c) recedes d) re-seed e) recede

B. Place the falling juncture into the related part of the sentence:

1. /Dad usually takes a nap → in the afternoon\
2. /She has a very narrow view → of life\
3. /They narrowly escaped death → in the accident\
4. /Matt has been saying → some nasty things → about me\
5. /When people come together → intentionally or unintentionally\
6. /We are having a meeting → on Monday\

7. /He's in a meeting → try again soon \
8. /The meeting did not go → so well \
9. /When many people come together → as a group \
10. /There is a gathering of protesters → in front of the City Hall \
11. /I only see him → in social gatherings \
12. /The gathering of candidates in Washington → retied the bonds \
13. /A large and formal meeting → where a lot of people talk about important matters → especially when it spreads over a few days \
14. /The United Nations → held a conference → on solar energy \
15. /We are attending the Conference → on Child's Rights \
16. /He will be a guest speaker → at the conference → next month \
17. /A formal meeting → to talk about → business matters \
18. /After a long conference → with the rest of the board → he decided to reject the offer \
19. /You should be in the conference room → at 5 o'clock \
20. /Please do not disturb us → we will be in conference \
21. /We will not give up → the freedom of assembly \
22. /The principle gave a speech → at school assembly \
23. /They are attending → the Auto Assembly → in November \
24. /When representatives of different groups → meet to discuss different matters \
25. /There was a lot of action → at the national congress of the party \
26. /The International Congress of Dentists → will take place in London \
27. /The Third Annual Fund Raising Congress → was a success \
28. /He's attending → a teachers' convention → in Rome \
29. /The convention on human rights → was an important step forward \
30. /The city's new convention center → will hold a convention → for science fiction fans \
31. /The live video chat session → is starting now \
32. /In this session → we will answer some questions → from the audience \
33. /Be quiet → There is a recording session → in progress \

C. Place the rising juncture into the related part of the sentence:

1. /Is Andrea → a native of Brazil ↗
2. /Is it natural → for a four-year-old → to be so quiet ↗

3. /Would you like to live → nearer to the ocean↗/
4. /Is there a bank → near here↗/
5. /Knowing that I know now → what would I have done differently↗/
6. /If it is good for you →→ why would it not be good → for others↗/
7. /Do you know → where bees go → in winter↗/
8. /You didn't finish your meal →→ did you↗/
9. /Can you guess →→ what happened today → at school↗/
10. /Is my dog going to die → doctor↗/
11. /How can someone tell you → what you can't do → if he hasn't done it himself↗/
12. /What if the dinosaurs come back → while we're all asleep↗/
13. /If winning isn't everything →→ why do they keep score↗/
14. /How do you spell → relief↗/
15. /Wasn't he here → at the party↗/
16. /Don't you want → any tea or coffee↗/
17. /I do not mean to pry →→ but you don't by any chance happen to have → six fingers on your right hand↗/
18. /Do you always begin conversations → this way↗/
19. /How much → do you love me↗/
20. /What would you do → if I went off the air↗/
21. /Why do people fear death → so much↗/
22. /How do you know → how to do all that↗/
23. /If a word in the dictionary were misspelled →→ how would we know↗/
24. /Will you travel by train → or by boat↗/
25. /Where do you want to go → today↗/
26. /Now →→ who wants to → save the world↗/
27. /What is the use of a house → if you haven't got a tolerable planet to put it on↗/
28. /Are you a good witch → or a bad witch↗/
29. /If you knew you were going to die today →→ what is the one thing that you would do → before you left the world behind↗/
30. /What do you think → is the most important thing to remember about → what it means to be an American↗/
31. /Why is it so easy → to give good positive advice to others →→ but you can't seem to follow → your own advice → when you need to↗/

32. /Do you not agree → that the book is always better → than the movie↗/
33. /What do you think → is the gravest problem with the current education system →→ and how can it be resolved↗/
34. /If you could go back and change just one thing →→ what would that one thing be↗/
35. /Do you think your vote counts↗/
36. /Who inspires you↗/
37. /If you were a road sign → what would you say↗/
38. /What song → are you listening to now↗/
39. /Should marijuana → be legalized↗/
40. /Why is gasoline → so high↗/
41. /Why are all our rights → being taken away↗/
42. /Why is it legal for police → to come and take anything of value → out of your homes and leave with it↗/
43. /When dog food's flavor is → new and improved →→ who is the person that determines this↗/
44. /What do you have hidden →→ in your undies drawer↗/
45. /What makes → a person rich↗/
46. /Love → or money↗/
47. /What is your favorite old movie → and by old → I mean black and white↗/
48. /How do you define high maintenance → and what qualities → does this include↗/
49. /If you could choose only one word → that describes you perfectly for your epitaph →→ what would → that one word be↗/
50. /If the police → were beating on your door now → what would you do↗/
51. /What is your → motto↗/
52. /What did you always want to be → when you grew up↗/
53. /How do you show support → for your troops↗/

D. Place the sustained juncture into the following sentences:

1. /From the beginning →→ James has maintained → his innocence↘/
2. /I wasn't hungry →→ but I made myself → eat something↘/
3. /I'm so tired →→ Yeah → that makes two of us↘/

4. /Don't worry →→ we'll manage → somehow\
5. /I have this nagging feeling → that he's lying\
6. /Jackson nailed his final shot → and the Bulls → won the game\
7. /Beer → whiskey → wine →→ you name it → and I've got it\
8. /The movie won two Oscars → namely Best Actor → and → Best Director\
9. /Give a man a fish → and you feed him for a day →→ teach a man to fish → and you feed him → for a lifetime\
10. /Follow glory → and it will flee →→ flee glory → and it will follow thee\
11. /Giving up → doesn't always mean you are weak → sometimes it means that you are strong enough → to let go\
12. /Promises mean everything →→ but after they are broken → sorry means nothing\
13. /God grant me → the serenity to accept the things I cannot change →→ courage to change the things I can → and wisdom → to know the difference\
14. /Be more concerned with your character→ than your reputation →→ because your character is what you really are → while your reputation is merely → what others think you are\
15. /Our character is what we do → when we think no one is looking\
16. /Knowledge speaks → but wisdom listens\
17. /The longer the explanation → the bigger the lie\
18. /Appear weak when you are strong → and strong when you are weak\
19. /Speak when you are angry →→ and you will make the best speech you'll ever regret\
20. /Do not go where the path may lead →→ go instead → where there is no path → and leave a trail\
21. /Experience is not what happens to you →→ it's what you do → with what happens to you\
22. /For beautiful eyes → look for the good in others →→ for beautiful lips, speak only words of kindness →→ and for poise → walk with the knowledge that you are never alone\
23. /By three methods we may learn wisdom →→ First → by reflection → which is noblest →→ Second → by imitation → which is easiest →→ and third → by experience → which is the bitterest\

24. /If you're trying to achieve → there will be roadblocks\ /I've had them → everybody has had them\ /But obstacles don't have to stop you\ /If you run into a wall → don't turn around and give up\ /Figure out how to climb it → go through it → or work around it\ /
25. /The only true wisdom is → in knowing → you know nothing\ /
26. /A wise man is superior to any insults which can be put upon him → and the best reply to unseemly behavior → is patience and moderation\ /
27. /A good head and a good heart are always a formidable combination\ /
28. /The pessimist complains about the wind → → the optimist expects it to change → → the realist adjusts the sails\ /
29. /A fool flatters himself → a wise man flatters the fool\ /
30. /I'd rather regret the things I've done → than regret the things I haven't done\ /
31. /Wisdom begins in wonder\ /
32. /The teacher who is indeed wise → does not bid you to enter the house of his wisdom → → but rather leads you → to the threshold of your mind\ /
33. /A man must be big enough → to admit his mistakes → → smart enough to profit from them → and strong enough → to correct them\ /
34. /If you talk to a man in a language he understands → that goes to his head → → but if you talk to him → in his own language → that goes to his heart\ /
35. /Honesty is the first chapter → in the book of wisdom\ /
36. /Winners never quit → and quitters never win\ /
37. /Discipline is the bridge → between goals and accomplishment\ /
38. /It's not what you look at that matters →, it's what you see\ /
39. /Adopt the pace of nature → her secret is patience\ /
40. /When it is obvious → that the goals cannot be reached → → don't adjust the goals → adjust the action steps\ /
41. /Always keep an open mind → and a compassionate heart\ /
42. /A mistake → is simply another way → of doing things\ /
43. /Beware of false knowledge → it is more dangerous → than ignorance\ /
44. /If you only have a hammer → → you tend to see every problem → as a nail\ /

