

Materials Development for Persian Intermediate EFL Learners: English Pronunciation Pros

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Abstract

Mispronunciation is still among the frailties of language learners the world over. The present study reports an all-out investigation into pronunciation training for the Persian-speaking EFL learners at the intermediate level of language proficiency. More specifically, the present study investigated (a) the underlying causes of mispronunciation at the level of segmental features, (b) the crucial importance of error analysis prior to developing any materials concerning suprasegmental features, and (c) the effectiveness of materials developed on the basis of the findings in the first two phases of the study. Sixty-Four Persian-speaking intermediate EFL learners were selected as participants for the purposes of this study. Twenty-Four of them assisted in the second and forty of them in the third phase. Since the results obtained in the first two phases were to be used for the preparation of the materials in the final phase, the researchers devised a pretest posttest design to prove or disprove the efficacy of the whole study. Thus, two intermediate classes in one of the language schools in Isfahan were chosen and randomly assigned to experimental and control groups. The first phase of the study confirmed the great impact of Persian language on EFL learners' English pronunciation (51.82%). The second phase supported the idea that some suprasegmental features such as linking sounds are obstacles to proper pronunciation for Persian-speaking EFL learners. The results obtained from the last phase of the study indicated that pronunciation training with supplementary materials is rewarding albeit the progress might be slow.

Keywords: pronunciation, segmental and suprasegmental features, material development, locally-prepared materials

Introduction

English has as many as 400 million native speakers in the British Isles, North America, Australia, and New Zealand as well as parts of Africa and Asia. It is the most popular language learnt and used as a second or foreign language. As a matter of fact, it is a member of the Indo-European family of languages, and as such, is genetically related to a number of tongues spoken all over Europe and Asia: from the Indian subcontinent to Western and Southern Europe. Thus, it is firmly believed that English pronunciation, which is under the dramatic influence of almost all the widely spoken languages, ought to be an important facet of EFL teaching/learning domain which is communicatively oriented (Gortjahn, 1998). In fact, whereas some time ago it was said that the goal should be native-like pronunciation, even though it was achieved by relatively few, it is now generally agreed upon that this is an inappropriate goal for most learners. This study, is the violation of such agreement and is to address English pronunciation.

These are not your own words, are they?

For the most part, due to a series of historical events, a discussion of which is beyond the purposes of the present study, English has developed two major *standard varieties*, both of which are equally accepted by the societies of their respective countries. One is Standard British English in England; the other is Standard American English in the USA. The standard pronunciation of

England is traditionally referred to as Received Pronunciation (where *received* means 'accepted'), abbreviated to RP, whereas that of the US is often referred to as General American, or GA for short. No need to mention that irrespective of those for whom English is a second language, the United States with roughly 226710000 native English speakers has the largest community of English speakers in the world. EFL learners are always asked to excel in one of these varieties. In this study, the main emphasis falls on GA since it has turned out to be the pronunciation most Iranian students of English as a foreign language are willing to acquire.

Since English is recognized as the most widely-used language in the world, intelligibility is of supreme importance in order for the English-speakers of the global village to communicate well. Pronunciation, in this regard, is one of the determining factors which contribute to intelligibility. Taken at face value, good pronunciation is welcome per se. The main possible reasons for this acceptability are the increase in listening comprehension and/or the bond of prestigious speaking with the determining self-image of the human kind. However, taking a glance at the history of ELT clarifies that pronunciation has been gradually marginalized as language learning got more attention. No matter what language would be considered, many think that perfect pronunciation is not a prerequisite for speaking, though it is typical among all native speakers (Dixon, 1960). For this reason, the great majority of learners have chosen a very practical purpose for learning English at the expense of accurate pronunciation so that pronunciation training has either been somehow ignored during the past or has not received as much time as is allocated to other elements of language such as vocabulary, grammar or even orthography. This sounds not to be desirable at all. On account of the fact that mispronunciation, at least in part, ends up in the absence of communication almost in the same way as wrong choices of words do, it seems plausible to conclude that much more attention needs to be directed towards phonology teaching in the classroom context. For further illustration of the point, note how the following sentence has been mispronounced by a nonnative speaker:

“We now boat off or bus is there.”

Instead of

“We know both of our bosses there.”

As it is obvious in this example, mispronunciation may lead to total miscommunication or distraction the same way as wrong choice of words or grammatical structures do; however, almost rarely has pronunciation teaching been the focus of previous research studies in Iran, neither has it in other parts of the world as Brown (1995) claims. This being so, EFL learners in Iran always appeal to the globally-prepared materials to build up better articulation. Although these books, software programs, and websites have made truly venerable efforts to develop worthwhile resources to be used by EFL learners, such materials utilized so far have not been very successful so that we come up with so many pronunciation mistakes in our academic contexts on the part of both the students and, regrettably, the teachers. It is undeniable that a countless number of mispronunciations in one stream of speech surely leads to failure of communication.

