CHAPTER II: LITERATURE REVIEW

2.1 General Overview

This review of literature will present relevant information that is needed to understand and support the present study. By the end of the first section (2.2), the reader will have a better understanding of the basic concepts that are fundamental for the development of this research (intelligibility, comprehensibility and foreign accent) as well as the relationship between these concepts (2.2.1).

Within this chapter, the reader will be presented with information related to the reasons why intelligibility is important as a goal of the learner (2.2.2). In addition, the chapter presents the role that teaching pronunciation has played within different teaching methods (2.3), the role of communicative competence (2.3.1), its relation to pronunciation (2.3.2) and finally, the two main types of instruction carried out in previous research (2.4).

By the end of this chapter, the reader will be informed of the two main features in pronunciation instruction (segmental and suprasegmental features), which combined will be the syllabus of the training on pronunciation that will be given to the participants of this study.

2.2 Intelligibility, Comprehensibility, and Foreign Accent

Intelligibility, comprehensibility and foreign accent are the three concepts which are fundamental for the present study, as it is their teachability. These are concepts that can only exist when the communicative act is taking place, that is,

in the presence of a speaker and a listener. This idea also presupposes the existence of a speech uttered by a speaker which can be labeled as intelligible, comprehensible or accented. For this reason, this first section will provide the reader with some definitions of the aforementioned concepts and the relationship among them.

Around the core concepts of the current research, there are two acronyms that need to be explained since they will be used throughout this review of literature: first language (L1) and second language (L2). According to Crystal (2007), L1 is used to refer to the people who learned a variety of English (or any other language) as a mother tongue or first language. Meanwhile, in the case of English, L2 makes reference to people who learned English as a Second Language, in addition to their mother tongue (E.g. Spanish). Therefore, a L1 community will refer to a group of L1 speakers of English; those who learned English as a foreign or second language will be the components of a L2 community of speakers of English.

As was stated in Chapter 1, the goal of learning a foreign language should be to be able to communicate in the target language. Effective communication is, in fact, the purpose of any communicative act. According to Richards and Rodgers (2006), effective communication is sought through comprehensible pronunciation, in other words, being intelligible.

Intelligibility is a notion that has become central to the teaching of pronunciation (Field, 2005). Field defines it as “the extent to which the acoustic-phonetic content of the message is recognizable by a listener” (p. 401); that is, the speakers’ production being deciphered by the listener. In Kenworthy’s

(1987) words, intelligibility is the goal of teaching pronunciation, as opposed to native-like pronunciation, and it is defined in its broader sense as “being understood by a listener at a given time in a given situation” (p. 13). Munro and Derwing (1999) define it as “the extent to which a speaker’s message is actually understood by the listener” (p. 289). These three definitions include the aspect of understandability as the only requirement of being intelligible, but it actually signals the fact that the speech production of the speaker qualifies in order to function in a real-life situation with his/her command of the language.

Similarly, *comprehensibility* is expressed by the listener’s judgment and how difficult it is to understand L2 speech production; “it is a subjective assessment of ease or difficulty of comprehension as opposed to a measure of actual intelligibility” (Derwing, Munro & Wiebe, 1998, p. 396).

As the definitions mentioned above express it, intelligibility is a property of the speaker, whereas comprehensibility is a judgment made by the listener in regards to his/her ability to understand the speaker. Within the field of World Englishes (WE), Smith and Nelson’s (1985, as cited in Pickering, 2006) tripartite definition of intelligibility, comprehensibility and interpretability is more commonly accepted. In this sense, intelligibility comprises the ability of the listener to recognize individual words that constitute an utterance, whereas comprehensibility refers to the listener’s ability to understand the utterance in a given context. On the other hand, interpretability is the listener’s ability to decipher the speaker’s intentions behind the uttered words and ideas. That is, both intelligibility and comprehensibility co-exist as long as there is a speaker and a listener in a given situation. For the purpose of this study, Smith and Nelson’s definitions of intelligibility and comprehensibility will be followed.

Intelligibility is also related to another important variable that has been the focus of numerous pronunciation studies: *accentedness* or *foreign accent*. According to Derwing et al., (1998) foreign accent "refers to the extent to which a listener judges second language speech to differ from the norms" (p. 396). Derwing and Munro (2005) define it as the listener's perception of how different a speaker's accent is from that of the L1 community. Flege (1987) defines it as the perceived discrete and general differences that make a n-native speaker differ from that of a native speaker. Since the definitions presented are straightforward in terms of the definition given to foreign accent, I will use the term to refer to the language spoken by L2 speakers, that present perceived differences in its production in relation to any variety of English, E.g. Australian English, British English, Us English, etc.

Recently, intelligibility, comprehensibility and accentedness have been the main foci of pronunciation studies. There has been a particular interest in the correlation existing among them and their hierarchy. In order to demonstrate which of the aforementioned variables is more important Munro and Derwing (1999), found that even when speakers have a heavy accent they can be perfectly intelligible, something which will be tested in the present study. They also found that there is a correlation between the above mentioned variables where a stronger correlation was drawn between intelligibility and comprehensibility than between intelligibility and foreign accent. Their findings suggest a hierarchy of importance where the main role is played by intelligibility, then comprehensibility, with accentedness having the least important consideration. This finding empirically demonstrates that "the presence of a strong accent does not necessarily result in reduced intelligibility or

comprehensibility" (Munro and Derwing, 1999, p. 302), an idea that triggered the carrying out of the present study.

After having explained the concepts of intelligibility, comprehensibility and accentedness, three studies will be discussed in order to establish the relationship existing among these concepts.

2.2.1 Relationship between Intelligibility, Comprehensibility and Foreign Accent

As presented in the previous section (2.2), intelligibility has commonly been investigated along with two other variables: comprehensibility and accentedness. Most of these studies have focused on the phonological aspects of English and the contribution that the production of specific sounds and features such as intonation and rhythm have on intelligibility, comprehensibility and foreign accent (Rajadurai, 2007). Researchers, Derwing and Munro, through a series of investigations, have suggested an order of importance between these three elements, giving less importance to the role played by accent in the judgments of intelligibility and comprehensibility (Munro and Derwing, 1999; Derwing, et al., 1998).

Studies carried out by Derwing, et al., (1998), Munro and Derwing (1999), and Derwing and Rossiter (2003) have focused on attaining intelligibility through explicit pronunciation instruction. Two of these studies (Derwing, et al., 1998; Derwing and Rossiter, 2003) comprised the same population and participants went through the same process of pronunciation training. However,

each one of these studies has approached intelligibility, comprehensibility, and accentedness differently, as it is described below.