E. Place the rising-falling juncture into the following sentences:

1. /What is the brand → of your pen↗ / /The brand of my pen → is Bic↘/
2. /What is your → sister's name↗ / /My sister's name → is Emily↘/
3. /What state → do you live in↗ / /I live in → Florida↘/
4. /Where do you → work↗ / /I work in an → office↘/
5. /What's your → name↗ / /My name is → John↘/
6. /Do you think → he is funny↗ / /No↘/
7. /Is your father → handsome↗ / /Yes↘/
8. /Can you → sing↗ / /Yes↘/
9. /Is this your school↗ / /Yes↘/
10. /Do you eat → pasta↗ / /No↘/
11. /Is that girl sitting at the bank → your sister↗ / /Yes → she is↘/
12. /You came here at six → right↗ / /Yes↘/
13. /Is your mother → a Turk↗ / /Yes↘/
14. /Have you been to China↗ / /No↘/
15. /Have you got → a watch↗ / /Yes↘/
16. /Is that → your school↗ / /Yes↘/
17. /Is your mother → old↗ / /No↘/
18. /Where did you learn → English↗ / /In America↘/
19. /Who is the US → President↗ / /Barrack Obama↘/
20. /Are you → Moslem↗ / /Yes↘/

F. Place the falling-rising juncture into the following sentences:

1. /Everybody's → gone home↘ / /Yes↗/
2. /Nobody here → speaks French↘ / /Right↗/
3. /Nobody → phoned↘ / /Yes↗/
4. /You don't know → me↘ / /Do you↗/
5. /You never drink → coffee↘ / /Right↗/
6. /That's → no excuse↘ / /Is it↗/
7. /Let's go → for a walk↘ / /Shall we↗/
8. /Nothing → ever changes↘ / /Does it↗/
9. /You hardly smoke → anymore↘ / /No↗/
10. /You didn't see me → right↘ /

11. /Sean never goes to bed → until really late\ / /Does he\ /
12. /Let's go to Mexico → this summer\ / /Shall we\ /
13. /The sun hardly → shone all summer\ / /Did it\ /
14. /Somebody called you → yesterday\ / /Yes\ /
15. /It's never too late → to learn\ / /Is it\ /
16. /There's no homework → tonight\ / /Is there\ /
17. /You all enjoyed → the party\ / /Right\ /
18. /You are from → Florida\ / /Yes\ /
19. /Pretty weather\ / /Right\ /
20. /That cat's yours\ / /No\ /

G. Place the related junctures into the following compound sentences:

1. /The little girl agreed that → they should eat more pizza → but her friend disagreed\ /
2. /Jenny hid under the bed → while Lenny hid in the cabinet\ /
3. /Sam went shopping → so Shelby played tennis\ /
4. /I tried to speak Spanish, and my friend tried to speak French\ /
5. /Meg brought the food → so Kate set the table\ /
6. /I went hiking → but my friend went jogging\ /
7. /My dog likes to eat grass → even though she's not allowed\ /
8. /My family is very caring → even though they may get on my nerves sometimes\ /
9. /The dog like to play fetch → while the cat likes to roll in the grass\ /
10. /I got an A on my test → even though I did not have a lot of time to study\ /
11. /As for racism → much progress has been made → but there is still much to do\ /
12. /It did rain a lot → but altogether it was a good trip\ /
13. /Some mothers are committed to their careers→ → by the same token → some fathers want to spend more time with their families\ /
14. /John bought some new shoes → and he wore them to a party\ /
15. /Lydia liked her new house → but she didn't like the front yard\ /
16. /We can go see a movie → or we can get something to eat\ /
17. /The two stopped to eat → for the work had made them hungry\ /
18. /The afternoon had been long, and hours had gone by since lunch\ /

19. /There was no house nearby → nor did they have any food with them\
20. /They wanted to pick blueberries as a snack → but a bear growled at them from the berry patch\
21. /Should they leave now → or should they wait awhile\
22. /The job was not done, yet they needed to rest and eat\
23. /They were starving → and it was getting dark → so they went home\
24. /We do not buy our food straight from the farmer → or fisherfolk\
25. /In a big supermarket → you can → buy all types of food\
26. /The commander-in-chief gave secret orders\
27. /Mark's sisters-in-law are thoughtful and kind\
28. /Good stepfathers are hard to find\
29. /Trust → but verify\
30. /I have opinions of my own → strong opinions, but I don't always agree with them\
31. /You can put wings on a pig → but you don't make it an eagle\
32. /I used to be snow white → but I drifted\
33. /A man may die → nations may rise and fall, but an idea lives on\
34. /Tell the truth → work hard, and come to dinner on time\
35. /I have often wanted to drown my troubles → but I can't get my wife to go swimming\
36. /Any jackass can kick down a barn → but it takes a good carpenter to build one\
37. /I celebrated Thanksgiving in an old-fashioned way → I invited every one in my neighbourhood to my house → we had an enormous feast → and then I killed them and took their land\

H. Place the related junctures into the following complex sentences:

1. /Because the world is getting warmer → polar bears are in danger of becoming extinct\
2. /I ate the meal that you cooked\
3. /I enjoyed the apple pie that you bought for me\
4. /I ate breakfast → before I went to work\
5. /I was scared → but I didn't run away\
6. /The dog that you gave me barked at me → and it bit my hand\
7. /I went to office after my daughter's admission procedures → were over\

8. /Juan and Maria went to the movies after they finished studying\
9. /While he waited at the train station → Joe realized that the train was late\
10. /Because Mary and Samantha arrived at the bus station before noon → I did not see them at the station\
11. /After I came home → I made dinner\
12. /We visited the museum → before it closed\
13. /After they left on the bus → Mary and Samantha realized that Joe was waiting at the train station\
14. /It's sad that these students → don't get the help they need\
15. /I'm not sure I can answer that question → to your satisfaction\
16. /If you ask a question → you'll get an answer → even if it's "I don't know\
17. /It was clearly evident → that she was unhappy\
18. /After I came home → I made dinner\
19. /We visited the museum → before it closed\
20. /Because the bridge wasn't properly maintained by the government → it fell down\
21. /Although he ate a really big dinner → now he wants to eat cake for dessert\
22. /Whenever they eat at this restaurant → they order a hamburger and fries\
23. /He'll be able to maintain a healthy weight → if he keeps exercising\
24. /The students are studying → because they have a test tomorrow\
25. /When he handed in his homework → he forgot to give the teacher the last page\
26. /The teacher returned the homework → after she noticed the error\
27. /There are dreams → that cannot die\
28. /The house which Abraham Lincoln was born in is still standing\
29. /The expert who examined this scroll → said that it was more than one thousand years old\
30. /My friend invited me to a party → but I do not want to go\
31. /Writing evolved → when picture symbols changed → to letters\
32. /Unless you read hard → you will fail\
33. /As he was industrious → he came out successful\
34. /Although my friend invited me to a party → I do not want to go\

35. /Because the soup was too cold → I warmed it in the microwave\
36. /Consumers buy fewer goods → when prices rise\
37. /The woman who called my mom → sells cosmetics\
39. /The book that Jonathan read → is on the shelf\
40. /The town where I grew up → is in the United States\
41. /Because it was expensive → we were not able to buy the necklace\
42. /The player → who ran the wrong way, misunderstood the signal\
43. /A boy who is diligent → is sure to succeed in life\

I. Place the related junctures into the following compound-complex sentences:

1. /Many buildings collapsed during the earthquake → so we plan to sell the property just before the real estate market collapses\
2. /I'm not going to worry about it → → I'll just take each day as it comes\
3. /The phrase "come on" is used → in order to tell someone that you know that what s/he said was not true or right\
4. /When I try to explain → it comes out all wrong → and she gets mad\
5. /Even though my wife objected → I had committed myself → and there was no turning back from my decision\
6. /The term "commonwealth" → indicates a group of countries → that are related politically or economically → → it commonly indicates the group of countries → that have a strong relationship with Great Britain\
7. /"I'll stay here to keep you company" → means I will be with you → so you are not alone\
8. /I have to make some preparations → → you have to remember that we're having company tonight → so you must be back home by five\
9. /I have never had good luck in my jobs → → my last job was so boring that this one seems great by comparison\
10. /Last year we sold twice as many computers as our main competitor → but still we must bear in mind that advertising → is a highly competitive and costly industry\
11. /She called at six → but by that time we had already left\
12. /She does the same job as I do → but in a bigger company\
13. /Even though he prefers to eat with a fork → he chooses to use chop sticks in Chinese restaurants → → however → they aren't easy to use\

