CHAPTER V: DISCUSSION AND CONCLUSIONS

The final chapter presents an interpretation and discussion of the results described in Chapter 4 in reference to the hypotheses made at the beginning of this study. The discussion proceeds by analyzing each one of the dependent variables and its attainability after the pronunciation instruction. I analyze these variables first independently at the same time I will compare them to the study of Derwing, Munro and Wiebe (1998) and Munro and Derwing (1999).

In the current chapter I will also refer to some methodological concerns regarding the present study, as well as some suggestions for future research in this area. Finally, I will explain some implications of this research to language teaching.

5.1 General Overview

Two issues were central for this research project: the teachability of pronunciation along with its effects in the improvement of intelligibility and comprehensibility, and the correlation existing between comprehensibility and foreign accent of Spanish speakers in an EFL context. The purpose of carrying out this study in an EFL context intended to show that Derwing, Munro and Wiebe's (1998) study would be backed up by having similar results of improvement in comprehensibility and intelligibility after explicit pronunciation instruction. It is for these reasons that the research questions of the current study were stated as follows:

1. *Will students from the experimental group be more intelligible at time 2 than at time 1 compared to students from the control group?*

This first question was very optimistic by giving a lot of credit to the pronunciation instruction that was about to be delivered to the students of the experimental group. Since both groups had the same instructor and were exposed for the same amount of time to the target language, an improvement in terms of intelligibility was expected as a result of the explicit pronunciation training given to the experimental group. However, according to the results presented in Chapter 4, no improvement was found in intelligibility for the students of the experimental group during the post-test.

The same expectation was anticipated for the improvement of comprehensibility with the following research question:

2. *Will students from the experimental group be more comprehensible at time 2 than at time 1 compared to the students from the control group?*

Likewise, students from the experimental group did not show any improvement in terms of comprehensibility after receiving explicit pronunciation training.

Finally, with this project I expected to find no correlation between the speakers' comprehensibility and their perceived foreign accent. It has been my belief, that it does not matter how strong a person's foreign accent is, this would not detrimentally affect the speaker's comprehensibility. In order to find support for this idea, the following question was posed:

3. Does the degree of foreign accent affect the experimental and control groups' comprehensibility?

Regarding the third question, although it was not expected to find a correlation between comprehensibility and perceived foreign accent, a positive correlation was found. The latter means that when speakers were found comprehensible, they were also perceived as having a mild foreign accent and vice versa. In the following sections I will discuss the answers more deeply.

5.2 Pronunciation Instruction

This section presents the interpretation of the results obtained from the students of the experimental group after receiving pronunciation training. Also, it compares the intelligibility and comprehensibility scores of the experimental group to those of the students from the control group.

5.2.1 Improvement on Intelligibility

As mentioned previously, an improvement in terms of intelligibility in the students from the experimental group from the pretest to the posttest was expected to be seen. This group of students was the group which received the explicit pronunciation instruction. The instruction they received lasted 12 weeks and it included segmental and suprasegmental features of the sound system of English. The way this dependent variable was measured was by the orthographic transcriptions made by 8 NESs.

According to the results presented in chapter 4, *there was no improvement* in terms of *intelligibility* for the speakers of the *experimental group* nor for the participants in the *control group*. In the case of the students from the *control group*, with an obtained t-value of 2.48 which is higher to the critical

value for *t* (2.11) was stated that there was statistical significance to say that the intelligibility scores during the pretest and the posttest were not the same. They were not better either, which leaves one option: they were lower. This can be noticed from the mean intelligibility scores of the students of the control group obtained during the pretest and the posttest: 86.82 and 69.43 respectively.

Although, there is a difference of 1.21 points on the mean intelligibility scores from the pretest (82.23) to the posttest (81.02) of the students from *the experimental group*, these are not significant to reject the null hypothesis and accept the alternative hypothesis. The latter stated that the mean intelligibility scores obtained during the posttest would be higher than those of the pretest. As a result, *the participants from the experimental group did not show a better performance during the posttest, which reflects no improvement.*

Despite the fact that there was no improvement in terms of intelligibility for the speakers of this study, it can be said that the students' intelligibility was acceptable and they could be able to communicate with other NESs. This is stated after observing that around 80 % of the utterances spoken by the Spanish speakers were rated intelligible (79.04).