Because EFL academies are rife with mispronunciation, the present study aimed at developing new locally-prepared materials for ELT contexts in Iran. In this respect, in light of previous works and research conducted on error-analysis and contrastive analysis of Persian and English phonology, fresh teaching materials were targeted to be used by Iranian EFL learners on an intermediate level of language proficiency either as a self-study or as supplementary input in academic contexts. To do so, the study also tried to spot the segmental mistakes which are made

more frequently than others, and had an eye on the suprasegmental facets which need to be paid more attention.

Research Questions

The following are the main research questions the present study aimed to answer:

- 1) Which of the English segmental features are more difficult for Iranian EFL learners at the intermediate level of language proficiency?
- 2) Which English suprasegmental features need to be addressed more than others?
- 3) To what extent the researcher-made teaching materials can be helpful for intermediate Iranian EFL learners to learn accurate pronunciation of the English language?

Background of the study

Studying pronunciation dates back to the ancient Greeks, specifically Sophists, who taught rhetoric language practically and asked their students to repeat the same segments of language after the expert models (Falk, 1978). Haghshenas (1993) states that ancient Greek linguists such as Dionysius, Thrax and Herodian even mentioned an aspect of language that was later called “prosodies” by Firth.

From the outset of the emergence of language learning methods, pronunciation was overlooked all out. In an interval of thirty years, from 1930s to 1960s, pronunciation had high priority in the audioli-ngualism in the United States and the oral approach (or situational language teaching) in the United Kingdom, which introduced the spoken before the written language and aimed at the formation of “good pronunciation habits” through drills and repetitions. Alongside the prominence of audio-lingualism in the 1950s, pronunciation was considered as an important element as vocabulary and grammar. English pronunciation dictionary was the first English phonetic dictionary of English language by Daniel Jones that was published in the early 20th century.

However, such significance did not last long. Morley (1991) states that pronunciation programs until the late 1960s were viewed as meaningless non-communicative drill-and-exercise gambits. For this reason, in the 1960s both structuralist language description and behaviorist views of language learning came under heavy attack in the mainstream of language teaching, and accordingly, pronunciation lost its unquestioned role as a pivotal component in the curriculums, and class time spent on pronunciation was greatly reduced or even dispensed with altogether (Richards & Renandya, 2002). In other words, it has been the underlying theories of pronunciation teaching which, indeed, altered especially after the advent of communicative language teaching, and consecutively diversified the strategies utilized in the classrooms (Richards & Renandya, 2002). Not surprisingly, during almost a decade from late 1960s to the early 1970s, questions were asked about the role of pronunciation in the ESL/EFL curriculum as to whether the focus of the programs and the instructional methods were indeed efficient.

In the meanwhile, a number of innovative methods came into existence. Silent way (SW) and community language learning (CLL) were the ones during which a great deal of practice was allowed in classroom settings (Richards & Rodgers, 1986).

However, later, the advent of communicative language teaching (CLT) created a lasting dilemma for methodology inasmuch as Jones (1997) points out the virtual disappearance of pronunciation work in communicative course books in the late 1970s and 1980s. From that point onward, the pronunciation focus shifted to fluency rather than accuracy, encouraging an almost exclusive emphasis on suprasegmental features (Morley, 1991).

In the 1990s, there was a shift to a communicative approach in ESL pronunciation instruction which required teaching methods and objectives to include ‘whole-person learner involvement’ (Morely, 1991) with a greater emphasis on teaching competent pronunciation to develop functional intelligibility, communicability, increased self-confidence, the development of speech monitoring abilities and speech modification strategies for use beyond the context of a classroom. Pronunciation instruction often concentrated on merely the mastery of segmental through discrimination and production of target sounds via drills consisting of minimal pairs, “techniques of the past which never yielded very good results” (Celce-Murcia, 1987). Although pronunciation teaching was de-emphasized and suffered a setback with the advent of the communicative language teaching in the later twentieth century (Trammell, 1993), pronunciation specialists have recently devised ways of incorporating the teaching of pronunciation within a communicative framework by moving away from the drilling of discrete language items to communicative activities in which pronunciation contributes to the meaning in context (Setter & Jenkins, 2005).

To sum up, it could be stated that the role of pronunciation in different schools of language teaching has varied widely from having virtually no role in grammar-translation method to being the main focus in the audio-lingual method where the emphasis was on traditional notions of pronunciations, minimal pairs, drills and short conversations Castillo (1990).