14. /I usually use a pick whenever I play the guitar → or I just use my fingers\
15. /If Barack Obama is re-elected this November → he'll serve another four years → but it won't be an easy contest to win\
16. /Although I enjoy shopping → I haven't been to the mall in two weeks → and I am broke\
17. /If I earn money from my chores → I will buy a new purse → but I don't get my allowance today\
18. /I want to play in the snow → but unless I can find my gloves, I can't\
19. /Annie lived in the North → but Sheena → who knew she was rich → lived in the side\
20. /Though her answers are proved correct → but one of our classmate said not → our teacher also said that it is wrong → which who do not really understand the sentences\
21. /Glaine though Eunice is angry to her → but Eunice, who love her → thought Glaine is the one who is angry\
22. /Travis went football → while Ryan went basketball after they all done they went home and watch movie\
23. /Cody residing at St. Claire → and Levi residing at St. Mary → since they are far from each other → they are still good friends\

J. Place the related junctures into the following proverbs:

1. /Do unto others → as you would have them do unto you\
2. /If life gives you lemons → make lemonade\
3. /Lightning never strikes twice → in the same place\
4. /It's better to have loved and lost → than never to have loved at all\
5. /Man proposes → but God disposes\
6. /Marry in haste → and repent at leisure\
7. /When the cat is away → the mice will play\
8. /If you don't have anything nice to say → don't say anything at all\
9. /A staff is quickly found → to beat a dog\
10. /The remedy is worse → than the disease\
11. /Give a dog an ill name and hang him\
12. /The voice of the people → the voice of God\
13. /The cow knows not what her tail is worth → till she hath lost it\

14. /The mouse that hath but one hole → is quickly taken\
15. /What is bred in the bone → will not out of the flesh\
16. /Where your will is ready → your feet are light\
17. /When all men say you are an ass → it is time to bray\
18. /We may give advice → but we cannot give conduct\
19. /The wolf eats often the sheep → that have been told\
20. /What is sauce for the goose → is sauce for the gander\
21. /Don't kill the goose → that lays the golden eggs\
22. /All that glitters → is not gold\
23. /Eavesdroppers hear → no good of themselves\
24. /The grass is always greener → on the other side of the fence\
25. /One rotten apple → will spoil the whole barrel\
26. /The apple → never falls far from the tree\
27. /A candle loses → nothing by lighting another candle\
28. /Paddle your → own canoe\
29. /A chain is only as strong → as its weakest link\
30. /A burnt child → dreads the fire\
31. /Children are uncertain → comforts but certain cares\
32. /Who has not served → cannot command\
33. /Better to be alone → than in bad company\
34. /A man is known → by the company he keeps\
35. /Better the devil you know → than the one you don't\
36. /Discretion → is the better part of valor\
37. /Fools rush in → where angels → fear to tread\
38. /An apple a day → keeps the doctor → away\
39. /A rotten apple → injures its companions\
40. /When all men say → you are an ass → it is time to bray\
41. /Don't throw the baby out → with the bathwater\
42. /Beggars → can't be choosers\
43. /Better is the enemy → of good\
44. /Beware of false prophets → who come to you in sheep's clothing → →
and inwardly are → ravening wolves\
45. /Don't bark → if you can't bite\
46. /You can't have your cake → and eat it → too\
47. /When the going gets tough → the tough get going\
48. /Eavesdroppers → hear no good of themselves\

49. /Great events → → cast their shadows → before them\
50. /Great spirits → have always encountered → violent opposition from mediocre minds\
51. /Drumming is not the way → to catch a hare\
52. /The road to hell is paved → with good intentions\
53. /Don't look a gift horse → in the mouth\
54. /Insanity is doing the same thing over and over, expecting different results\
55. /Keep your mouth shut → and your eyes open\
56. /Give a dog a bad name → and hang him\
57. /When one door closes → another door opens\
58. /Better an egg today than a hen → tomorrow\
59. /An empty vessel → makes the most noise\
60. /Everyone talks about the weather → but nobody does anything about it\
61. /All cats love fish → but hate to get their paws wet\
62. /A friend in need → s a friend indeed\
63. /A man of words → and not of deeds → → is like a garden full of weeds\

K. Place the related junctures into the following 5 dialogs:

Dialog 1. Appointment with a Doctor:

- Caller 1:** /Dr. Peterson's office\ /How may I help you↗/
- Caller 2:** /I'd like to make an appointment → to see the doctor\
- Caller 1:** /Certainly → are you ill at the moment↗/
- Caller 2:** /Yes → I'm not feeling very well\
- Caller 1:** /Do you have a fever → or any other symptoms↗/
- Caller 2:** /Yes → I have a slight fever → and aches and pains\
- Caller 1:** /OK → Dr. Peterson can see you → tomorrow\ /Can you come → in the morning↗/
- Caller 2:** /Yes → tomorrow morning is fine\
- Caller 1:** /How about → 10 o'clock\
- Caller 2:** /Yes → 10 o'clock is fine\
- Caller 1:** / May have → your name↗/
- Caller 2:** /Yes → it's David Lain\

Caller 1: /Have you seen → Dr. Peterson before↗/
Caller 2: /Yes→ I had a physical exam → last year↘/
Caller 1: /Yes → here you are↘ OK → I've scheduled you for ten o'clock
→ tomorrow morning↘/
Caller 2: /Thank you↘/
Caller 1: /Drink plenty of warm fluids → and get a good night's sleep↘/
Caller 2: /Thank you→ I'll do my best↘/ /Goodbye↘/

Dialog 2. Dental Check-up

Sam: /Hello→ Doctor↘/
Dr. Peterson: /Good morning→ Sam. How are you doing → today↗/
Sam: /I'm OK↘ I've been having some → gum pain recently↘/
Dr. Peterson: /Well → we'll take a look →→ Please recline → and open
your mouth. . . . that's good↘/
Sam: (after being examined) How does it look↗/
Dr. Peterson: /Well → there is some inflammation of the gums → I think
we should also do → a new set of X-rays↘/
Sam: /Why do you say that↗ Is something wrong↗/
Dr. Peterson: /No→ no→ it's just standard procedure every year↘/ /It
looks like → you may have a few cavities as well↘/
Sam: /That's not → good news↘ hmmm↘/
Dr. Peterson: /There are just two → and they look superficial↘/
Sam: /I hope so↘/
Dr. Peterson: /We need to take X-rays → to identify tooth decay →→ as
well as check for decay → between the teeth↘/
Sam: /I see↘/
Dr. Peterson: /Here → put on this protective apron↘/
Sam: /OK↘/
Dr. Peterson: (after taking the X-rays) Things look good↘/ /I don't see
any evidence of further decay↘/
Sam: /That's → good news↘/
Dr. Peterson: /Yes →→ I'll just get these two fillings drilled → and taken
care of and then →→ we'll get your teeth cleaned↘/

Dialog 3. Tomorrow's Meeting

Alice: /We're having a meeting → tomorrow\ / /Can you make it\ /
Kevin: /When → is it taking place\ /
Alice: /We're planning on → 10 o'clock\ / /Is that OK\ /
Kevin: /Yes\ / /That'll be fine\ /
Alice: /We're going to go over → last quarter's sales figures\ /
Kevin: /Good → I have some input → I'd like to make\ /
Alice: /Frank is also going to make some suggestions → on improving the bottom line\ /
Kevin: /That'll be interesting\ He's got keen insights\ /
Alice: /Yes → he's going to outline → some new sales strategies\ /
Kevin: /Is Alan attending\ /
Alice: /No → he's flying to San Francisco → and won't be able to make it\ /
Kevin: /Oh well → maybe He'll phone in\ /

Dialog 4. Customer Service

Representative: /Hello → Big City Electricity → how may I help you today\ /
Mr. Peters: /I'm calling concerning my electricity bill\ /
Customer Service Representative: /May I have your account number\ /
Mr. Peters: /Certainly → it's 4392107\ /
Customer Service Representative: /Thank you → is this Mr. Peters\ /
Mr. Peters: /Yes → this is Mr. Peters\ /
Customer Service Representative: /Thank you → what can I help you with\ /
Mr. Peters: /I think I've been overcharged → for the past month\ /
Customer Service Representative: /I'm sorry to hear that → → Why do you think we charged you too much\ /
Mr. Peters: /The bill is 300% higher → than last month\ /
Customer Service Representative: /I'm sorry to hear that\ / /Let me ask you a few questions and then → I'll see what I can do\ /
Mr. Peters: /OK → Thank you for your help\ /
Customer Service Representative: /Of course → thank you for calling this to our attention → → Now → how much do you usually pay → for your electricity\ /
Mr. Peters: /I usually pay → about \$50 a month\ /