In conclusion, it cannot be claimed that there was any improvement in terms of intelligibility for the speakers of the control group. Most importantly, there was no improvement of the dependent variable for the speakers of the experimental group, something that was expected due to the fact that this group of students received explicit pronunciation training over a period of 12 weeks.

5.2.2 Improvement on Comprehensibility

As opposed to Derwing, et al. (1998)'s study there was n*o improvement in terms of comprehensibility* for *neither the control* nor *the experimental group*. Although no improvement was expected in terms of comprehensibility for the control group, it was important for me to see if they improved even when no explicit pronunciation instruction was delivered to them.

As a reminder to the reader, due to the values given to the scales used to rate foreign accent and comprehensibility, the lower the score obtained from the ratings the better. Therefore, it is expected to see lower scores (between 1 and 2) during the post-test and higher scores during the pre-test (3 and 4).

After carrying out a Paired t-test (-1.86>-2.11),it could be said that the students from the *control group* did not obtain similar results on comprehensibility during the pretest and posttest according to the ratings obtained from NESs. This cannot be translated though as finding an improvement in terms of comprehensibility. On this note, the mean score obtained during the pretest was 1.764, whereas during the posttest was 2.229, which indicates that they were slightly better at the beginning of the semester and got a little worse by the end of it.

Likewise, the *experimental group* students' comprehensibility scores were not affected by the pronunciation instruction. According to the results presented in Chapter 4, the difference of the scores in terms of comprehensibility from the pretest (1.796) to the posttest (1.977) was not statistically significant. Although the mean score from the posttest is higher than the one from the pretest, due to the organization of the scale (1- very easy

to understand, 4- impossible to understand), the higher the score, the less comprehensible.

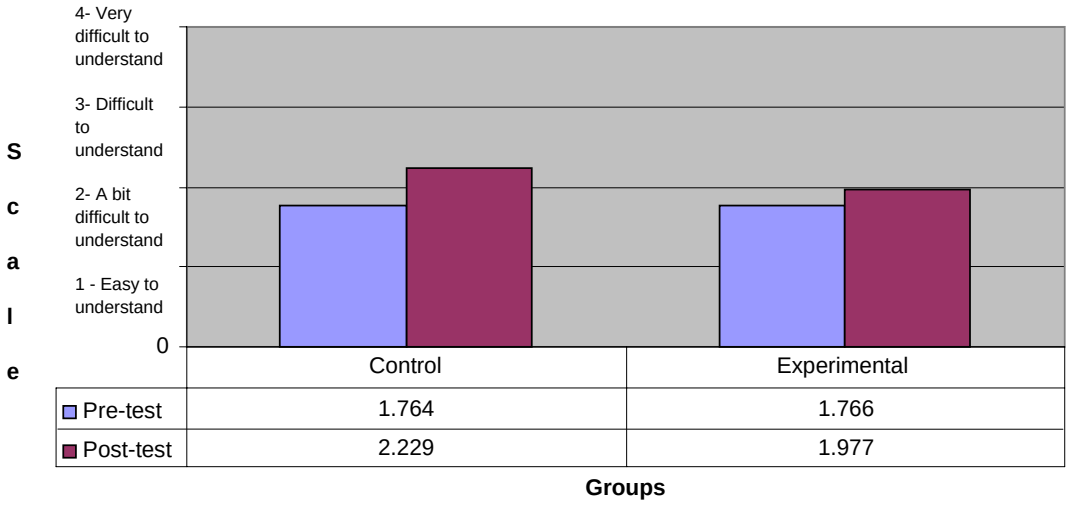

Figure 9- Mean Comprehensibility Scores for the Pretest and the Post test for the Experimental and Control Group.

As can be seen from Figure 9, the mean comprehensibility scores presented as the nonnative stimuli were found to be very comprehensible; the comprehensibility scores were rated to be between ‘easy to understand’ and ‘a bit difficult to understand’ (1 and 2, respectively). From this observation I found that the speakers from the control group were slightly better in terms of comprehensibility (1.764) from the beginning of the experiment than the students from the experimental group (1.766). During the post-test the students from the control group obtained the highest scores (2.229) between these two groups, indicating a poor performance. In addition, the students from the experimental group also obtained high scores (1.977), but not as high as the scores obtained from the students from the control group, which means that the

students from the control group performed worse than the ones from the experimental group.