In terms of pronunciation instruction and its effects in improving intelligibility and comprehensibility, Derwing, Munro and Wiebe (1998) undertook a study comparing the implementation of two perspectives on pronunciation teaching over a period of 12 weeks. The objective of their study was to show how the focus of pronunciation instruction accounts for the improvement of comprehensibility and accentedness. Although an improvement was found in terms of accentedness and comprehensibility, the type of instruction each group received accounted for either improvement on accentedness (segmental approach) or comprehensibility (global approach). Since these two previous studies are the ones that the present research will follow, its methodology will be explained in-depth in Chapter 3 in order to compare the setups of the original and the adapted studies. Their study also provides evidence that supports the second premise of the current study: having a strong foreign accent does not affect the speaker's intelligibility.

After showing that comprehensibility and accentedness could be improved after explicit pronunciation training and in order to understand the relationship between these three variables, Munro and Derwing (1999) carried out another study. They worked with 10 native speakers of mandarin studying ESL and 18 Native English Listeners (NELs) who transcribed the speakers' utterances and evaluated them in terms of intelligibility, comprehensibility and foreign accent. They found that the speakers received high intelligibility and comprehensibility scores although the perception of foreign accent varied significantly, with prevalence in the 'heavily accented' range. The results of this

study demonstrate that having a strong accent does not compromise intelligibility. Furthermore, we can observe that there was a negative correlation between the three variables where having a strong accent does not translate to poor intelligibility.

Similar to Derwing, et al., (1998)'s study, Derwing and Rossiter's (2003) worked with 48 No native English Speakers (NNESs) and after explicit pronunciation instruction (segmental, suprasegmental or global, to be explained/defined below) the researchers came to conclude that the improvement observed in each group was due to pronunciation instruction the participants received. Derwing and Rossiter (2003), state that focusing on certain aspects of the phonology of the language affect the development of others. An example of this situation is found in the results obtained by the segmental group, who after focusing on the accurate production of certain phonemes, were rated as having less accent during the recordings carried out after the pronunciation training.

Yet, regardless of the type of instruction that the EFL speaker can get in the language classroom, there is another important factor that can contribute to the improvement of comprehensibility, intelligibility and accentedness such as the setting (ESL / EFL) in which the learner studies, the characteristics of the learner as well as their motivation. The following section presents relevant information that makes reference to the learners` needs and characteristics as well as the place in which the target language is studied. It also emphasizes the age factor in the achievement of pronunciation goals in the class and the acquisition of a foreign language in general.

2.2.2 Motivation and the Attainability of a Native-like Foreign Accent

According to Pennington (1996), “the most important thing when deciding what to teach is looking at our students, their language problems and their future needs in terms of their English language skills” (p. 218). This is important to be considered since we cannot be expected to teach the same syllabus to a group of EFL learners and a group of ESL students. Also, because there are students who want to learn English in order to communicate with other NESs, to be able to read and understand articles, or even to teach English. Because we do not know which purpose a given language learner may have, we need to get acquainted with the learners in terms of their ages, their background and language needs.

This section presents the role that motivation and age play in the acquisition of a foreign language, specifically in the acquisition of a native-like foreign accent. The reason why I have decided to focus only on the attainment of a native-like accent derives from the fact that not so long ago bias were held against ‘foreign’ accents (Munro and Derwing, 1999) and research was carried out in order to support the fact that native-like accents were possible to acquire, such as the study that will be presented below.

The literature presented in this section shows how the characteristics of the learners account for the attainability of language learners’ goals. From biological reasons to external factors, learners’ characteristics play the most determinant role in the acquisition of a foreign language.

Despite the fact that learning a foreign language is a ‘must’ in the overall preparation of professionals for people living in Mexico, the situation mentioned in the introduction of this thesis project, it is also important to take into consideration the characteristics of the learner. One of the main differences between learners in an EFL and ESL context is the fact that most EFL learners are not in the classroom by personal choice, but because they are required to learn a foreign language as a mandatory subject, as opposed to the ESL learners who want to learn the target language as a means of survival in a foreign country. For the abovementioned reasons, when teaching EFL as teachers we need to ask ourselves the following question: ‘Who are our learners?’ Knowing our learners mean to be acquainted with the students’ age, their experience in learning a foreign language, their level of proficiency and their motivations and attitudes toward the learning of it. (Celce-Murcia, et al., 1996).

With respect to age, there is a period of time in which the learner is said to learn easily and have more probability to achieve a native-like pronunciation of the target language called *The Critical Period Hypothesis* (CPH) proposed by Lennenberg (1967, as cited in Flynn and O’Neil, 1988). According to Flynn et al., (1988) the CPH represents the biologically determined period of life during which maximal conditions for language acquisition exist. The theory suggests that after the critical period, which ends around puberty, the learner will face difficulties when acquiring a second language (Celce-Murcia, et al., 1996). Furthermore, Lennenberg believed that the language acquisition device prevents an adult learner for acquiring an accent-free second language (Flynn et al., 1988).

The CPH in its strong version suggests that “persons beyond the age of puberty do not acquire an authentic (native-speaker) pronunciation of the second language due to aspects such as: neuromuscular plasticity, cerebral development, psychobiological programs, and the environment of socio-cultural influences” (Brown, 2007, pp. 62-63). However, Lamendella (1977, as cited in Bebee, 1988) and Selinger (1978, as cited in Bebee, 1988), argue for a sensitive period which leaves open the possibility of learning certain language skills at different periods of time in human development. This means that the brain does not shut off completely or at all around puberty, instead some language skills can be acquired at certain ages; not doing so would only make it difficult to acquire later but not impossible. The latter accounts for the weak version of the CPH, also supported by Scovel (1988).

The strongest version of the CPH would lead us to believe that it is virtually impossible to acquire a native-like pronunciation of any given language after the age of 13. However, the CPH only gives us a principle regarding the acquisition of a second language in terms of pronunciation that cannot be taken as a rule as will be shown later in this Chapter. As I mentioned before, knowing our students’ age could help us to prepare suitable material for the acquisition of the target language regardless of whether the learner wants to sound native-like or keep his/her foreign accent, after all it is the learner’s choice.