Customer Service Representative: /Thank you →→ and how much did we charge → on this bill↗/

Mr. Peters: /\$150↘ I can't understand why↘/

Customer Service Representative: /Yes → Mr Smith →→ Was your usage → different in any way↗/

Mr. Peters: /No → it was an average month↘/

Customer Service Representative: /I'm sorry →→ there certainly seems to be a mistake↘/

Mr. Peters: /Well → I'm happy you agree with me↘/

Customer Service Representative: /I'll contact a service representative to come out → and check your meter →→ What's your address Mr Peters↗/

Mr. Peters: /223 Flanders St. Tacoma → Washington 94998/

Customer Service Representative: /. . . and what's your phone number↗/

Mr. Peters: /408-533-0875/

Customer Service Representative: /I'm terribly sorry → about the misunderstanding↘/ /We'll do our best to change this → as quickly as possible↘/

Mr. Peters: /Thank you for your help in clearing this up↘/

Dialog 5. Two good friends chatting on the telephone

Angie: /Hello↘/

Brenda: /Hi → Angie↘/

Angie: /Yeah↘/

Brenda: /This is Brenda → Brenda Rivers↘/

Angie: /Brenda Rivers↘/ /I haven't seen you since high school↘/ /How have you been↗/

Brenda: /I've been great↘/

Angie: /Are you still living → in San Diego↗/

Brenda: /No↘ I moved to Chicago → two years ago↘/ /I got a job → at a big company → here as a writer for a fashion magazine↘/

Angie: /Really↗/

Brenda: /Yeah↘/ /I've worked at Fashion Now magazine → since I moved here↘/

Angie: /Wow! →/ /That sounds like → an exciting job↘/

Brenda: /Oh↘/ /It's great↘/ /I've always loved → fashion↘ It's really exciting → I've met a lot of famous designers → already↘/ /Actually → I'm calling because I'm in love → and I'm getting → married↘/

Angie: /Wow\ Good for you\ /How did you meet → the guy\

Brenda: /He works for Fashion Now magazine too\ /He's a photographer\ /We're going to get married in September → and I want you to be the maid of honor\

Angie: /Me\ /Wow → I'd love to\

Brenda: /You'll have to fly out here → to get measured → for a bridesmaid's dress\

Angie: /OK\ /I have some vacation time → available\ /I could go → next month\

Brenda: /Great\ /I'll show you around Chicago → while you're here\ /You'll love it\

Angie: /I've always wanted → to see Chicago\

Brenda: /Well → I need to go\ /We're meeting with the → pastor tonight → to plan the ceremony\ /E-mail me → and let me know about your life\ /My e-mail is brivers@fashionnow.com\

Angie: /OK\ /I can't wait to see you\

K. Place the related junctures into the following 5 paragraphs:

Paragraph 1. The Description of a Gentleman:

/Hence it → is almost a definition of a gentleman to say → he is one who never inflicts pain\ /This description is → both refined and → as far as it goes → accurate\ /He is mainly occupied in merely removing the obstacles → which hinder the free and unembarrassed action of those about him → and he concurs with their movements rather than → takes the initiative himself\ /His benefits may be considered a parallel → to what are called comforts or conveniences in arrangements of a personal nature → like an easy chair or a good fire → which do their part in dispelling cold and fatigue → though nature provides both means of rest and animal heat without them\ – J. E. Newman

Paragraph 2. The Road:

/The Road → is one of the great fundamental institutions of mankind\ /Not only is the Road → one of the great human institutions → because it is fundamental to social existence → but also because its varied effects appear → in every department of the State\ /It is the Road → which determines the sites of many cities → and the growth and nourishment of all\ /It is the Road → which controls the development of strate-

gies → and fixes the sites of battles\ / It is the Road → that gives its framework to all economic development\ / It is the Road → which is the channel of all trade → and → what is more important → of all ideas\ / In its most humble function → it is a necessary guide → without which progress from place to place → would be a ceaseless experiment → it is a sustenance → without which organized society would be impossible → thus the Road moves → and controls all history\ / – Hilaire Belloc

Paragraph 3. Poetry:

/Poetry is the language → of the imagination and the passions\ / It relates to whatever gives immediate pleasure or pain → to the human mind\ / It comes home to the bosoms → and businesses of men → → for nothing but what comes home to them in the most general and intelligible shape → can be a subject for poetry\ / Poetry → is the universal language which the heart holds with nature → and itself\ / He who has a contempt for poetry → cannot have much respect for himself → or for anything else\ / Wherever there is a sense of beauty → or power → or harmony → as in the motion of a wave of the sea → in the growth of a flower → there is poetry in its birth\ /

Paragraph 4. Last Night (A narrative):

/Yesterday evening → I got home from work at 6 o'clock\ / My wife had prepared dinner → which we ate immediately\ / After I had cleaned up the kitchen, we watched TV for about an hour\ / Then we got ready to go out with some friends\ Our friends arrived at about 9 o'clock → and we chatted for a while\ / Later we decided to visit a jazz club → and listen to some music\ / We really enjoyed ourselves → and stayed late\ / We finally left at one o'clock → in the morning\ /

Paragraph 5. Thomas Wilson:

/The famous English detective Thomas Wilson → was actually a great lover of music → → he often played the violin and even composed some music\ / He would sometimes spend a whole afternoon → → listening to music → and this would make him extremely happy\ / On such occasions → he grew gentle and dreamy → quite unlike the sharp → clever and rather frightening detective → that everybody knew him to be\ / But such a mood → rarely lasted long → and when it left him → he was more alert and businesslike than ever\ /

Paragraph 6. Florence Nightingale:

/During the Crimean War → Florence Nightingale showed extraordinary qualities of determination → and organizing ability\ / In the English hospital → where she worked → conditions at first were terrible\ / Dirt and disease probably caused → more deaths among the soldiers than the wounds received in battle\ / Still → under these circumstances → Florence Nightingale gradually built up → a highly disciplined nursing staff → and together with more adequate medical supplies → she was able to improve conditions → and be of real service to the soldiers\ / However → the work was hard → and as a result → her own health suffered\ /

Paragraph 7. Summer Holiday:

/This year our holiday turned out to be → all we had hoped for\ / The rooms we rented were clean and pleasant\ / We managed to find really good room → at reasonable prices\ I like to go somewhere different → each year\ / But best of all → we soon found lots of friends → and soon became a part of a lively group of young people\ /

Paragraph 8. Venice:

/Venice → is the most romantic of all the Italian towns\ / It is built entirely on islands\ It has canals → instead of streets\ / In fact → modern Italian culture has derived a lot from ancient Roman culture\ / So → quite naturally → instead of the wheeled traffic of an ordinary town → it has motor boats and steamers as well as the graceful gondolas\ /

Paragraph 9. Choosing Holiday Destinations:

/Obviously different people → like to spend their holidays → in different ways\ / Some are → only really happy → by the sea\ / In fact everyone loves to go swimming → in the summer\ / Others like to take their holidays in winter → and go skiing\ / Still others think the best holidays are → those spent exploring new places\ /

Paragraph 10. The Growth of Population:

/The growth in the population of the world → has produced other problems\ / Agricultural workers everywhere → agree on this matter\ / One of them is the problem of producing enough food → for everyone\ / This problem must be solved → if we want there to be peace in the world\ / For → as everyone knows → an angry world is → never a peaceful world\ /

APPENDIX D. STRESS EXERCISES

Sentence stress pretest and post-test examples

Example Type 1:

Word level analysis

Write down the transcription of the following words and put the related stresses on them. An example:

abstract /'æbstrækt/ / (adj)

abstract /əb'strækt / (v)

combat (n) /...../

combat (v) /...../

combine (n) /...../

combine (v) /...../

compact (n) /...../

compact (v) /...../

conflict (n) /...../

conflict (v) /...../

contest (n) /...../

contest (v) /...../

Phrase level analysis

An example:

External Open Juncture

a light house / ə + 'laɪt + ,haʊs/

(a house which is light)

Internal Close Juncture

a lighthouse / ə + 'laɪt,haʊs/

(a tower with a bright light for ships near the shore)