Despite the fact that the experimental group did not show any improvement in terms of comprehensibility during the post test, it can possibly be argued that the pronunciation instruction they received helped them from obtaining even higher scores during the posttest. Likewise, it can be argued that the students from the control group obtained much higher scores, which translates on a worsening of comprehensibility, on the posttest than on the pretest due to the lack of pronunciation training.

5.2.3 Improvement of Foreign Accent

Although looking at the reduction of foreign accent in the utterances produced by the participants of this study was not the aim of this study, it needs to be addressed in order to compare the current results to those obtained by Derwing et al. (1998)'s study. According to their study, the three groups with whom they worked (the segmental, suprasegmental and no-instruction approach) showed an improvement in terms of perceived foreign accent. However, the group which received the segmental approach was significantly less accented during the posttest (Derwing et al., 1998). One of the arguments that favor this improvement could be the amount of exposure to the target language. It is important to highlight the fact that the participants from Derwing et al. (1998)'s study were living in Canada, a country which official languages are English and French. Therefore, the ESL learners had to be in contact with other NESs. Perhaps this contact was not characterized by a face-to-face interaction but by

the mass media like television, radio, and advertisements in the target language. Also, these were students who received the pronunciation training over a period of 12 weeks, just like the participants of the current study, but the former group received 100-minutes of pronunciation training per week, while the participants of this study received just 20 minutes per week. After taking all these issues in consideration, the interpretation of the results in terms of foreign accent will be discussed. The scale based on for the rating of this variable was similar to the one used for the rating of foreign accent (1- No foreign accent, 2-mild foreign accent, 3-strong foreign accent, 4-Very strong foreign accent).

Overall, as shown by Figure 15, the mean foreign accent score for both groups was 2.5, which places it between the ‘mild foreign accent’ and ‘strong foreign accent’ categories.

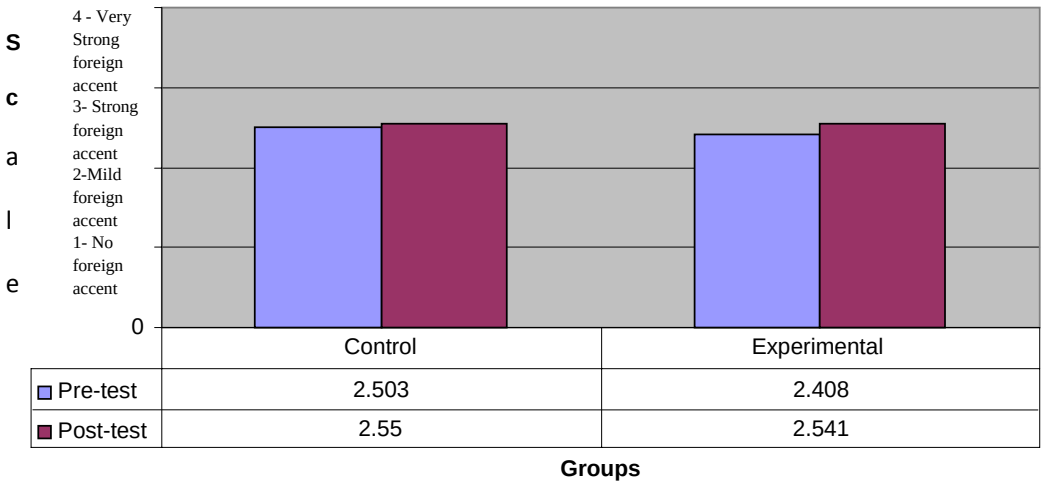

Figure10 - Mean Foreign Accent Scores for the Pretest and the Post test for the Experimental and Control Group

In the specific case of the control group, a reduction for foreign accent was not expected due to the lack of pronunciation instruction. According to chapter 4, the results were not statistically significant to reject the null hypothesis. This means that the perceived foreign accent during the pretest and the posttest were perceived by the NESs as the same. The fact that the participants of the control group from Derwing, et al. (1998)'s study showed an improvement in terms of foreign accent and the participants in the current study did not, I attribute to context: ESL vs. EFL, especially to the amount of time of exposure to the target language, a limitation I will address shortly.