As mentioned before, some findings do not support the CPH. Although the study discussed below qualifies as the exception to the rule, we should consider the characteristics of the participants and the role that motivation played within the acquisition of a L2. Bongaerts, Summeren, Planken, and Schils (1997), present a study where samples of 5 native speakers of British

English (control group) and two groups of learners were collected (experimental group). These two groups of learners were comprised of 10 Dutch learners of English identified as highly successful learners by EFL experts, and 12 learners of English at various levels of proficiency. None of the participants from the experimental group had received instruction of English before the age of 12. Language samples were rated on their accent by 13 native speakers of English; the results showed that "some of the NS of Dutch received ratings that were comparable to the ratings assigned to the native speaker controls" (p. 462), apparently the judges seemed to be unable to identify the native English speakers from the highly successful learners of English. In spite of the late exposure to the target language, it seems that the Dutch learners from Bongaerts et al. (19997)' study could attain a native like pronunciation of their L2. However, regarding this study it is important to keep in mind that these were highly successful learners, who were also highly motivated.

Therefore, motivation is an important factor in the attaining of a native like accent as Bongaerts et al. (1997) point it out when they refer to Klein's (1995, as cited in Bongaerts et al., 1997) argument. According to Klein (1995, as cited in Bongaerts et al., 1997), if learners have a massive L2 input and if it is important for them to sound like a native speaker, there is a possibility that they will attain a native-like accent, despite the fact that they started to learn the language late. This was the case of the Dutch learners, who reported that, in view of their profession (professors of English), it was important for them to speak English without a noticeable trace of Dutch accent (Bongaerts et al. 1997).

Although the results of this study support the argument that it is possible to acquire native-like pronunciation after certain period of time, they are not significant enough to represent the counterpart evidence to the CPH. As, Bongaerts et al. (1997)'s study seems to represent a utopian scenario, where nativeness in pronunciation is aimed for regardless of the late start, which takes us back to the beginning of this section; we have to know our students, their motivations, and needs.

Apart from the age of the learner, the learners' attitudes and motivation towards the learning of the foreign language are vital. In the words of Pennington (1996), "the learner's attention and motivation are key to activating change, facilitating the change process and maintaining process in phonological acquisition" (p. 219). If we take again into consideration the participants in Bongaert et al.'s (1997) study we can see that those learners were successful with an excellent command on the target language and who were also lecturers who taught English at a Dutch university, the reason why not having a foreign accent was important, hence, the reason which led them to acquire a native like accent. Besides the neurological constraints that these learners may have experienced, the role of attitudes toward the target language are very important. According to Firth (1992), among the most significant factors affecting attitude are education, occupation, length of time in host country and feelings about the target culture. The role that motivation plays in the improvement of intelligibility and foreign accent could be a key factor in the results obtained in the current study.

In addition, with the increased number of NNESs around the world and concurrent increase in NNES-NNES interaction as opposed to NES-NES

interaction it may be that learners would want to acquire a native-like foreign accent. As Jenkins (2000) points out “there is no need for learners to eradicate the phonological features that mark them as coming from a particular L1 group” (p. 207).

Throughout this section the focus was on the learners and their characteristics of age, attitudes and motivation towards the target language and how this can account for differing achievement in native-like pronunciation. It can be noticed that the learner’s attitudes, motivation, and age in which they are first exposed to the foreign language can account for the success or failure of the learning of it. However, it is not all the students’ responsibility because the methodology of language teaching also plays an important role. In the following section, it will be described the most relevant research that has been carried out in the area of pronunciation, specifically that on pronunciation instruction.

2.3 Teaching: The Role of Pronunciation Instruction

Language teaching has experienced dramatic changes as a result of the practical realities of the classroom and the society of the time. It holds true that now bilingualism and multilingualism are the norm rather than the exception (Richards and Rodgers, 2006). Furthermore, of all the languages spoken in the world there is one which has stood out due to its economical, political and cultural importance: English.

During late 1999 the world population passed the 6 billion mark. Of these, 1,500 million speakers speak English with approximately 750 million having English as either their L1 and L2 while an equivalent number of

speakers using English as their foreign language (Crystal, 2007). Remarkably, the population of speakers of English as a foreign language is the same as the amount of L1 and L2 speakers' altogether. According to this information, Crystal (2007) suggests that one quarter of the world population were capable of communicating with a useful level of English in 1999. This data help us underscore the importance that English has been acquiring as a global and main language, hence, the interest of methodologies and theories to teach it.

The methods that have existed through the last decades symbolize the stages that language teaching has experienced. Nowadays, the most accepted approach is the Communicative Approach. Language schools offer courses that promise the students will be able to communicate at the end of it. Students enter these classes with the hope of being taught in an effective way, in which the outcome is communicating effectively, where the eclecticism is the common label used for the language teaching method. However, from my experience as a language teacher and learner, most of the times students find themselves in a situation were the emphasis of language learning is placed on grammar structures, and if any, on writing skills.

Whether English is taught as a foreign or second language, there are 4 skills that must be taken into consideration when teaching a language. Those four major skills are: listening, speaking, writing and reading (Harmer, 1986). The four skills can be categorized according to what they require on the learner's part; to produce or to receive the language. Among the receptive skills listening and reading can be found, and writing and speaking are considered to be productive skills. These skills cannot be taught in isolation, because the language as a whole and as a communicative act requires the learner to make

use of the four integrative skills (Harmer, 1986). This also means that any teacher of English should combine the teaching of the four skills, and as a consequence the learners should view the target language as a whole, not as only grammar, or only reading. For this reason, the objective of the present section is to show how the communicative competence becomes the goal of instruction and how it fits in the teaching of English as part of the communicative approach.

2.3.1 Communicative Competence

Learning a foreign language does not only mean studying and understanding the use of grammatical rules (grammatical competence), or memorizing vocabulary, it also includes the development of the ability to know how to use the language effectively. For this reason it is important to refer to the communicative competence.

Canale and Swain (1980) are very explicit in defining the components of communicative competence. They state that in order to be communicatively competent, the speaker has to a) know the grammatical rules of the target language and, b) know how, when and with who use the language. The first one refers to the *grammatical competence* and the latter makes reference to the *sociolinguistic competence*.

According to Kasper and Rose (2001), communicative competence includes at least two components: a code component and a use component. According to Kasper and Rose, the *code component* refers to speakers' knowledge of syntax, morphology, semantics, lexicon and phonology, which

makes reference to the grammatical competence proposed by Canale and Swain (1980). On the other hand, the *use component* describes the ability that the second language (L2) learner has to use the target language appropriately according to a specific context, named sociolinguistic. In addition, Hall (2005) defines communicative competence as the ability that the speaker has to use language in an appropriate (sociolinguistic competence) and effective way (grammatical competence) in the communicative act. Although Hall does not make a marked distinction between the knowledge of grammar and the knowledge of the rules of language use proposed by Canale and Swain (1980), these can be clearly identified.