Apply the rules to the following phrases and compound words:

a green house /'gri:n + ,haʊs/

(a house which is green)

a greenhouse /,gri:n'haʊs/

(a glass building in which you grow plants)

a black bird / ə + 'blæk + ,bɜ:d/
(Any bird which is black)

a blackbird / ə + ,blæk'bɜ:d/
(a special species of a bird)

wet nurse /'wɛt + ,nɜ:s /
(a nurse who is wet)

wetnurse /,wɛt'nɜ:s /
(a woman who breastfeeds another woman's baby)

a typical /ə + 'tɪpəkəl/
(typical or usual)

atypical /er'tɪpɪkəl/
(not typical or usual)

a bout /ə + baʊt/

about /ə'baʊt/

a broad /ə + 'brɔ:d/

abroad /ə'brɔ:d/

a claim /ə + 'kleɪm/

acclaim /ə'kleɪm/

a cord /ə + 'kɔ:d/

accord /ə'kɔ:d/

a count /ə + 'kaʊnt/

account /ə'kaʊnt/

a cross /ə + 'krɒs/

across /ə'krɒs/

Without giving the transcriptions, put down the related stresses on their proper places. The following samples are taken from the speaking *Longman Dictionary of American English* (2004); students can listen to the phrases in audio form via listening comprehension and then can place the stresses on the phrases:

American Indian

beach ball

Capitol Hill

April Fool's Day

beauty parlor

carbon monoxide

area code

bed and breakfast

card catalog

Atlantic Ocean

best man

cardiac arrest

atomic bomb

big mouth

care package

baby buggy

birth control

cash machine

baby carriage

black and white

catch phrase

bachelor party

black hole

cell phone

baby boom

black sheep

center of gravity

ball game

call center

central heating

bargaining chip

candy bar

certified mail

bathing suit

can opener

chain reaction

With three elements:

center of gravity	Chamber of Commerce	chief of staff
commander-in-chief	cloak-and-dagger	as soon as
April Fool's Day	an awful movie	

With four elements:

love at first sight	back-to-back wins
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Mark the strong and weak words in the following sentences to change the meaning in various ways:

- A.**
1. Tom saw a black dog yesterday.
 2. Sorry, we asked for two cups of tea.
 3. I think the coke is mine.
 4. Jane hurt her ankle playing soccer.
 5. It wasn't David's psychology book.
 6. I didn't know Lucy was out there.
- B.**
1. My **teachers** really **amuse** me.
 2. That is kept **confidential** in the **file cabinet**.
 3. The **president's family** lives in the **White House**.
 4. **According** to my calendar, we have an **appointment** at three.
 5. I'm going to **print out** the **handouts** for the **geology class** now.
- C.**
1. I'm going to New YORK. WHERE? New **YORK!**
 2. Do you have Mary's PHONE number? WHOSE? **MARY's!**
 3. Ted likes the BLUE one best. WHICH one? The **BLUE** one!
 4. I can't find the CAR keys. WHICH keys? The **CAR** keys!
 5. I'm taking my vacation in NoVEMber. WHEN? In No**VEM**ber.

Example Type 2:

Give students sentences which may carry different meanings when emphasis is changed on various words:

- A.** 1. I don't want to buy a brown coat. — But your **brother** does.
 2. I don't want to buy a brown **coat**. — Buy a **jacket** then.
 3. I don't want to **buy** a brown coat. — Why don't you **rent** one then?
 4. I don't want to buy a **brown** coat. — Yes, I know you hate **brown**.
- B.** 1. "I'm not going" meaning. — Not "ME", but perhaps "YOU", "SHE" or "HE".
 2. "I'm **not** going." — I reFUSE to go.
 3. "I'm not **going**" "I'm not GOing... I'm COMing BACK!"
- C.** 1. I'm going to study **THAI**. (You're going to study **what**?)
 2. I'm going to STUDY Thai!
 3. You've got to be KIDDING.
 4. I **AM** going to study Thai.
- D.** 1. I didn't see him **SPEEDING**.
 2. I didn't see **HIM** speeding.
 3. I didn't **SEE** him speeding.
 4. I **DIDN'T** see him speeding.
 5. I didn't see him speeding.

Example Type 3:

"Janet's going to Brighton tomorrow afternoon to buy herself a pair of red leather shoes." Practice of sentence stress is achieved by cueing the learners with questions while requiring them to use the whole sentence in reply. The second time this is done, the learners can discard the parts of the sentence which do not contain the important element of the answer in order to form a more natural response. The teacher provides cues such as: "Is John going to Brighton...?", "Is Janet going to London..?", "Is Janet going away from Brighton...?", "Is Janet coming from Brighton...? Is Janet going to sell her mother a pair of red leather shoes?", "Is Janet going to buy herself three pairs...?" "Is Janet going to buy herself a pair of blue suede shoes / red leather sandals?" It will become clear to learners that there are many variations of sentence stress, which will decide the meaning of their responses.

Example Type 4:

You are going to deal with some situations in which the sayings have been prepared for you. Imagine you are in these situations and speak the utterances with your natural intonation:

1. You are a teacher at Language Link and your students are from five to eight years old. Today, you are going to play a little game. Before playing the game, you instruct them to prepare the necessary objects: "You need a pen, a pencil and some paper."
2. You are at the train station to see off your close friend. You don't remember the departure time, so you ask him/her: "Your train leaves at six, doesn't it?"
3. Your younger sister borrowed your walkman for two weeks and now she comes into our room to return it. You are busy with an assignment, so you say to her without turning around: "Put it on the table"
4. This is your first time in London. You need to deposit some money, but you don't know how to get to the bank. You catch a man on the street and ask him: "Do you know where the bank is, please?"
5. You don't have a watch or a clock around. In order to learn the time, you ask your roommate: "What time is it?"
6. You are a teacher at a high school. You are teaching the lesson when a student opens the door and asks for permission to come into the class. He is 30 minutes late. You ask him: "What time is it?"

Sentence Stress Recognition Test

Find the place of the primarily stressed word(s) in the following sentences:

1. The movie may be inappropriate for children under 14.

- a) movie b) may c) **inappropriate** d) children e) 14

2. The White House has badly misjudged Congress's support for his bill.

- a) White b) House c) **badly** d) misjudged e) Congress's

3. The weather is unlikely to improve over the next few years.

- a) weather b) **unlikely** c) improve d) over e) few

4. You have to take precautions when working with chemicals.

- a) You b) have to c) **precautions** d) working e) chemicals

5. He has been granted a visa by the State Department.

- a) He b) been c) granted d) **visa** e) State

6. He's been variously called a genius and a madman.

- a) He's b) been c) **variously** d) genius e) madman

7. It's unreasonable to give a 10-year-old so much responsibility.

- a) It's b) **unreasonable** c) give d) so much e) responsibility

8. It seemed unreal to be sitting and talking to someone so famous.

- a) seemed b) **unreal** c) sitting d) talking e) famous

9. I'm thinking about becoming a vegetarian.

- a) I'm b) **thinking** c) about d) becoming e) a vegetarian

10. I think we've all learned a valuable lesson today.

- a) I b) think c) we d) **all** e) valuable

11. Her quiet voice seemed incongruous with her hard face.

- a) Her b) **quiet** c) incongruous d) her e) hard

12. John was a little vague about where he was going.

- a) John b) **little** c) vague d) where e) going

13. You cannot walk away from eight years of marriage.

- a) You b) **cannot** c) away d) eight e) marriage

14. News stories like these could cause mass hysteria.

- a) News b) these c) cause d) **mass** e) hysteria

15. Several employees unwittingly became involved in illegal activities.

- a) Several b) employees c) **unwittingly** d) involved e) illegal

- 16. The hospital was accused of hiring unqualified health workers.**
 a) hospital b) accused c) hiring **d) unqualified** e) workers
- 17. He was surprisingly candid about his past drug addiction.**
 a) He **b) surprisingly** c) candid d) past e) addiction
- 18. Millions of people may have been unknowingly infected.**
 a) Millions b) people c) been **d) unknowingly** e) infected
- 19. After only a few lessons, you will be able to understand basic Spanish.**
 a) After **b) only** c) few d) you e) Spanish
- 20. Test questions often deal with unreal situations.**
 a) **Test** b) questions c) often d) unreal e) situations
- 21. The doctors have put him in the hospital as a precautionary measure.**
 a) doctors b) put c) him d) hospital **e) precautionary**
- 22. The book looks at the relationship between religion and civilization.**
 a) book b) looks c) relationship **d) religion** e) civilization
- 23. The ticket is valid for an unspecified period of time.**
 a) **ticket** b) valid c) unspecified d) period e) time
- 24. Ten children were absent from class today.**
 a) **Ten** b) children c) absent d) class e) today
- 25. An electrical problem may have contributed to the crash.**
 a) **electrical** b) problem c) have d) contributed e) crash

Listen to the audio form of the following compound sentences and put down their related stresses Consult: (Longman Dictionary of American English, 2004)

1. Martha cooks, **and** Tom does the dishes.
2. I missed supper **and** I'm starving!

3. It's an old car, **but** it's reliable.
4. I'd like to go, **but** I'm awfully busy.
5. You can use either milk **or** cream in the sauce.
6. I got hungry, **so** I made a sandwich.
7. I put your keys in the drawer **so** they wouldn't get lost.
8. She didn't reply, **nor** did she look at him.
9. Neither Julie **nor** Mark said anything.
10. We sent thousands of forms, **yet** fewer than 50 were returned.
11. Respond by letter, or better **yet**, a telephone call.