With similar results, the participants from the experimental group did not show any improvement in foreign accent from the pretest to the posttest after receiving explicit pronunciation training. The null hypothesis, which stated that the mean difference between the mean scores of the pretest and the posttest were the same, failed to be rejected.

For this reason, it can be concluded that there was no improvement in terms of foreign accent for the speakers of the experimental group after 12 weeks of explicit pronunciation instruction. These findings contradict the idea that foreign accent can be reduced after explicit pronunciation instruction, as suggested by the results found in Derwing, et al. (1998)'s study.

5.2.4 Correlation between Comprehensibility and Foreign Accent

According to the results from Chapter 4, a linear positive correlation between the dependent variables of comprehensibility and foreign accent was found. This can be translated into a relationship between them, which means

that if the speaker's comprehensibility was rated as 'a bit difficult to understand' (obtaining a 2), they were likely to obtain a 'mild foreign accent' rating (also obtaining a 2).

As I mentioned earlier, I was not expecting to find a correlation between these variables. Believing that a strong foreign accent could not affect someone's comprehensibility is a hypothesis that grew in me after observing empirically that most of my students were comprehensible even when they did not have a native-like pronunciation. However, this was not a belief that has always governed my thinking; I used to believe the opposite. Therefore, observing that there is, according to my results, a correlation between these variables pulls me back to my original beliefs. I am not saying that I disregard the idea that motivated me to carry out this study (i.e, that there is no correlation), but it does leave room to support the theory that foreign accent and comprehensibility are related to one another.

On this note, this finding reveals that even when we might think that the correlation is positive, causality cannot be shown from this correlational study. In order to determine if comprehensibility affects foreign accent of vice versa, an experimental design showing causality should be carried out

These results confirm Munro and Derwing (1999)'s study, where a stronger correlation between comprehensibility and foreign accent for extemporaneous speech rather than for intelligibility and perceived comprehensibility, was found.

Due to the unexpectedness of my results I find it important to address some methodological concerns that should be borne in mind for further

research. The following section describes concerns related to the participants (speakers 5.2.5.1 and listeners 5.2.5.1.1) of the current study, time constraints and exposure to the target language (5.2.5.2).

5.2.5 Methodological Concerns

What should be the focus on pronunciation instruction in order to make a difference in the students' production of the target language? What should be the level of these students in order to notice an improvement? These are some of the questions I ask myself after analyzing and interpreting the data of this study. As seen from the interpretation of the results presented above, there was no improvement in terms of intelligibility, comprehensibility or foreign accent in the students from the experimental group. Throughout this section, I present the methodological concerns, which, in my opinion, should be taken into account for this study to be replicated.

5.2.5.1 Choosing the Right Sample: Speakers

One of the limitations of this study was the selection of the participants. It must be said that the reason I decided to work with students with a high-intermediate level of proficiency in English, was because they were the ones available. As a language professor of the university in which this experiment took place, I had knowledge of the curriculum of the course in which the pronunciation component was included. By experience, I was aware the professors of this course (ID102), must cover set content per week. Even though this time

constraint would have also affected my class, I had the experience of teaching ID102 before with the pronunciation component included. The latter took place during the summer period of 2008, in which the pilot study of this research took place.

In addition, it was important for the purpose of this study to have control of the presence or lack of the pronunciation component. By deciding to work with two of my classes I was able to present explicit pronunciation instruction to the students from the experimental group and avoided doing so with the students from the control group.

Since the students from both groups performed very well by obtaining relatively high scores on intelligibility and comprehensibility in the pretest, the improvement (if any) could not have been expected to be significant. The ideal situation for this study would have been that in which the students obtained lower scores in each of the dependent variables in order to observe improvement (if any). It is for this reason that for future work in this area, I suggest choosing a sample of students with a lower level of proficiency in English.