Furthermore, Canale and Swain (1980) distinguish another important factor within the communicative approach: communicative performance, which is the realization of the grammatical and the sociolinguistic competencies. Following the communicative approach, it should be the goal of instruction to have students being able to communicate effectively by recognizing grammatical structures and knowing when and how to use them.

In order to demonstrate the relationship existing between the communicative competence and pronunciation teaching and its relationship with the attainability of intelligibility and comprehensibility, the following section focuses on the description of teaching methods and the role of pronunciation instruction has played within them.

2.3.2 Development of the Communicative Competence through Pronunciation Instruction

From the grammar translation method, to the communicative approach, the instruction of foreign languages has become a reflection of society's needs. For example, the Grammar-Translation method had as its goal of foreign language study to read its literature and to obtain mental discipline or intellectual development as the result from foreign language study (Richards and Rodgers, 2006). A more illustrative method of how methods have become a reflection of society's needs is the Audiolingual method or the Army Method, which resulted from the US government's need to have military personnel able to interpret, translate and communicate in languages such as German, French, Italian, and others. According to Richards and Rodgers, the aim of this program was for students to achieve conversational proficiency in a variety of foreign languages.

As a consequence, some methods have conferred more importance to certain aspects of the language than to others. In the nineteenth century, the grammar translation method placed great importance to the accurate translation of texts and sentences to the target language (Richards and Rodgers, 2006). This method emphasized the development of the grammatical competence where precise translations and the memorizing of grammatical rules of the target language were demanded. As a consequence, pronunciation was not considered as important in the acquisition of a second language.

According to Morley (1991) the history of teaching pronunciation dates back to the 1940's with the development of the audiolingual method in the United States and the Oral approach in Britain, where pronunciation was

considered one of the top priorities. The oral approach was carried out by emphasizing imitation, memorization of patterns through drills and dialogues, and with special attention to correction. According to Richards and Rodgers (2006), the latter focused on the accurate production of the target language in its speaking form.

One of the main criticisms to the Oral approach is its foundation on behaviorism (Richards and Rodgers, 2006). According to Richards and Rodgers, behaviorism acknowledges the human being as an organism that is capable of performing different kinds of behaviors. These behaviors can become habits in the presence of three elements: a stimulus, a response and reinforcement. One of the central methodological practices of Audiolingualism makes reference to the accurate production of speech. This is supposed to be achieved by the learner by memorizing dialogues and pattern drills from the learner (Richards and Rodgers, 2006), leaving no room for real and effective communication.

During the early 1960's the instruction of pronunciation diminished from teaching practice. Methods and approaches to the teaching of languages tended to focus on grammar, or skills like reading as, for example, in the reading-based approach (Celce-Murcia, et al., 1996).

Later, with the purpose of enabling the learner's use of the target language in a functional way, the *Communicative approach* emerged as the evolution of teaching methods. This approach views language as communication, where meaning is paramount instead of grammar structures and accurate pronunciation. Different to Audiolingualism, the Communicative

approach strives for a comprehensible pronunciation rather than a native-like pronunciation (Richards and Rodgers, 2006). Therefore, through the Communicative approach aims to have speakers who are able to communicate and who are intelligible.

During the 1970's and with the increasing popularity of the Communicative approach there were some indications of change. According to Morley (1991) the foci of this change were basic philosophical considerations for teaching pronunciation such as learner involvement and self-monitoring. There were also pronunciation considerations such as intelligibility issues, attention to word and sentence stress, rhythm, intonation, vowel reduction, sound spelling, among others.

After this increased attention to pronunciation, in the mid-1980's continuing into the 1990's, the ESL curriculum gained more importance among researchers; hence, more research was carried out. Among research carried out, there was a special attention to adult and young adult learners (Morley, 1991).

The language approaches mentioned above show us how pronunciation has moved up in the hierarchy of importance in language teaching, especially for the development of the communicative competence. As one can see, the emphasis placed on pronunciation has depended on the language teaching method most widely used during a particular time in history. Celce-Murcia, et al. (1996) summarizes the methodological differences of teaching methods and the role that pronunciation has played in each one in Table 1.

Method	*Focus*	*Method used*
Grammar-Translation	N/A	Teacher correction via lecture/explanation
Direct Method	Accuracy	Teacher correction and repetition
Audiolingual	Accuracy	Teacher correction Repetition drill and practice in the language lab Minimal pair drill
Silent Way	Accuracy first, then fluency	Teacher correction cues by sound/color charts and Field charts; use of gestures and facial expression
Community Language Learning	Fluency, then accuracy	Teacher correction via repetition
TPR and Natural Approach	N/A	Native-speaker input
Communicative Approach	Fluency obligatory; accuracy optional	Learner engagement in authentic listening and speaking tasks
Suggestopedia	Fluency	Peripheral learning; dialogue dramatization

Table 1 – Teaching Pronunciation: Methodological Variation (Celce-Murcia, et al., 1996, pp. 236-27)

The table presented above, shows the different teaching methods of foreign languages. It includes the focus on pronunciation given by each method, as well as the types of activities carried out within the classroom. As can be seen, the focus on pronunciation has shifted greatly, from giving more importance to

accuracy to centering the attention to fluency, from a teacher-centered setting to student-centered activities, from controlled classroom activities to freer tasks.

According to Morley (1991), with the commitment to empowering students to become effective communicators, the instruction of pronunciation should be addressed with a new look and a basic premise: “intelligible pronunciation is an essential component of the communicative competence” (p. 488). Something to which Celce-Murcia, et al. (1996) add “the next issue is methodological: How can teachers improve the pronunciation of unintelligible speakers of English so that they become intelligible?” (p. 8).

The following section will describe two main pronunciation instruction approaches, one based on the teaching of phonemes of the target language (segmental approach) and a second one focusing on features such as lexical stress, sentence stress, intonation and rhythm (suprasegmental approach). As evidence will be presented, we will find out how each of these approaches can help to the improvement of intelligibility, comprehensibility and accentedness in different ways.

2.4 Approaches to Pronunciation Instruction: Segmental vs. Suprasegmental

In the previous section (2.3.2) it was stated that the main goal of pronunciation instruction should be intelligibility and not native-like pronunciation. Intelligibility is the only requirement for the L2 speaker to be able to communicate. Celce-Mucia et al. (1996) ask themselves the same question I have asked myself in order to attain intelligibility, what methodology would be more helpful / effective

for students to aim this goal? How can intelligibility be reached? As could be seen in the previous section, approaches to the teaching of pronunciation have changed significantly throughout the recent history of language teaching, moving from an emphasis on the accurate production of individual speech sounds, such as vowels and consonant sounds, to concentrating more on the suprasegmental features and the communicative aspects of speech (Richards and Renandya, 2002).