Sentence Stress Recognition:

Listen to the audio form of the following *complex sentences* and put down their related stresses Consult: (*Longman Dictionary of American English*, 2004)

1. **If** I call her now, she should still be at home.
2. Do you mind **if** I close the door?
3. He was nine **when** his father died.
4. The best moment was **when** Barnes scored the winning goal.
5. I don't know **why** she won't talk to me.
6. This is the book **which** I told you about.
7. The house, **which** was completed in 1856, was famous for its huge marble staircase.
8. The train only takes two hours, **which** is quicker than the bus.
9. You get the same result **whichever** way you do it.
10. He won't go to sleep **unless** you tell him a story.
11. We can go in my car **unless** you want to walk.
12. One of them called the other a liar, **whereupon** a fight broke out.
13. They arrived **while** we were having dinner.
14. I tried to call you **as soon as** I heard the news.
15. I asked Lucy **where** she was going.

Sentence Stress Recognition:

Listen to the audio form of the following *compound-complex sentences* and put down their related stresses Consult: (*Longman Dictionary of American English*, 2004)

1. He knows how the Democrats like to work; accordingly, he can help the Republicans defeat them.
2. You may not like her, but you have to admit that she is good at her job.
3. She's an adult - she can do what she pleases.
4. I'm not surprised he left her, after the way she treated him.
5. He discovered the jewel was fake three weeks after he bought it.
6. I guess you're right, we should have left earlier.
7. I'm sorry I was rude; I've had a bad day.
8. It was apparent that the enemy was stronger than they had believed.
9. Your light wasn't on, so I assumed you were out.
10. She's upset that they broke up, but it's probably for the best.

General Answers

Answers:

a green house /'gri:n + ,haʊs/
(a house which is green)

a greenhouse /,gri:n'haʊs/
(a glass building in which you grow plants)

a black bird / ə + 'blæk + ,bɜ:əd /
(Any bird which is black)

a blackbird / ə + ,blæk'bɜ:əd/
(a special species of a bird)

A wet nurse /'wet + ,nɜ:s /
(a nurse who is wet)

a wetnurse /'wet,nɜ:s /
(a woman who breastfeeds another woman's baby)

a typical /eɪ + 'tɪpɪkəl/
(typical or usual)

atypical /eɪ'tɪpɪkəl/
(not typical or usual)

a bout /ə + 'baʊt/

about /ə'baʊt/

a broad /ə + 'brɔ:d/

abroad /ə'brɔ:d/

a claim /ə + 'kleɪm/

acclaim /ə'kleɪm/

a cord /ə + 'kɔ:d/

accord /ə'kɔ:d/

a count /ə + 'kaʊnt/

account /ə'kaʊnt/

a cross /ə + 'krɒs/

across /ə'krɒs/

APPENDIX E. KEY TO STRESS EXERCISES

Word level analysis

Write down the transcription of the following words and put the related stresses on them. Examples:

abstract /'æb,strækt/ adj	abstract /əb'strækt/ v
combat /'kɒm,bæt/ n	combat /kəm,bæt/ n
combine /'kɒm,bain/	combine /kəm'bain/ v
compact /'kɒm,pækt/ n	compact /kəm'pækt/ v
conflict /'kɒnflɪkt/ n	conflict /kən'flɪkt/ v
contest /'kɒn,tɛst/ n	contest /kən'tɛst/ v

Phrase level analysis

An example:

<u>External Open Juncture</u>	vs.	<u>Internal Close Juncture</u>
a light house /ə + 'laɪt + ,haʊs/ (a house which is light)	vs.	a lighthouse / ə + ,laɪt'haʊs/ (a tower with a bright light for ships near the shore)

Apply the rules to the following phrases and compound words:

a green house /'gri:n + ,haʊs/ (a house which is green)	vs.	a greenhouse /,gri:n'haʊs/ (a glass building in which you grow plants)
a black bird /ə + 'blæk ,bɜ:d/ (any bird which is black)	vs.	a blackbird /ə + 'blæk,bɜ:d/ (a special species of a bird)
wet nurse /'wɛt + ,nɜ:s/ (a nurse who is wet)	vs.	wetnurse /'wɛt,nɜ:rs/ (a woman who breastfeeds another's baby)
a typical /ə + 'tɪpɪkəl/ (typical or usual)	vs.	atypical /eɪ'tɪpɪkəl/ (not typical or usual)

a bout /ə + baʊt/	vs.	about /ə ¹ baʊt/
a broad /ə + ¹ brɔ:d/	vs.	abroad /ə ¹ brɔ:d/
a claim /ə + ¹ kleɪm/	vs.	acclaim /ə ¹ kleɪm/
a cord /ə + ¹ kɔ:d/	vs.	accord /ə ¹ kɔ:d/
a count /ə + ¹ kaʊnt/	vs.	account /ə ¹ kaʊnt/
a cross /ə + ¹ kɹɒs/	vs.	across /ə ¹ kɹɒs/

Without giving the transcriptions, put down the related stresses on their proper places. The following samples are taken from the speaking *Longman Dictionary of American English*; students can listen to the phrases in audio form via listening comprehension and then can place the stresses on the phrases:

American Indian /ə¹merɪkən_ˌndiən/
beach ball /¹bi:tʃ_ˌbɔ:l/
Capitol Hill /¹kæpɪtəl_ˌhɪl/
April Fool's Day /¹eɪprəl_ˌfu:lz_ˈdeɪ/
beauty parlor /¹bju:ti_ˌpɑ:lər/
carbon monoxide /¹kɑ:bən_ˌmɒnək_saɪd/
area code /¹eɪrə_ˌkəʊd/
bed and breakfast /¹bed_ən_ˌbrɛkfəst/
card catalog /¹kɑ:d_ˌkætəlɒɡ/
Atlantic Ocean /ət¹læntɪk_ˌoʊʃən/
best man /¹best_ˌmæn/
cardiac arrest /¹kɑ:dɪæk_ˌərest/
atomic bomb /ə¹tɒmɪk_ˌbɒm/
big mouth /¹bɪɡ_ˌmaʊθ/
care package /¹keɪ_ˈpækɪdʒ/
baby buggy /¹beɪbi_ˌbʒɪ/
birth control /¹bɜ:θ/
cash machine /¹kæʃ_məˌʃi:n/
baby carriage /¹beɪbi_ˌkærɪdʒ/
black and white /¹blæk_ən_ˌhwaɪt/
catch phrase /¹kætʃ_ˌfreɪz/
bachelor party /¹bætʃələr_ˌpɑ:ti/
black hole /¹blæk_ˌhəʊl/
cell phone /¹sel_ˌfəʊn/
baby boom /¹beɪbi_ˌbu:m/

black sheep /'blæk ʃi:p/
ball game /'bɔ:l ˌgeɪm/
call center /'kɔ:l ˌsɛntər/
central heating /'sɛnrəl ˌhi:tɪŋ/
bargaining chip /'bɑ:gəniŋ ˌtʃɪp/
candy bar /'kændi ˌbɑr/
certified mail /'sɜrtɪfaɪd ˌmeɪl/
bathing suit /'beɪðɪŋ ˌsu:t/
can opener /'kæn ˌoʊpənər/
chain reaction /'tʃeɪn rɪˌɛkʃən/

With three elements:

center of gravity /'sɛntə r_əv ˌgrævəti/
Chamber of Commerce /'tʃeɪmbər ˌəv ˈkɒmɜrs/
chief of staff /'tʃi:f_əv ˌstæf/
commander-in-chief /kə'mændər_ɪn ˌtʃi:f/
cloak-and-dagger /'kloʊk_ən ˌdægər/
as soon as /əz ˈsu:n_æz/
April Fool's Day /'eɪprəl ˌfu:lz ˈdeɪ/
an awful movie /ən_ʊ:fəl ˌmu:vi/

With four elements:

love at first sight /'lʌv_ət ˈfɜrst ˌsaɪt/
back-to-back wins /'bæk tə ˈbæk ˌwɪnz/

Example Type 1:

Mark the strong and weak words in the following sentences to change the meaning in various ways:

- A. 1. **TOM** saw a **BLACK** dog yesterday.
2. Sorry, we asked for **TWO CUPS** of **TEA**.
3. I think the **COKE** is **MINE**.
4. Jane **HURT** her **ANKLE** playing **SOCCER**.