Thus, according to the questionnaire applied to these students at the beginning of the course, roughly 80% affirmed having started to study English before the age of 13 (see Figure 11 below), which according to the Critical Period Hypothesis (in its strongest version) is the ideal age to learn a foreign language with a lower trace of foreign accent (Flynn, 1988). This could be attributed as another factor that determined the high level of English of these participants. Therefore, I suggest choosing a sample of people who started to study English at a later age in their lives, ensuring the possibility of actually

instructing them in pronunciation and observing an improvement. Thus, pronunciation instruction can neither be regarded nor discounted as having an effect in terms of improvement on intelligibility and comprehensibility. Further work needs to be done in this area where the participants fulfill the characteristics above mentioned.

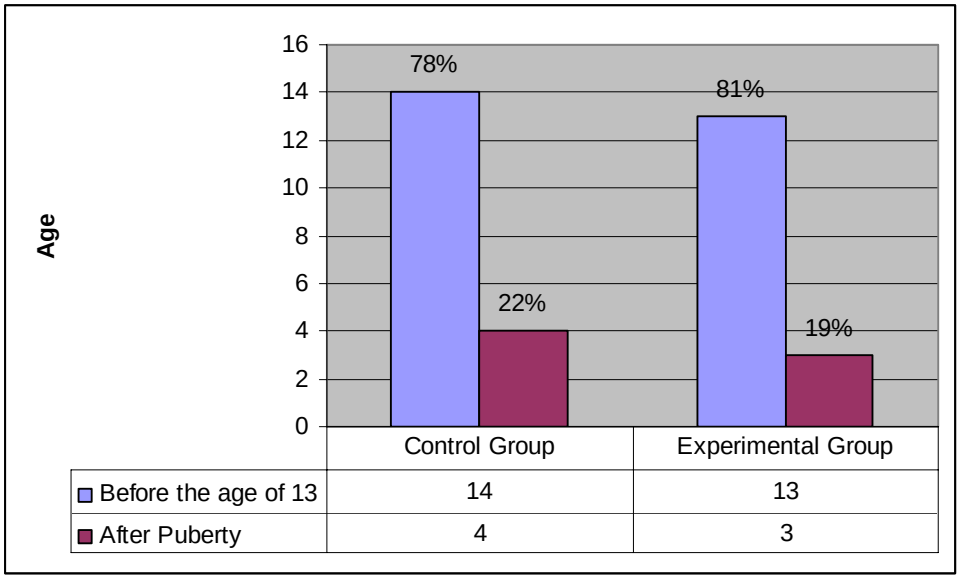

Figure 11 – Age at which Students started to study English as a Foreign Language

5.2.5.1.1 Choosing the Right Sample: Listeners

The availability of listener-raters also played a determining part in the carrying out of this research project. Derwing, et al. (1998)'s study involved 48 NESs, whereas the current study was comprised of 8. From the beginning of the study, it was acknowledged that finding NESs to complete the second part of this experiment was going to be a difficult task for several reasons. Principally, it was necessary to procure raters who shared certain characteristics with the

participants of Derwing, et al. (1998)'s study. These characteristics included US American students who had limited exposure to Spanish speakers: the less contact with other native Spanish speakers, the better. By having little contact with Native Spanish speakers there is a possibility they may have not been acquainted with Spanish accents in English. Also, the raters would have to be living in a Spanish-speaking country for the first time and had not taken more than 3 courses of Spanish. Most of the raters of this study, however, had previously lived in a Spanish-speaking country or were taking their 3rd or 4th Despite the listener-raters' exposure to Spanish-accented English, I suggest considering another population for carrying out the transcription task, such as one with a lower level of proficiency in Spanish or better yet, one whose native language is other than Spanish, such as the study carried out by Bent and Bradlow (2003). Their study was comprised of native talkers of Chinese, Korean and English, who were recorded reading simple English sentences. Later, native listeners of English, Chinese, Korean and a group of various native language backgrounds carried out an intelligibility recognition task with the recordings of all the talkers. Bent and Bradlow(2003) observed that NNESs were perceived as intelligible as other NESs by listeners who shared the Non-native speaker L1, but also that they were perceived as intelligible by those listeners who did not share the same language background. For example, Chinese speakers were perceived as intelligible as NESs by Chine listeners but also by Korean Listeners.