However, the recent shift in the use of English, where the number of NNESs has overcome the number of NESs (Crystal, 2007), implies the change of focus of pronunciation instruction (Jenkins, 2002). It is not only about deciding whether to teach segmental or suprasegmental features, but about identifying which phonemes within the segmental approach and which features regarding the suprasegmental approach will help in the attaining of intelligibility.

In Field's (2005) words, it is not easy to determine which features of pronunciation should be prioritized in order to achieve intelligibility. Opinion on this subject has been divided giving importance to the contributions made by segmental features (phonemes) and suprasegmental ones (word stress, rhythm, and intonation, often referred to as *prosody*). In this section the most significant studies carried out to support each one of these approaches will be presented, as they will comprise the syllabus of the explicit pronunciation instruction to be delivered to the experimental group.

2.4.1 The Segmental Approach

According to Jenkins (1998), the *segmental features* are considered the 'core' sounds of English and those that distinguish it from other languages, as well as the tonic stress in terms of suprasegmental features. The segmental aspect of language makes reference to the inventory of vowels and consonants (Celce-Murcia et al., 1996). Among these special sounds of English there is the consonant 'th', which does not occur in the majority of other languages and which most non-native speakers have difficulty in pronouncing. The segmental aspects also include the inventory of 14 vowels. For researchers such as Deterding (2005), and Riney, Takada, and Ota (2000), the accurate production of these phonemes affects the speakers' intelligibility as it will be presented in the research they carried out.

In order to determine the important role that some phonemes play in the intelligibility of a language, Deterding (2005) worked with speakers of Estuary English[1] (EE), a style of pronunciation somewhere between the prestigious RP (Received Pronunciation) and Cockney, which is the accent associated with the working-class speakers in London (Deterding, 2005). Deterding (2005) carried out his study in a University in Singapore, where he recorded three young British men individually in a five-minute conversation with him. Then, these conversations were listened to and transcribed by 12 undergraduate Singaporean students. Deterding (2005) found that there are some features of pronunciation that contribute to the non-understanding of EE speakers. He focused on the 'theta' sound and its replacement with /f/ and /v/, t-glotalling, the

[1] Estuary English is the variety of English becoming popular in much of Southern England.

fronting of close back vowels, and the vocalization of dark /l/ which are ones of the prominent features of EE. Deterding (2005) suggests that the EE speakers created intelligibility problems for Singaporean listeners. For example, the Singaporean listeners signaled difficulties in transcribing what they were listening to; for example, the 'th' fronting replaced by the /f/ was one of the most problematic features, such as the expression 'three nights' which was transcribed as 'free nights'. Another example of th-fronting happened with the transcription of 'thought' as 'fought' (p. 433).

As this study shows, the substitution of certain phonemes can produce misunderstandings. Despite the fact that this is not the case of isolated sentences being transcribed, it seems that it was not very helpful that the expressions transcribed inaccurately were in context. Therefore, the replacement of one sound over another might cause conflicts in the understanding of a message, something that would be serious enough to affect overall intelligibility. What this study intends to stress is the fact that English learners should be exposed to non-native English accents, since students are likely to encounter interlocutors whose speech has these characteristics. In terms of pronunciation teaching, these findings suggest that overall intelligibility can be affected by the mispronunciation of certain phonemes. Therefore, special attention should be given to segmental features in the syllabus designed for the experimental group, including the voiced and voiceless sound of theta.

Similarly, Riney, Takada, and Ota (2000) present a study focused on global foreign accent and the transfer flap /r/ instead of /l/ and /r/ in the speech of Japanese native speakers in an EFL context. This study focuses more on the

fact that mispronunciation of some sounds can affect perceived global foreign accent; the more the flap substitution is present, the more the foreign accent is perceived by the listeners (Riney et al., 2000). This correlation shows that the transferred segmental, the Japanese flap, may be a contributor to the global foreign accent of Japanese EFL speakers.

It is clear that focusing on segmental features does not emphasize the idea of understanding each word from the interlocutor, as long as the message is understood (Deterding, 2005). Deterding points out how in one of the conversations carried out with one of the participants, the interviewer understood *Oman* as “Amman,” (the participant’s name) and how that did not cause a breakdown in the process of communication. This does not mean that if the segmental component is left outside the pronunciation instruction, the speaker will still be able to communicate. It could be the case that the mispronunciation of a key word within the message can create serious breakdown in communication. In this regard, Jenkins (2002) proposes a *Lingua Franca Core* which suggests those segmental (and suprasegmental) features which according to her studies are worth focusing on in order to attain intelligibility among NNESs (e.g. learners of English with the same or different L1s). For example, according to Jenkins and her Lingua Franca Core, the voiceless sound of ‘th’ (e.g. the word ‘three’) which is not included in most of the phonological inventories of other languages and its substitution for the voiced sound of ‘th’ is acceptable (in most cases) since it does not cause intelligibility problems among NNESs. On the other hand, she argues that if there should be a focus on vowels sounds, they should be drawn to the contrast between long and short vowels (‘l<u>i</u>ve’ and ‘l<u>ea</u>ve) and not in vowel quality (/bʌs/

and /bus/). Accordingly, Jenkins proposes an inventory of consonant and vowel sounds that are required for intelligibility.

Due to the importance given to segmental features, it is important to include a section in the literature review which deals with the teaching of segmental features. The following section will introduce the main stages of teaching segmental features based on Celce-Murcia, et al., (1996), an example will also be provided.

2.4.1.1 Teaching Segmental Features

For the purpose of teaching segmentals, Avery and Ehrlich (1992) grouped the most common pronunciation problems of different L1 speakers (e.g. Spanish, Italian, Japanese speakers) and created a document that contains the problems that certain language groups may present while learning English. Knowing the speakers' problems is beneficial for the teaching of pronunciation in the sense that it can help the teacher to predict problems that the learner can present and come up with solutions beforehand, prioritizing the learners' needs. However, it is important to keep in mind that each learner is different and in order to determine the group of segments that will be addressed a diagnostic test should be given before the instruction begins.

Celce-Murcia et al. (1996) propose a communicative framework to teach pronunciation based on the segmental approach. Its communicative framework includes activities that identify four main blocks: description, listening discrimination, guided and controlled practice and communicative practice and feedback.