Locally-Prepared Materials

For the last two decades, academics and publishers have propounded theories on pronunciation acquisition and on pronunciation training. However, with a broad sweep, all L2 learners were grouped as though there were no differences that could possibly affect the learner. Both the indecision of English material developers to provide learners with peculiar materials and the permissive methodology of teaching pronunciation have adversely affected the way words are enunciated by Persian-speaking EFL learners. By the exponential increase of the number of Iranian EFL learners who steep themselves in English books, it seems that it is time we approached locally-prepared materials. Pronunciation is a language component which is crucially affected by the mother tongue, thereby developing particular materials addressing one nation is indispensable.

Pronunciation in Iran

Pronunciation has rarely been given due attention in research projects in Iran. From among the works regarding pronunciation, the following are pertinent to the teaching domain:

Asgari (1992) conducted a comparative study of teaching phonics and whole-word to the Farsi-speaking children over 5 years old. Moreover, Behzadi (1997) investigated on the relationship between language proficiency and pronunciation errors of Iranian EFL learners. The results of this study enlighten the necessity of new materials regarding pronunciation for Iranian EFL learners. Years ago, Jafarpour reviewed contrastive analysis of Persian and English articles for pedagogical purposes for his M.A. final project in Shiraz University (1973). Also, Khalili (1997) carried out his M.A. thesis centered on the comparison between Persian and English pronunciation and differences that make English pronunciation very cumbersome for Iranian EFL learners to acquire. Finally, Raei Sharif abad (2004) carried out a research upon intonation in Persian and English for his Ph.D. thesis project.

Method

Participants

Since the first phase of the study regarding the segmental features was to figure out the commonest mistakes that Persian-speaking EFL learners make only at the level of words, no special group of learners was selected.

The second phase, however, required a more trusty number of participants. For that reason, 50 EFL learners aging from 18 to 25 were selected to answer a researcher-made questionnaire. These learners were studying intermediate-level books in two classes in one of the language schools in Isfahan. Inasmuch as the homogeneity of the students was a determining factor, their responses to the questions in the first part of the questionnaire were scored and only 24 of them were selected to be regarded as the participants of this phase. In order to eliminate the potential impact(s) of the gender on the results, males and females were assigned to compose right half of the participants each.

In the last phase of the study, two classes out of six intermediate classes held in one of the boys' language schools in Isfahan randomly served as the experimental and control group of the study. In order to have a representative sample of the population under study, a 60-question multiple-choice OPT was administered at the outset of the third phase of the study as the standard of the homogeneity of the learners. Having obtained the OPT results, the researcher decided to choose the participants whose score range was one standard deviation above and below the mean (i.e. $\text{mean} \pm 1$). The rationale behind such application was to make sure that the EFL learners of two classes were homogeneous and at the intermediate level of language proficiency and, therefore, could serve the purpose of the researcher. This being so, 20 students in each class met the required homogeneity and were, thus, selected to serve as participants of the study. Needless to mention, all participants unexceptionally spoke only Persian as their mother tongue and the classes had 20 pupils each. Fortunately, the teenaged participants did not considerably vary in age.

Materials

The materials used in the study are as follows:

Questionnaire

Very early in the study, a five-item questionnaire was prepared by the researcher and given to the EFL learners in order to elicit responses from them about (a) the importance of pronunciation, (b) the pronunciation status in Iran, (c) the effects of Persian on their foreign language, (d) the effectiveness of pronunciation materials in Iran, and also (e) the accent with which they prefer to learn English.

Pretest

To assess the participants' performance regarding pronunciation prior to the treatment of the study, a pretest was needed to be constructed. In order to put pronunciation to test, it was necessary to measure oral language, and the only productive skill of oral communication is speaking. However, it would be, one way or another, impracticable to devise a speaking test which might be able to elicit the same responses from different EFL learners. To this end, reading-aloud technique was employed in the pretest and posttest of the study.

The pretest comprised four sections. At first, learners were given a passage to read aloud. At this point of the test, their attention was directed to the questions concerning passage rather than pronunciation. From the second section on, learners were consciously asked about the

pronunciation of words whether in isolation or in a conversation. Specifically, section two tested the common mispronounced words in general. Also, section three tested single words with potentially interlingual and intralingual sources of mispronunciation among Persian-speaking EFL learners. In the end, a conversation was prepared just to test suprasegmental features of pronunciation when learners were aware of the main aim of the test.

Posttest

In order to gauge the learners' gain of the segmental and suprasegmental features of English pronunciation after the treatment, a test parallel to that of the pre-test was constructed.