5. It wasn't **DAVID'S PSYCHOLOGY BOOK**.

6. I didn't **KNOW LUCY** was out **THERE**.

- B.**
1. My **TEACHERS** really **AMUSE** me.
 2. That is kept **CONFIDENTIAL** in the **FILE CABINET**.
 3. The **PRESIDENT'S FAMILY** lives in the **WHITE** House.
 4. According to my **CALENDAR**, we have an **APPOINTMENT** at **THREE**.
 5. I'm going to **PRINT OUT** the **HANDOUTS** for the **GEOLOGY** class now.
- C.**
1. I'm going to New **YORK**. **WHERE** \ New **YORK**!
 2. Do you have Mary's **PHONE** number \ **WHOSE** \ **MARY's**!
 3. Ted likes the **BLUE** one best. **WHICH** one \ The **BLUE** one!
 4. I can't find the **CAR** keys. **WHICH** keys \ The **CAR** keys!
 5. I'm taking my vacation in No**VEM**ber. **WHEN** \ In No**VEM**ber.

Example Type 2:

Give students sentences which may carry different meanings when the emphasis on various words is changed:

- A.**
1. I don't want to buy a brown coat. — But your **brother** does.
 2. I don't want to buy a brown **coat**. — Buy a **jacket** then.
 3. I don't want to **buy** a brown coat. — Why don't you **rent** one then \
 4. I don't want to buy a **brown** coat. — Yes, I know you hate **brown**.
- B.**
1. "I'm not going" means — Not "**ME**", but perhaps "**YOU**", "**SHE**" or "**HE**".
 2. "I'm not going." — I **reFUSE** to go.
 3. "I'm not going" I'm not **GOing**. . . I'm **COMing BACK**!
- C.**
1. I'm going to study **THAI**. (You're going to study what \)
 2. I'm going to **STUDY** Thai. !
 3. You've got to be **KIDDING**.
 4. I **AM** going to study Thai.

- D.**
1. I didn't see him **SPEEDING**.
 2. I didn't see **HIM** speeding.
 3. I didn't **SEE** him speeding.
 4. I **DIDN'T** see him speeding.
 5. I didn't see him speeding.

Example Type 3:

“Janet’s going to Brighton tomorrow afternoon to buy herself a pair of red leather shoes.” Practice of sentence stress is achieved by cueing the learners with questions while requiring them to use the whole sentence in reply. The second time this is done, the learners can discard the parts of the sentence which do not contain the important element of the answer in order to form a more natural response. The teacher provides cues such as: /**Is John going to Brighton** \/, /**Is Janet going to London** \/, /**Is Janet going away from Brighton** \/, /**Is Janet coming from Brighton** \/, /**Is Janet going to sell her mother a pair of red leather shoes** \/, /**Is Janet going to buy herself three pairs** \/, /**Is Janet going to buy herself a pair of blue suede shoes / red leather sandals** \/ It will become clear to learners that there are many variations of sentence stress, which will decide the meaning of their responses.

Example Type 4:

You are going to deal with some situations in which the sayings have been prepared for you. Imagine you are in these situations and speak the utterances with your natural intonation:

1. You are a teacher at Language Link and your students are from five to eight years old. Today, you are going to play a little game. Before playing the game, you instruct them to prepare the necessary objects: /**You need a pen, a pencil and some paper.**/
2. You are at the train station to see off your close friend. You don't remember the departure time, so you ask him/her: /**Your train leaves at six, doesn't it** \/
3. Your younger sister borrowed your walkman for two weeks and now she comes into our room to return it. You are busy with the assignment, so you say to her without turning around: /**Put it on the table** ↗/

4. This is your first time in London. You need to deposit some money but you don't know how to get to the bank. You catch a man on the street and ask him: **/Do you know where the bank is, please**/
5. You don't have a watch or a clock around. In order to learn the time, you ask your roommate: **/What time is it**/
6. You are a teacher at a high school. You are teaching the lesson when a student opens the door and asks for permission to come into the class. He is 30 minutes late. You ask him: **/What time is it**/

Sentence Stress Recognition Test

Find the place of the primarily stressed word(s) in the following sentences:

1. **The movie may be inappropriate for children under 14.**
 a) **movie** b) may c) inappropriate d) children e) 14
2. **The White House has badly misjudged Congress's support for his bill.**
 a) **White** b) House c) badly d) misjudged e) Congress'
3. **The weather is unlikely to improve over the next few years.**
 a) **weather** b) unlikely c) improve d) over e) few
4. **You have to take precautions when working with chemicals.**
 a) You b) have to c) **precautions** d) working e) chemicals
5. **He has been granted a visa by the State Department.**
 a) He b) been c) granted d) **visa** e) State
6. **He's been variously called a genius and a madman.**
 a) He's b) been c) variously d) **genius** e) madman
7. **It's unreasonable to give a 10-year-old so much responsibility.**
 a) It's b) **unreasonable** c) give d) so much e) responsibility
8. **It seemed unreal to be sitting and talking to someone so famous.**
 a) seemed b) **unreal** c) sitting d) talking e) famous

- 9. I'm thinking about becoming a vegetarian.**
a) I'm b) **thinking** c) about d) becoming e) vegetarian
- 10. I think we've all learned a valuable lesson today.**
a) I b) think c) we d) **all** e) valuable
- 11. Her quiet voice seemed incongruous with her hard face.**
a) Her b) quiet c) **incongruous** d) her e) hard
- 12. John was a little vague about where he was going.**
a) John b) **little** c) vague d) where e) going
- 13. You cannot walk away from eight years of marriage.**
a) You b) cannot c) away d) **eight** e) marriage
- 14. News stories like these could cause mass hysteria.**
a) News b) these c) cause d) **mass** e) hysteria
- 15. Several employees unwittingly became involved in illegal activities.**
a) Several b) employees c) **unwittingly** d) involved e) illegal
- 16. The hospital was accused of hiring unqualified health workers.**
a) hospital b) accused c) hiring d) **unqualified** e) workers
- 17. He was surprisingly candid about his past drug addiction.**
a) He b) **surprisingly** c) candid d) past e) addiction
- 18. Millions of people may have been unknowingly infected.**
a) Millions b) people c) been d) **unknowingly** e) infected
- 19. After only a few lessons, you will be able to understand basic Spanish.**
a) After b) **only** c) few d) you e) Spanish
- 20. Test questions often deal with unreal situations.**
a) **Test** b) questions c) often d) unreal e) situations

21. The doctors have put him in the hospital as a precautionary measure.

- a) doctors b) put c) him d) hospital e) **precautionary**

22. The book looks at the relationship between religion and civilization.

- a) book b) looks c) relationship d) religion e) **civilization**

23. The ticket is valid for an unspecified period of time.

- a) ticket b) valid c) unspecified d) **period** e) time

24. Ten children were absent from class today.

- a) **Ten** b) children c) absent d) class e) today

25. An electrical problem may have contributed to the crash.

- a) **electrical** b) problem c) have d) contributed e) crash

Listen to the audio form of the following compound sentences and put down their related stresses:

1. Martha **cooks**, and Tom does the **dishes**.
2. I missed **supper** and I'm **starving**!
3. It's an **old** car, but it's **reliable**.
4. I'd like to **go**, but I'm awfully **busy**.
5. You can use either **milk** or **cream** in the sauce.
6. I got **hungry**, so I made a **sandwich**.
7. I put your **keys** in the drawer so they wouldn't get **lost**.
8. She didn't **reply**, nor did she **look** at him.
9. Neither **Julie** nor **Mark** said anything.
10. We sent **thousands** of forms, yet fewer than **50** were returned.
11. Respond by **letter**, or better yet, a **telephone** call.