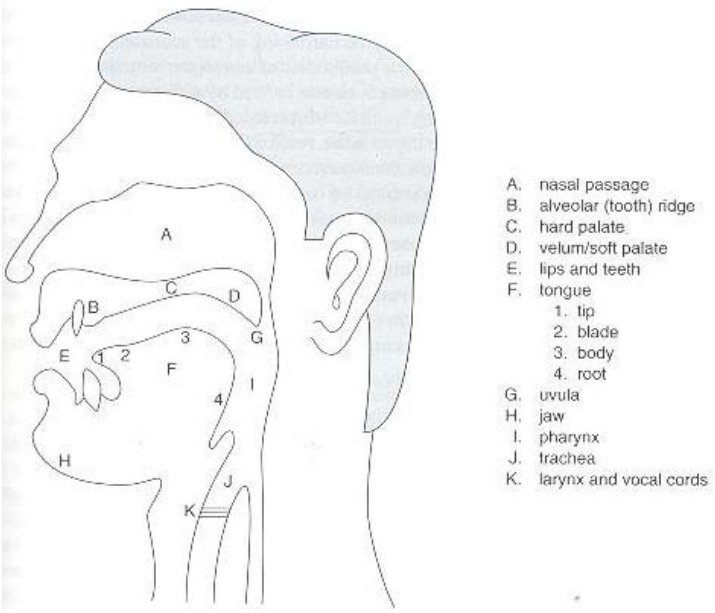

Figure 1. Sagital Section Diagram (Celce-Murcia et al., 1996, p. 43)

During the description, the teacher has to present the sounds to be taught during the lesson. This includes presenting Sagital section diagrams like the one that represents Figure 1 that show the place of articulation (where the sound is made) of certain sounds, and the manner of articulation (how the airflow is affected) (Celce-Mucia, et al., 1996).

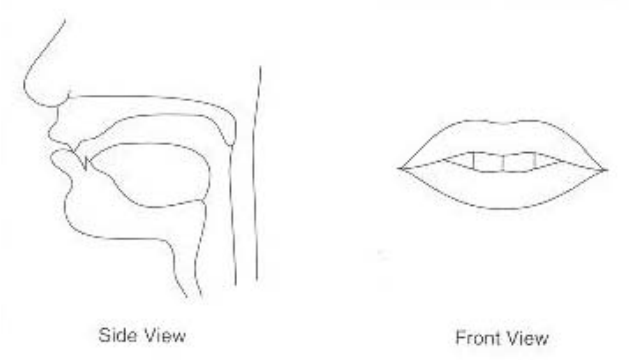

Figure 2 – Articulation of /v/ (Celce-Murcia et al., 1996, p. 51)

In order to give a clearer example, Figure 2 serves as a means to give the articulatory description when teaching /v/. The side view demonstrates how the upper teeth rest inside the lower lip when producing the /v/ sound. The front view gives is a better picture of how the aforementioned description should be viewed while producing the target sound. This is very helpful, especially when explaining the production of sounds that do not exist in the inventory of sounds of the mother tongue.

The listening discrimination section consists of giving the learner enough input to identify which target sound is being produced. Most of the times, the discrimination section will be presented with minimal pair drills – drills that use words that differ by a single sound in the same position (Celce-Murcia et al., 1996). An example of a listening discrimination exercise requires the learner to decide if two words spoken by the teacher or an audio tape are the same or different. Table 2 (below) presents an example of minimal pair drill use for listening practice and guided oral production. Minimal pair drills are especially helpful to develop listening skills in the students. Although Table 2 shows the example of a minimal pair focused on the production of vowels, this can be also used for the production of consonants.

Word Drills	
A	B
/iy/	/i/
sheep	Ship
green	Grin
least	List
meet	Mitt
deed	Did

Table 2 – Minimal Pair Drill for Listening Discrimination (Celce-Murcia, et al. 1996, pp. 4)

The guided and controlled practice provides the learner with the opportunity to produce the target sound. Through isolated words, simple sentences, conversations, and role play, students have the opportunity to practice in a controlled way.

Finally, once the students have had the chance for controlled and guided practice, they are ready to engage in communicative practice using the target sound (Celce-Murcia, et al., 1996). An example of this stage of pronunciation instruction could be the practicing of voiced and voiceless “th”, an example of how the teaching of this phoneme could be carried out is presented in Appendix A.

This section showed one way to teach segmental features, as part of pronunciation instruction. Although it is not the only way of teaching segmental features, it is the one I will use though to teach this feature to the experimental group since it is the one I have worked with before with significant results. This approach is especially helpful to teach those phonemes that are absent in a speakers' L1. However, one of the disadvantages of this approach could be translated in the amount of time devoted to mastering these phonemes and the lack of attention to others aspects of the language that according to Derwing and Rossiter (2003) can affect more importantly the speaker's intelligibility.

Consequently, in order to counteract time constraints regarding the teaching of English phonemes, I will focus on segmental features according to the language function we go over in class. For example, if we go over the function of talking about the past I will teach the segmental '–ed' observed in the past tense of regular verbs, without having to separate the function of the language with its pronunciation.

Focusing on one aspect of speech could affect the other. Derwing and Rossiter's (2003) study found how the group of learners receiving segmental instruction made less phonological errors during the post-test after receiving a segmental instruction than the group who was instructed following the suprasegmental approach. Influenced by the specific type of instruction the segmental group received, they seemed to be more concerned about not making errors related to the production of some segmental features than to the fluency of their speech.

However, languages have their own set of unique features that go beyond the segmental level: the suprasegmental features. This includes connected speech, rhythm, linking, intonation, and prominence and will be presented in the following section.

2.4.2 The Suprasegmental Approach

One aspect that plays an important role in the preference of focusing on suprasegmental over the segmental features is the communicative approach in language teaching. This approach seeks to develop the speaker's communicative competence while focusing on fluency and accuracy, emphasizing the former. Although, both features benefit the speaker's intelligibility, it has been shown that suprasegmental features help more in the improvement of intelligibility than segmental features (Field, 2005; Trofimovich and Baker, 2006).

Major research concerning the suprasegmental features and their importance in attaining intelligibility (Hahn, 2004 and Pickering, 2001) has been conducted using the ITA population- International Teaching Assistantship, henceforth ITAs . ITAs are a US concept that refers to international students enrolled in a degree program at a university in the US. They are in charge of teaching a variety of classes across the university such as physics, chemistry, math, linguistics, and language courses. ITAs go to these universities from all over the world. Since most of them speak a L1 different to that of the language spoken in the host country, it is common for the majority of them to have problems in communication with their students; especially those who are living

abroad for the first time and started to learn English in college. These language characteristics have been fundamental to the development of studies where the importance of suprasegmental features in language teaching have been raised. In addition, these studies have focused on discourse rather than on individual sentences, as is often the focus in lab work.