The four sections of the posttest were analogous to those of the pretest, and both segmental and suprasegmental features under question perfectly resembled those tested in the pretest. However, no one word was tested twice in the two tests.

It should be noted that both the pre- and the posttest of the study, as stated in 3.3.5. below were proven to enjoy an acceptable reliability level.

Reliability of the Pre-test and the Post-test

Since the pre- and the post-test utilized in this study were researcher-made, a Cronbach's alpha was applied to guarantee their reliability. The results indicated reliability indices of 0.763 and 0.821 for the pretest and posttest, respectively. Needless to mention, such reliability indices proved that the researcher-made tests were acceptable for the purpose of the study.

Procedures

To accomplish the aims of the study, the following steps were taken:

Initial Questionnaire

In order not to have a false start, an opposite survey was carried out both to investigate the significance of the study in reality, and to obtain bona fide ideas which could help the researcher set the ground of the study and develop decent materials as well. To this end, one hundred EFL learners-fifty males and fifty females-aged from 11 to 36 participated in the survey. It should be mentioned that no matter how old or educated they were, all participants were studying English at the intermediate level of language proficiency in two of the language schools in Isfahan.

Administration of the Pretest

The pretest of the study was administered in the very beginning session of the course in order to obtain the initial behavior of the Persian-speaking EFL learners who had never trained in English pronunciation before. The learners were not confined with time; however, they all took the test in less than five minutes.

Since the thirty one-and-a-half-hour classes of the students were held every other day, each lesson of the pamphlet was presented in twenty minutes of each session. During this time, the participants of the experimental group were taught the developed materials of the pamphlet. Some exercises were assigned as homework, though. It took twenty-six sessions, thus, to teach the pamphlet cover to cover. Unlike the experimental group, the control group did not receive any treatment regarding pronunciation during this time.

Administration of the Posttest

About a week after the last time the pamphlet was taught in the class, the posttest was administered. No definite time was assigned for the task; however, the learners took the test in less than five minutes.

Scoring

The first phase of the present study which investigated segmental features gathered 1100 mispronounced words. All words were equal in value in this phase. The second phase, however, looked into those suprasegmental features which need to be given more attention in material development process. Here, suprasegmental features were scored based on their frequency of use. For example, intonation was given the maximum score since it exists in all forms of sentences; Emphatic stress was given the minimum score due to the fact that it is not a linguistic feature. As for the scoring of OPT, each correct answer was given a single point, and all the correct answers added up to a total sum. There was no negative point for the items not answered at all.

Both interlingual and intralingual sources of mispronunciation among Persian-speaking EFL learners, namely borrowed words, proper nouns, absent sounds, stress, both initial and final consonant clusters, schwa, rule ignorance and silent letters were tested and scored in the first section of the pretest and posttest. The other kinds of intralingual mistakes were not inserted in the tests since they were more of a productive nature on the part of learners; therefore, their testability might be under question. Suprasegmental features of English pronunciation such as pause, intonation, abbreviation, weak form, connected speech, and sentence stress were also examined in this section of the test. Each feature was graded dichotomously: one point for a correct pronunciation and zero for an incorrect one. There was no negative point for the wrong pronunciation of the words. Therefore, the grades added up to a total sum of 20 in the first passage.

From section two on, students were told about the nature of the test in the given directions in order to gauge their conscious knowledge about pronunciation. Each properly pronounced minimal-pair in section 2 was scored dichotomously, too. Thus, this section was scored seven for the seven pairs.

The third section which examined the participants' aptitude in pronouncing words with potentially interlingual and intralingual sources of mispronunciation was scored eight in total. The answer for each triple was scored one only if the reader pronounced all the three words correctly. The last section was to consciously test suprasegmental features, and was scored twenty-five on the whole. All in all, suprasegmental features bore twice as many scores as the segmental features. The rationale behind such scoring is the fact drawn from the review of literature where suprasegmental features were recently accentuated in comparison to segmental features.

Data Analysis and Results

Questionnaire results

The results obtained from the initial questionnaire were as follows:
As Table 4.1 Reveals the majority of participants (%98) unanimously regarded pronunciation as an important component of English language. Further, while only twelve percent of one hundred Persian-speaking EFL learners participating in this study were content with the pronunciation status in Iran, approximately half of them (%44) did not like the status quo. Table 4.2 shows such results. The results of the study also revealed that more than half of the participants (%64) considered Persian as a contributing factor in EFL learning. Figure 4.3 illustrates this on the basis

of the data obtained through the questionnaire. Surprisingly, as Table 4.4 shows, almost the same number of EFL participants was either against or in favor of the pronunciation materials available on the market in Iran. Finally, as it is depicted in Table 4.5., 88 percent of the participants were in favor of American accent of English, thereby convincing the researchers to develop American educational materials for pronunciation purposes.