Sentence Stress Recognition:

Listen to the audio form of the following complex sentences and put down their related stresses

1. If I **call** her now, she should **still** be at home.
2. Do you **mind** if I **close** the door.

3. He was **nine** when his **father** died.
4. The best **moment** was when Barnes scored the **winning** goal.
5. I don't **know** why she won't **talk** to me.
6. This is the **book** which I **told** you about.
7. The **house**, which was completed in 1856, was famous for its **huge** marble staircase.
8. The train only takes two hours, which is quicker than the bus.
9. You get the same result whichever way you do it.
10. He won't go to sleep unless you tell him a story.
11. We can go in my car unless you want to walk.
12. One of them called the other a liar, whereupon a fight broke out.
13. They arrived while we were having dinner.
14. I tried to call you as soon as I heard the news.
15. I asked Lucy where she was going.

Sentence Stress Recognition:

Listen to the audio form of the following compound-complex sentences and put down their related stresses

1. He knows **how** the Democrats like to work; accordingly, he can **help** the Republicans defeat them.
2. You may **not** like her, but you have to **admit** that she is good at her job.
3. She's an **adult** - she can do what she **pleases**.
4. I'm **not** surprised he left her, after the way she **treated** him.
5. He discovered the jewel was **fake** three weeks after he **bought** it.
6. I guess you're **right**, we should have left **earlier**.
7. I'm sorry I was **rude**; I've had a **bad** day.
8. It was apparent that the **enemy** was stronger than they had **believed**.
9. Your light **wasn't** on, so I **assumed** you were out.
10. She's **upset** that they **broke** up, but it's probably for the best.

General Answers

a green house /'gri:n + ,haus/
(a house which is green)

a greenhouse /'gri:n,haus/
(a glass building in which you grow plants)

a black bird /ə + 'blæk + ,bɜrd/
(Any bird which is black)

A wet nurse /'wɛt + ,nɜrs/
(a nurse who is wet)

a typical /,ə + 'tɪpɪkəl/
(typical or usual)

a bout /ə + 'baʊt/

a broad /ə + 'brɔ:d/

a claim /ə + 'kleɪm/

a cord /ə + 'kɔ:d/

a count /ə + 'kaʊnt/

a cross /ə + 'krɒs/

a blackbird /ə + 'blæk,bɜrd/
(a special species of a bird)

a wetnurse /,wɛt'nɜrs/
(a woman who breastfeeds another's
baby)

atypical /,eɪ'tɪpɪkəl/
(not typical or usual)

about /ə'baʊt/

abroad /ə'brɔ:d/

acclaim /ə'kleɪm/

accord /ə'kɔ:d/

account /ə'kaʊnt/

across /ə'krɒs/

APPENDIX F. PITCH EXERCISES

Exercises

The following exercises depend mainly on listening comprehension. All of the exercises are taken from the *Longman Dictionary of American English* speaking dictionary and were downloaded via the Audacity program in Wav form.

A1. Listen to the following words and put down their pitch patterns using the NAE transcriptions:

1. abandoned
2. abominable
3. acknowledgment
4. backgammon
5. basically
6. beneficiary
7. calligraphy
8. Canadian
9. counterclockwise
10. credibility
11. crematorium
12. ecological
13. economical
14. fallacious
15. familiarity

B1: Listen to the following phrases and put down their pitch patterns in NAE

1. fan club
2. Father's Day
3. fetal position
4. game plan
5. garage sale
6. general election
7. generation gap
8. global warming
9. good evening
10. grade school
11. hard disk

12. health club
13. index finger
14. Indian summer
15. inner city

C1: Listen to the following complex phrases and put down their pitch patterns using NAE:

1. a child's innocence
2. a very inquisitive little boy
3. an innovative approach to language teaching
4. an insatiable appetite
5. a health inspector
6. an inspirational speech
7. an instantaneous reaction to the drug
8. a lion's instinct to hunt
9. insufficient supplies of food
10. the intellectual development of children
11. a child of average intelligence
12. a pair of jeans
13. a peanut butter and jelly sandwich
14. a strong jet of water
15. the place where the two roads join

D1: Put down the pitch patterns of the following simple sentences:

1. Mary joined the gym last month.
2. Why don't you join us for dinner?
3. His first job was writing gags for radio comedians.
4. He was telling funny stories about his college days.
5. Employees should be judged on the quality of their work.
6. The sudden ring of the telephone made us jump.
7. She had to cover her mouth to keep from laughing.
8. I wanted to kick myself for forgetting her name.
9. The mayor took every opportunity to knock his opponent.
10. It's normal for people to ignore each other in an elevator.
11. The nature of my work requires a lot of traveling.
12. The university's website is really easy to navigate.
13. It was too dark for me to distinguish anything clearly.
14. The government is trying to distract attention from its failures.
15. You shouldn't drive or operate heavy machinery while taking this medication.

APPENDIX G. KEY TO PITCH EXERCISES

A1

1. abandoned /²ə³ˈbændənd¹/
2. abominable /²ə³ˈbɑmənəbəl¹/
3. acknowledgment /²ək³ˈnɒlɪdʒmənt¹/
4. backgammon /²ˌbæk¹ˈɡæmənt¹/
5. basically /²ˌbeɪsɪkli¹/
6. beneficiary /²ˌbenə³ˈfɪʃɪəri¹/
7. calligraphy /²ˌkælɪˈɡrəfi¹/
8. Canadian /²ˌkæ³ˈneɪdiən¹/
9. counterclockwise /²ˌkaʊntə³ˈklɒk-waɪz¹/
10. credibility /²ˌkredə³ˈbɪlədʒi¹/
11. crematorium /²ˌkriːmə³ˈtɔːriəm¹/
12. ecological /²ˌiːkə³ˈlɒdʒɪkəl¹/
13. economical /²ˌekə³ˈnɒmɪkəl¹/
14. fallacious /²ˌfælɪʃəs¹/
15. familiarity /²ˌfæmə³ˈljærədi¹/

B1

1. /²ˌfæn klʌb¹/
2. /²ˌfɑːðəz deɪ¹/
3. /²ˌfetəl pəzɪʃən¹/
4. /²ˌɡeɪm plæn¹/
5. /²ˌɡærɑːʒ seɪl¹/
6. /²ˌdʒenərə³leɪʃən¹/
7. /²ˌdʒenə³reɪʃən ɡæp¹/
8. /²ˌɡləʊbəl wɔːmɪŋ¹/
9. /²ˌɡʊd ˈiːvənɪŋ¹/
10. /²ˌɡreɪd skuːl¹/
11. /²ˌhɑːd ˈdɪsk¹/
12. /²ˌhelθ ˈklʌb¹/
13. /²ˌɪndeks ˈfɪŋɡə¹/
14. /²ˌɪndiən ˈsʌmə³ə¹/
15. /²ˌɪnə³ˈsɪti¹/

C1

1. /²a child's ³innocence¹/
2. /²a very ³inquisitive little boy¹/
3. /²an ³innovative approach to language teaching¹/
4. /²an ³insatiable appetite¹/
5. /²a ³health inspector¹/
6. /²an ³inspirational speech¹/
7. /²an ³instantaneous reaction to the drug¹/
8. /² a lion's ²instinct to hunt¹/
9. /² insufficient supplies of ³food¹/
10. /² the intellectual development of ³children¹/
11. /²a ³child of average intelligence¹/
12. /²a pair of ³jeans¹/
13. /²a peanut butter and jelly ³sandwich¹/
14. /²a strong jet of ³water¹/
15. /²the place where the two roads ³join¹/

D1

1. /²Mary joined the ³gym last month¹/
2. /²Why don't you ³join us for dinner¹/
3. /²His first job was writing ³gags for radio comedians¹/
4. /²He was telling ³funny stories about his college days¹/
5. /²Employees should be judged on the ³quality of their work¹/
6. /²The sudden ring of the telephone made us ³jump¹/
7. /²She ³had to cover her mouth to keep from laughing¹/
8. /²I wanted to ³kick myself for forgetting her name¹./
9. /²The mayor took every opportunity to ³knock his opponent¹/
10. /²It's ³normal for people to ignore each other in an elevator¹/
11. /²The ³nature of my work requires a lot of traveling¹/
12. /²The university's website is ³really easy to navigate¹/
13. /²It was too dark for me to distinguish ³anything clearly¹/
14. /²The government is trying to distract ³attention from its failures¹/
15. /²You shouldn't ³drive or operate heavy machinery while taking this medication¹/