In the following section a short definition of each suprasegmental will be presented, followed by current major studies carried out in their support.

2.4.2.1 Sentence Stress and Lexical Stress

The first suprasegmental feature to be described is stress. In English, stress is present at the lexical level (or word level) and at the sentence level. Word stress refers to the pattern of stressed and unstressed syllables within a word (Celce-Murcia et al., 1996). E.g. to-MA-to; in the word 'tomato' the syllable 'MA' has the main stress, in the word CUL-ture, the stress lies on the first syllable.

At the sentence level, "sentence stress refers to the various stressed elements of each sentence" (Celce-Murcia et al., 1996, p.151). Sentence stress is also known as the focus word of a sentence (Grant, 2007). Through sentence stress the speaker can let the hearer know his/her intentions and clarify the hidden meaning of an utterance, for example:

(1) I thought she might consider a new handbag (Not someone else**)**

(2) I **thought** she might consider a new handbag **(**I am not sure**)**

(3) I thought **she** might consider a new handbag (Not another person**)**

(NagaRaju, 2008)

As these series of same utterances show, a person can decide which part of the message the listener should pay attention to, it gives a whole different meaning if the stress is put on the word ‘I’, ‘thought’, or ‘she’. On this note, two studies will be presented in this section referring to each one of these features of speech. Its importance in the inclusion of the pronunciation instruction will be also mentioned.

Field (2005) focused his study on lexical stress with the idea that the various constituents of prosody (lexical stress, intonation, relative duration of strong and weak syllables) contribute to intelligibility in different ways. He emphasized that prosodic features could play a more important role in intelligibility than segmental features. That is, native listeners (NLs) could have more difficulty understanding a speaker’s message when misplacement of lexical stress occurred with the addition or deletion or a phoneme. Field also supports the idea where the misplacement or lack of lexical stress can compromise the intelligibility of a speaker.

By focusing on the oral production of speakers, groups of listeners were asked to transcribe a set of isolated words that presented changes in lexical stress (rightward or leftward[2]) and manipulation of vowel quality (Field, 2005). These groups of listeners were formed by Native English Listeners (NELs) and Non-Native English Listeners (NNELs), whose proficiency level was not stated, and in spite of their different L1s, both responded in similar ways to the misallocation of stress. The result from Field’s study showed that significant

[2] rightward is when the lexical stress is misplaced to the right (seCOND, instead of SEcond); leftward is when the stress is misplaced from its original place to the left (CONtain instead of conTAIN).

decrement in intelligibility was perceived when stress was shifted to an unstressed syllable without an accompanying change of quality. This study demonstrated that lexical stress should be considered in the teaching of pronunciation, but not as a priority since intelligibility only decreased by 19.78% for NELs and 21.28% for NNELs. According to Cutler and Carter (1987,as cited in Deterding, 2005), who calculated the polysyllabic items of the type studied by Deterding (2005), 40.59% of these words constitute the words in English conversation. In Deterding (2005) words, there is a possibility that intelligibility loss due to the incorrect placement of lexical stress is quite small, around 8% of uttered words if they were all misstressed.

However, it is important to bear in mind that this study comprised the transcription of isolated words, and this might have been the reason why lower decrease on intelligibility was observed. Could the listener follow a running speech when misallocation of lexical stress occurs? Would global intelligibility be affected by the misinterpretation of content words? This loss of intelligibility due to wrong placement of lexical stress depends on how much the listener has been able to decode so far. Therefore, lexical stress should be considered a priority in the syllabus of any pronunciation instruction.

As the previous study showed, the listener seemed to rely on stress at the word level since “the stressed syllable of a word provides the listener with a code that links directly to the representation of that word in the mind” (Field, 2005, p. 403). This should be considered enough to include the teaching of lexical stress as an important feature to attain intelligibility; it represents the linking to the lexicon. Similarly, Hahn (2004) focused her study on the importance that sentence stress has on intelligibility. She focused on the

principle of *given-new stress connection* (GNSC), which presents the contrast between new and given information expressed by stressed and unstressed elements.

Hahn (2004) also worked with the speech of an ITA and a group of North American undergraduate students, the latter of which evaluated the ITAs' oral production. The ITA had to read three versions of a text and each presented changes in the placement of primary stress or sentence stress; one was correctly located (version A), in the second version the target feature was misplaced (version B), and the last one did not indicate where the sentence stress was situated (Version C).

The listeners, who were Native English Speakers, then were asked to pay attention to the different versions of the paragraph and asked to answer an instrument that measured comprehensibility. The results of this study showed that the listeners responded more positively to the speech of the ITA when the GNSC was not violated, and were also able to recall more information about the text than when they listened to version B and C (Hahn, 2004).

Keeping the GNSC showed how NESs could recall more information than when sentence stress did not do its job (Hahn, 2004). It is possible that in a conversation between a NES and a NNES, if the latter does not break the rules of given and old information within the use of sentence stress, there would not be a breakdown in communication. More important is the fact that NESs could easily follow a NNES speech by getting the message across, since the chances of sounding monotonous will decrease. Therefore, keeping the GNSC could be translated in terms of being intelligible, hence comprehensible.

2.4.2.2 Stress Timing, Peak Alignments, Speech Rate, Pause Frequency and Pause Duration and its Effects

In order to understand the effect that L2 experience has on the production of five suprasegmentals (stress timing, peak alignment characterizing speech melody and speech rate, pause frequency, and pause duration characteristics of speech fluency), Trofimovich and Baker (2006) carried out a study that consisted of 30 adult Korean learners and 10 adult native English speakers. One of the objectives of Trofimovich and Baker's (2006) study was to find a correlation between the production of those five suprasegmentals and foreign accent.

The role that input and time of living in an English speaking country play in the production of the suprasegmental features favor the production of some, but not all, of the suprasegmentals presented in Trofimovich and Baker's (2006) study . These results revealed that the learners' production of stress timing was related to the speaker's amount of L2 experience. The learners' production of speech rate, pause frequency, pause duration seemed to be related to the participants' age at the time of L2 learning. The learners' production of peak alignment appeared to bear no relationship to either learners' amount of L2 experience or their age at the time of L2 learning.

In terms of the relationship between the production of these five suprasegmentals and accent it was found that a strong and complex relationship exists between the participants' accuracy in producing specific

suprasegmentals and the degree to which their speech was perceived as being accented. As can be seen, Trofimovich and Baker focused on the *accurate* production of five suprasegmentals and its relation to perceived foreign accent without aiming to find a correlation between these variables and intelligibility, which will be more important for the current study.