Ho1. English segmental features are not much distinct in level of difficulty for Iranian EFL learners.

In order to prove or disprove the above hypothesis, it is surely necessary to analyze a good many of mistakes made by Persian-speaking EFL learners. Moreover, just like a teacher, a researcher and/or a material developer ought to have a plan both as an extremely useful guide and also as the reflection of the main purpose underlying the project. It was, therefore, planned in this study to analyze plenty of words mispronounced by Iranian EFL learners for two main reasons:

1) Analyzing data hopefully tells us what these mistakes are attributed to. The researchers, in this regard, benefited from contrastive analysis of Persian and English phonology. Interpretation of the mistakes in this part would either confirm or refute the findings of the previous studies in this domain.

2) Collecting these data facilitates paving the way to help develop materials for Iranian EFL learners. Then, it can be claimed that materials are more or less effectual.

In view of the importance of data collection, 1100 words mispronounced by Iranian EFL learners were recorded over more than two years. These mistakes were made by males and females at the intermediate or advanced level of English language proficiency. Suffice it to mention, mistakes made by beginners were overlooked since they wouldn't seem to be so much meaningful.

To analyze the data, it wouldn't be unwise to classifying the mispronounced words into different categories based on some criteria and providing a few examples of each category.

A complete analysis of these data has come in table 4.1 below:

Table 4.1 the Frequency of Mispronounced Words Beginning with Each Letter

Letter	Number of words	Frequency
A	89	8.09%
B	75	6.89%
C	109	9.91%
D	67	6.09%
E	46	4.19%
F	46	4.19%
G	36	3.28%
H	42	3.82%
I	27	2.46%
J	5	0.46%
K	14	1.28%

L	47	4.28%
M	61	5.55%
Letter	Number of words	Frequency
N	19	1.73%
O	32	2.91%
P	88	8.00%
Q	7	0.64%
R	46	4.19%
S	121	11.00%
T	50	4.55%
U	12	1.09%
V	19	1.73%
W	36	3.28%
X	1	0.09%
Y	4	0.37%
Z	1	0.09%

An exact look at the data presented in the above table clarifies that a significant difference--ranging from 0.09% to 11.00%--is found among the frequency of the mispronounced words beginning with one of the letters in English alphabet. Interestingly, the frequencies of mispronounced words beginning with S and C are by far and away more than the frequency of words beginning with most of other letters, and the least number of words begin with X and Z. It should, then, be concluded that the ration of the words beginning with different letters should never be the same. In other words, it would be wise to bear the obtained results in mind in the process of material development specifically for the Persian-speaking EFL learners.

Further, these data need to be analyzed regarding the part of speech of each word to dig out the most problematic category for Iranian EFL learners to as far as pronunciation is concerned. To this end, each and every one of the mispronounced words fell under only one category from among Noun, Verb, Adjective, Adverb, Preposition, Conjunction and Determiner, or the combinations like Noun/Verb, Noun/Adjective, Verb/Adjective and Adjective/Adverb. Table 4.2 shows the results obtained from a meticulous analysis of the data.

Table 4.2 Parts of Speech of the Mispronounced Words

Part of speech	Number of words	Frequency
Noun	596	51.73 %
Verb	205	18.64 %
Adjective	150	13.64 %
Adverb	20	1.82 %
Why?!!!!!!	Why?!!!!!!	Why?!!!!!!

Pronoun	11	1 %
Conjunction	3	0.28 %
Determiner	2	0.19 %
Noun/verb	98	8.91 %
Noun/adjective	20	1.82 %
Verb/adjective	8	0.73 %
Adjective/adverb	2	0.19 %