Concerning the orthographic transcriptions presented in Chapter 4, the results indicated that on several occasions the listener-raters transcribed verbs and prepositions that were not uttered by the speakers. Upon studying some of

these orthographic transcriptions it can be argued the fact that the NESs tended to infer the words they did not understand by paying attention to the context or the environment in which the word was expressed. In some cases, transcribers tended to fill in the correct forms, which was the case of some grammar post-hoc corrections. An example of this situation happened with the following expression uttered by a speaker:

(1) *"My sister is married, she have one son"*

This expression was transcribed as "My sister is married, she has one son" by 6 of the 8 listener-raters. As we know, the verb 'to have' needs to be conjugated in the third person singular (she); therefore, the grammatically acceptable utterance should have been "she has one son". This can become problematic if we are relying on the fact that NESs would transcribe only what they hear because the listeners were not transcribing what they heard but what they thought they heard according to the context. For this reason if someone tries to duplicate the present study, I would recommend to be very cautious in choosing NESs for the performance of this task. They necessarily would have to be people who are not in constant contact with other Spanish speakers or people who have just arrived from their place of origin. On this regard, it should be ideal to have a homogenous group of listeners, with the same background and amount of exposure to Spanish. On the other hand, I would also recommend that the listener-raters should be given more training in the transcription task, since 15 minutes of training could not possibly prepare the listener-raters enough for the carrying out of transcriptions.

Furthermore, it would yield more interesting results if the transcriptions were made by other NNESs, such as the model proposed by Jenkins (2000) and the mutual intelligibility model researched by Munro, Derwing, and Morton (2006). This would be interesting in the sense that we could observe the degree of intelligibility of these speakers from other NNESs. Like I mentioned in chapter 2, English is spoken by one quarter of the world population (Crystal, 2007), where the number of speakers of EFL is the same as the sum of L1 and L2 speakers altogether (Crystal, 2007). This leaves me with the impression that studies where mutual intelligibility takes place should be carried out.

5.2.5.2 Time Constraints and Amount of Exposure to the Target Language

It is imperative to mention that another important limitation for this study regards time and the amount of exposure to the target language. As mentioned earlier, the participants from the Derwing, et al. (1998)'s study were exposed to the pronunciation component over a period of 12 weeks and 100 minutes per week, whereas the students of the current study were exposed to only 20 minutes per week over the same period of time. Furthermore, the original study took place in an English-speaking country, whereas the present study was carried out in a country where English is spoken as a foreign language.

The amount of pronunciation instruction to which the participants are exposed is inherent to the context in which this research is carried out. In an English-speaking country, the language learning process takes place in a full

immersion program of the learning of the target language; these programs include a 20 hours-per week exposure to it. Besides, the students are exposed to the language on a daily basis. As a consequence, there are no limitations for the ESL teachers to dedicate a set amount of time to the pronunciation component. The amount of time given to the pronunciation component could not be handled the same way in this study. As an EFL class, English is taught 3 times a week for 50 minutes each class, which is not even half of the time to which the ESL learners were exposed. If we take this into account and the fact that it is necessary to cover certain content, grammar structures, reading and writing abilities in the course, it leaves little room to teach something extra. Even though pronunciation should be a component of the formal curriculum of ID102, this is not evaluated formally; neither teachers nor students or course designers give it great importance.

One of my suggestions to duplicate this study would be to give its own space to the teaching of pronunciation. During the same period of data collection I worked in a workshop of pronunciation with 3 students within the same university. With a 60-minute class, I was able to give the proper amount of time to each of the stages suggested by Celce-Murcia, et al. (1996) which are: listening discrimination, controlled practice, guided practice, and communicative practice. As a consequence, we were able to go through the segmental and suprasegmental features in depth. There was enough time to practice without any of us thinking that we had to speed the presentation up so they could go to another class, which was the case of the students from the experimental group. Although these students were not recorded, an improvement in their pronunciation was noticeable, especially in the production

of certain segments, which was their concern and the reason they joined the workshop.

Similarly, after working with a female from the Intensive English Pronunciation Program (IEP) at a university in the US over a period of 11 weeks and 60 to 80 minutes per week, an improvement in pronunciation was found. The major improvement was noticeable in her production of consonants, which were identified as the segmental features that caused her problems in communicating with other NESs. This was noticeable after running a pretest and a posttest between the pronunciation training. In spite of her problems in the production of certain consonants during the posttest (e.g. /m/, /n/ and /ng/ at the end of words), consonants which were practiced and highlighted over 11 weeks, it was acknowledged that the purpose of pronunciation training was to make her aware of certain features that are important to recognize about the target language that is being studied, and not to produce them perfectly.