However, these findings provided insights into the nature of L2 suprasegmental learning and the factors influencing it, revealing similarities between L2 segmental and suprasegmental learning, where can be said that both segmental and suprasegmental features learning depend on the amount of L2 experience and input (Trofimovich and Baker, 2006). In this sense experience is defined as the length of residence in the target language country and the contact to L2 NS and frequency of use (Trofimovich and Baker, 2006).

These findings provide useful information for the development of a curriculum of pronunciation training where attention should be also paid to suprasegmental features such as stress timing, peak alignments, speech rate, pause frequency and pause duration, which can be grouped under a broader category such as rhythm.

The studies presented above support the idea of teaching suprasegmentals in order to attain intelligibility and comprehensibility. In the following section, the role played by intonation will be reviewed.

2.4.2.3 Intonation

The use of proper intonation in a conversation or a speech presentation plays an important role in the communicative act. According to Celce-Murcia et al.,

(1996), intonation “performs an important conversation management function” (p. 200). Celce-Murcia et al. (1996), mention that intonation signals to the listener important features of the message that can enhance successful communication, such as the highlighting of a piece of information, establishing rapport, expressing boredom, to respond in a particular fashion, etcetera.

Pickering (2001) following Brazil’s (1997, as cited in Pickering, 2001) model of intonation in discourse, states how intonation is crucial for the communicative act. One of the principles of Brazil’s model is his idea of *common ground*, which refers to the shared knowledge of the world that the speakers bring into a conversation (Pickering, 2001). In this sense, the use of tone choice summarizes the common ground between speakers, for example: falling tones in English indicate the introduction of new information, rising tones signal the presentation of shared knowledge between the speaker and the hearer, and level tones or neutral tones have no specific function of introducing new or given information and are often associated with a monotonous speech. In order to find out the importance of the use of tone choice, as a suprasegmental feature, and intelligibility I will present Pickering’s (2001) study on the use of tone choice as a tool for improving communication.

The purpose of her (2001) study was to show the importance of the intonation feature of tone choice for comprehensibility in NNESs teaching discourse. She worked with ITAs from China and Teaching Assistants (TAs) from the United States. After recording each of the ITAs and TAs in a natural environment (while giving a presentation to their students), it was found that ITAs used more level and falling tones than rising tones. The level tones chosen by the ITAs encouraged their speech to be perceived by students as

uninterested and the teachers as being uninvolved in the lecture. Despite Chinese being a tone language, which means that a change in pitch can cause change in meaning, this feature was not transferred to their production of English. L1 transfer to English was expected, considering that Chinese would have used varied falling and rising tones, and not just neutral tones. In Chinese, tone woks at the word level whereas in English intonation is part of the sentence level.

Examples of appropriate and inappropriate use of tone choice by TAs and ITAs respectively will be shown below. The first example represents the appropriate use of tone choice by a TA. In this example taken from Pickering (2001, p. 239), the TA shows shifts in his speech according to the function of what is being said (see Appendix B for transcription conventions).

1. / / ↘ so you GUYS had PROBlems / / ↘ with the PRElab / /

   ↗ RIGHT / / →AND / / → the FIRST question WAS uh / / ↘ QUEStion ONE was / /↘for the exAMple on pages four and FIVE / / → FIND out TORQUES / / ↘ for an Axis at x equals ZEro/ /

In example 1, the TA starts addressing the students with his opening remarks, later he use a combination of falling and level tones which indicate a shift of his attention from the students to the information he starts to read from a book. The example shows how teachers use different intonation according to what they are trying to project to their students, whether it is rapport, indifference, new or shared knowledge.

The following example represents the use of tone choice that does not correspond to the kind of information given by the speaker. In the following example from Pickering (2001, p. 248), is presented a transcription of an extract from one of the classes given by the ITA. During this class the ITA makes reference to a series of experiments already conducted by students as part of their previous class, but the ITA does not refer to this prior knowledge with the appropriate tone choice.

2. / / ↘ the FIRST STEP / / ↘ you do is FLAME TEST / / ↘ for Sodium/ / ↘ if YOU have SOdium ion / / ↘ you will get BIG yellow Orange/ / ↘but if you HAVEn't // → there will be NO / / ↘ BIG yellow Orange / /

As observed in example 2, the TA uses falling tones throughout his presentation, suggesting the introduction of new information. However, according to the background information provided by Pickering (2001), the TA from example 3 is referring to information which he already shared with the students. In this sense, the most appropriate tone choice would have been rising tones.

Conversely, Pickering (2001) states that TAs employed rising tones not only to establish common ground of knowledge with the audience, but also to promote a sense of mutual involvement and rapport (Pickering, 2004). An example of this is presented below from Pickering's (2001) study (p. 243).

3. / / ↘ R is what's CALLED / / ↘ it's a GROWTH CONstant / / ↗ if r's Positive the thing's getting BIGger / / ↗ you're getting MORE Money / / ↗RIGHT / / / / ↗ you WANT THAT / / ↗ you want your money to GROW in a BANK / /

As this transcription shows, rising intonation is used to establish rapport with the interlocutors. As observed from example 3, the use of the comprehension checks, such as / /↗RIGHT / / is another device used by TAs to establish rapport and involvement with students.

Different to the NESs expectations, the ITAs did not use tone choices appropriately to signal the difference of status of the information presented to the students (new or given). As a consequence, the ITAs discourse affected the way they were perceived by the students, being boring and uninterested the main adjectives used to describe the ITAs attitudes within the classroom.

One of the main contributions of this study is that it shows that the lack of a proper use of tone choice can affect the interaction between the speakers. It seems that intonation helps to build the necessary rapport to hold a successive exchange of information, also that it gives the listener an idea about the speaker's assumptions about the listener's knowledge; it is a pragmatic feature that needs to be addressed in the instruction of pronunciation.

In general, it can be stated that the suprasegmental features, especially those concerning fluency and prosody, might affect the speaker's intelligibility more than the accurate production of some phonemes. Nevertheless, the theoretical discussion in this chapter has shown that both segmentals and

suprasegmentals can work in favor of the development of intelligibility. In order to construct a holistic curriculum on pronunciation instruction, both approaches will be included in the pronunciation training to be delivered to the experimental group.

The next chapter will present the methodology carried out following Derwing et al. (1998)'s study in order to determine if intelligibility and comprehensibility can be improved after explicit pronunciation instruction. It will also explain how the data will be analyzed in order to determine the relationship existing between comprehensibility and foreign accent.