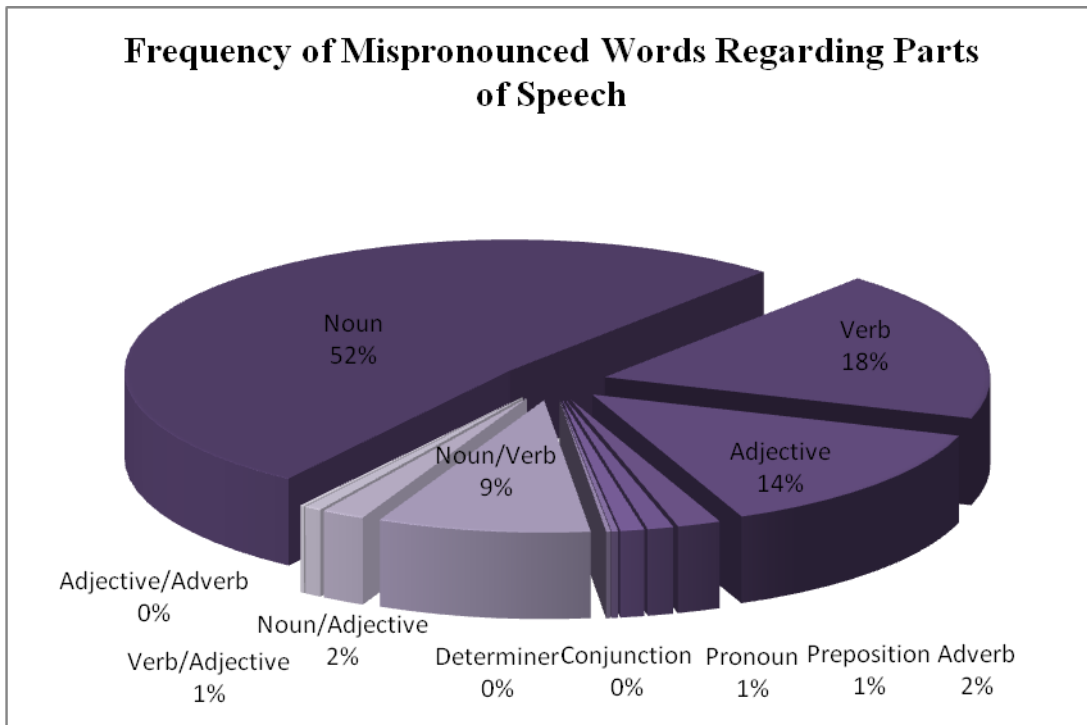


Figure 4.2 Parts of Speech of the Mispronounced Words

Surprisingly enough, it is found out that nouns are by far and away more difficult for Iranian EFL learners to pronounce. As it is shown on Figure 4.5., approximately 52 percent of the mistakes were nouns. This figure rises to more than 63 percent if we take into account those nouns which have other parts of speech, too.

To put our discussion on a concrete footing, it seems necessary to categorize the mistakes based on the cause of the difficulty which ends up in mispronunciation.

Studies which focus on pronunciation or contrastive phonology do not deny the fact that mother tongue is a causative factor of mispronunciation (Flege, 1987; Scovel, 1988; Walsh & Diller, 1981; Wode, 1989), but almost none accentuated how grave a part it may have in EFL pronunciation training.

However, in this study, all mispronunciations fall under two major categories namely *interlingual* which in this study deals only with Persian as the first language of the EFL learners and English as their foreign language, and *intralingual* which refers to the mistakes that cannot be attributed to the learners' mother tongue.

Interlingual mistakes, shown in Figure 4.6., occur due to two main reasons: similarities between two languages which are mainly borrowed words such as “dollar” and “دلار”, or proper nouns like “Einstein” and “اينشتين”. Despite Kenworthy (1990) who assumes proper names to be facilitative in teaching pronunciation, it is observed that proper names can be a source of mistake. Church (2000) points out that “although one might argue that, in real text, proper names account for a small percentage of all the words, and improvement in this area would have no significant impact on the overall accuracy of the system, getting them right would have its own worthy part in pronunciation training.”

It is predictable that the differences between two languages are much more than similarities in type. Different types of the mistakes attributed to the differences between the two languages are as follows:

1. Sounds which are absent in first language:

2. Vowels e.g. / near

3. Consonants e.g. / health

I. Stress e.g. / e´vent

II. some consonant clusters

1. double-consonant e.g. / school

2. triple-consonant e.g. / scream

III. schwa

1. Initial e.g. / affect

2. In the midst of the word e.g. / history

3. Final e.g. / hospital

IV. hyper-correction e.g. / verb

V. vowel insertion e.g. / language

On the other hand, intralingual mistakes, displayed in figure 4.5., are those that pertain to the fundamental difficulties of the foreign language rather than any other reasons. These mistakes mainly origin from the followings:

I. rule ignorance e.g. / worked

II. False analogy

1. Vowel e.g. / ear and deaf

2. Consonant e.g. / exam and exercise

III. Vowel omission e.g. / particular

IV. Silent letters e.g. ex/ psychology

V. unique goofs e.g. / dilris instead of drills

VI. Spelling pronunciation discrepancy e.g. / curtain

This fact is straightforward that English spelling is so complicated that it is hard even for native speakers to learn it. Speakers of many other languages in which the sounds and the letters are more closely connected have a much easier time learning to spell in their L1 than native speakers of English have learning to spell in theirs (Gilbert, 2008).

The total repertoire of both interlingual and intralingual mistakes gathered in this study and the way they were categorized are given below in tables 4.3. and 4.4. on next pages.