In order to conclude this section on pronunciation training and the amount of exposure to the target language, drawing from the results of this study, the 1998 study, and my previous professional experience, I consider it imperative in both ESL and EFL contexs, to dedicate a special time to pronunciation in order to make a difference.

5.3 Concluding Remarks and Future Work

Throughout this thesis project, it has been stated that pronunciation should play an important role in the curriculum of any course that focuses on the teaching of a foreign language, especially the teaching of English. Although the results of

this study do not support the fact that pronunciation training has an important role in the improvement of intelligibility and comprehensibility, based on the amount of time given to pronunciation training in studies such as Derwing et. al (1998), it is clear that the instruction by itself could prove the contrary. There are several factors such as time and the characteristics of the students, which can help enhance this result. Observing an improvement is not about manipulating the variables in order to improve results, but the consideration of a suitable environment that can prove the efficacy of pronunciation training in favor of improving intelligibility and comprehensibility of NNESs.

Regarding the role that pronunciation should play in the classroom, I consider it important not to overlook it. Just like the learning of other aspects of the language such as syntax, grammar and vocabulary, language learners need to be aware of their production of the target language. This feature of the language may not seem as important for teachers as it is for language learners. According to Derwing (2003), people tend to hold biases against people with accented speech and for this reason some learners desire to leave no mark of their origin, which would be noticeable through their accented English.

Although Derwing (2003)'s affirmations are true for the majority of ESL learners, we cannot assume that this is not the case for EFL learners. Despite the fact that I did not carry out a formal research on attitudes toward the learners' pronunciation concerns, I could identify that the same idea expressed by Derwing (2003) also applies to some EFL speakers from my study through informal conversations. The students who participated in the pronunciation workshop stated that having a good pronunciation gives a higher social status to the person who speaks it; it is synonymous with *well-educated*.

Not very surprisingly, the majority of the pronunciation workshop participants were only concerned about the production of segmental features and that is what they expected to be taught. All of them affirmed never having heard about intonation, rhythm, word and sentence stress as important components to the improvement of pronunciation. I would like to make clear that a pronunciation component within the curriculum, should not aim for a native-like pronunciation. It may not even be expected for English learners to produce phonemes such as the voiceless 'th' perfectly (Jenkins, 2002) but only to make the students aware of the main components that make English different from their mother tongue and can cause intelligibility problems with other NNESs.

At this point, I consider important for the reader to take into account the fact that the number NNESs has overcome the number of NESs (Crystal, 2007). For this reason English learners must realize that they are no required to attain a native-like pronunciation, since this characteristic does not equal to intelligibility (Jenkins, 2000), but only to be intelligible. According to the Lingua Franca Core proposed by Jenkins (2002) language professors teaching pronunciation should re-direct their attention to the aspects of the phonology of English that are more likely to cause intelligibility problems among different L1 speakers of English.

As a follow-up of this study, I will analyze the improvement in terms of intelligibility and comprehensibility after explicit pronunciation instruction from the NNESs point of view. It will be the objective of this study to find out if there is any improvement after explicit pronunciation instruction. The listener-raters of this research project will have to be comprised by other Spanish speakers with a medium to high level of proficiency in English. Spanish speakers working as

listeners will have to rate for comprehensibility and carry out transcriptions for intelligibility. By doing this, I will follow Jenkin's model of mutual intelligibility in the sense that I will study how intelligible are NNESs to other NNESs since the interaction among NNESs will be present more frequently.

Finally, although the results presented in this thesis project do not shed light in favor of the improvement of intelligibility and comprehensibility after explicit pronunciation instruction, these findings are not conclusive. More research needs to be done in this area, with samples with different characteristics, including other Non-Native English speakers. Meanwhile, pronunciation instruction should continue to be included as an important component in the learning of a foreign language. Knowing how to pronounce the language we are learning gives us confidence and motivates us to do better. Language professors should realize that grammar, writing and reading abilities are important, but no more important than pronunciation. The ability to express our ideas and communicate with other people as intelligibly and comprehensibly as possible is why we decide to study a foreign language in the first place.