It should not be kept out of consideration that some words like “affair” may potentially be mispronounced in different ways; only the observed mistake is recorded and the other sources of mispronunciation are disregarded owing to the fact that the nature of the actual mistakes is to investigate upon and not the possible sources of mispronunciation. The other important point is

that “Borrowed word” is an umbrella term to refer to all kinds of mistakes which have form familiarity as the foremost underlying cause of mispronunciation.

Table 4.3 below shows the contribution of interlingual and intralingual factors in English mispronunciation for Persian-speaking EFL learners.

Table 4.3 Interlingual/Intralingual Causes of Mispronunciation

Mispronunciation Source	Number	Percentage
Interlingual	570	51.82%
Intralingual	540	49.08%

The above table reveals that interlingual causes of mispronunciation which have formerly gotten little attention in teaching pronunciation carry more weight than intralingual causes of mispronunciation, though the difference is not very significant. Figure 4.8. shows the importance of interlingual causes of mispronunciation better.

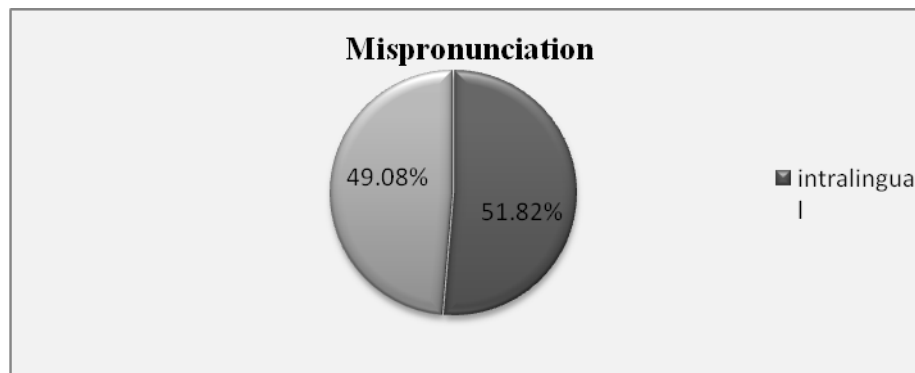


Figure 4.3 Interlingual/Intralingual Causes of Mispronunciation

To be more specific about the causes of mispronunciation specifically for Persian-speaking EFL learners, each category discussed before must be analyzed individually. Table 4.4 represents the obtained figures exactly.

Table 4.4 A Close Look at the Causes of Mispronunciation

Mispronunciation	Number of Mistakes	Percentage
Interlingual		
Borrowed words	88	8 %
Proper nouns	26	2.37 %
Absent sound(s)	104	9.46 %
Stress	154	9.46 %
Consonant cluster	84	7.64 %
Schwa	82	7.46 %
Hyper-correction	17	1.55 %
Vowel insertion	15	1.37 %
Intralingual		
Rule ignorance	35	3.19 %
False analogy	85	7.73 %

Vowel elision	6	0.55 %
Silent letters	83	7.55 %
Spelling pronunciation	325	29.55 %
Unique goofs	6	0.55 %

Still, the most and the least causative factors turned out to be of intralingual nature. While spelling pronunciation is the most contributing factor (29.55%), vowel elision and unique goofs are the least causative. Figure 4.9 sheds more light on the results obtained from such clarification.

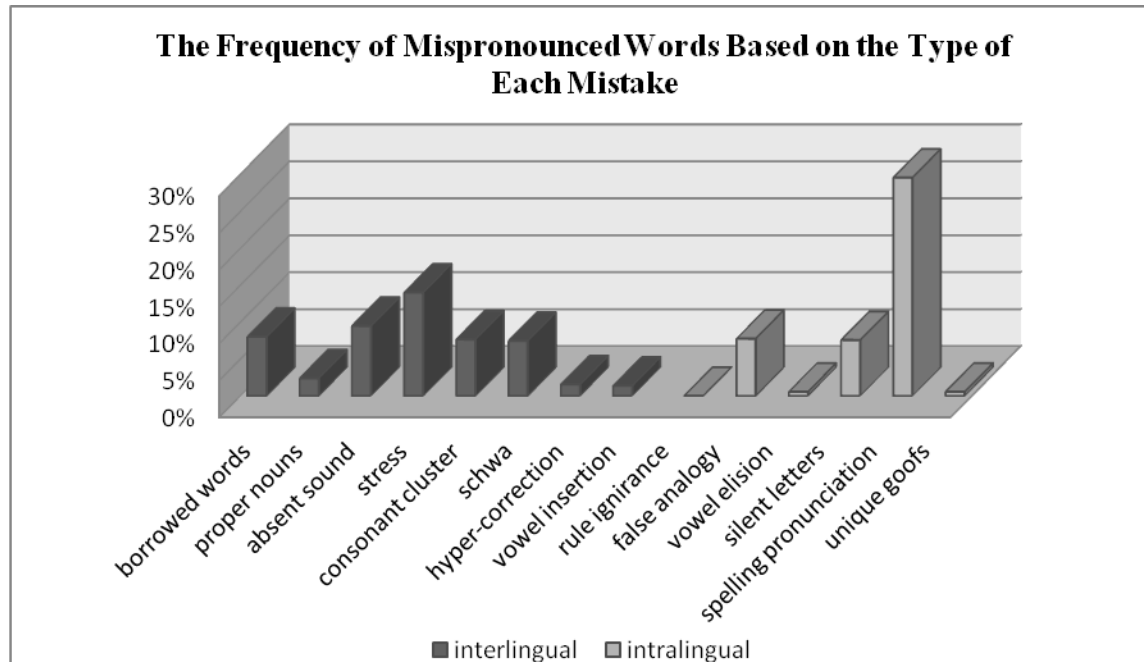


Figure 4.4 Close Look at the Causes of Mispronunciation

Ho 2. Not all of the English Suprasegmental features need to be addressed for Iranian EFL learners.

In order for the researcher to put suprasegmental features into a test, it was necessary to run a test which included intonation, sentence stress, Reduction, Contraction, Linking Sounds, Prominence and Contrastive Stress. Accordingly, a test was prepared to gauge the Persian-speaking EFL learners' performance and knowledge. Part A of the test was to evaluate the aforementioned suprasegmental unconsciously while learners were well aware of what they were tested on in part B of the study.

The above-mentioned suprasegmental features were scored 3, 3, 3, 2, 3, 1, and 1 respectively. The rationale behind such scoring procedure is the frequency of each feature in real speech. Twenty percent of the total score is allocated to the comprehension of the questions on the part of participants since comprehensibility is an important factor in pronunciation training. All in all, half of the rest of the total score is for indirect responses and the other half for the direct ones.

As figure 4.4 shows, the performance of the Persian-speaking EFL learners on suprasegmental features was a little bit below average. Further, the difference of the learners covers a vast range and whereas the highest score is 16.4, the lowest score is only 9.5.

Table 4.5 is provided for the sake of a better understanding of the participants' performance.

Table 4.5.Central Tendency Measurement

Mean	Median	Mode
13.33	13.25	15

Obtained results in Table 4.5 above show that the participants performance on suprasegmental features is not alright at all and needs to be practiced.

Still, it is indispensable to uncover more about such performance because each suprasegmental feature must be analyzed in isolation. This way, the material developers may find out what to focus on more in the process of material development.

Figures 4.5 to 4.11 illustrate the performance of the participants on each suprasegmental feature, namely, intonation, sentence stress, reduction, contraction, linking sounds, prominence, contrastive stress, and comprehensibility, respectively.

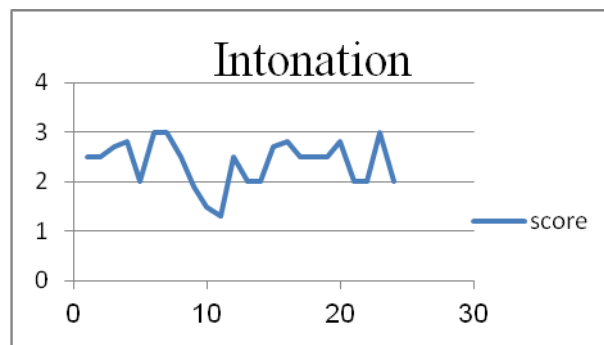


Figure 4.5.The Participants' Performance on Intonation

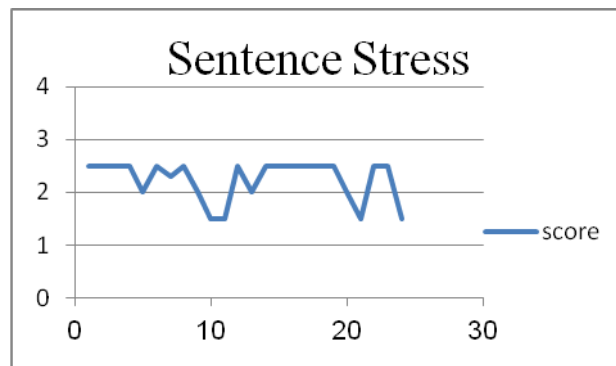


Figure 4.6The Participants' Performance on Sentence stress

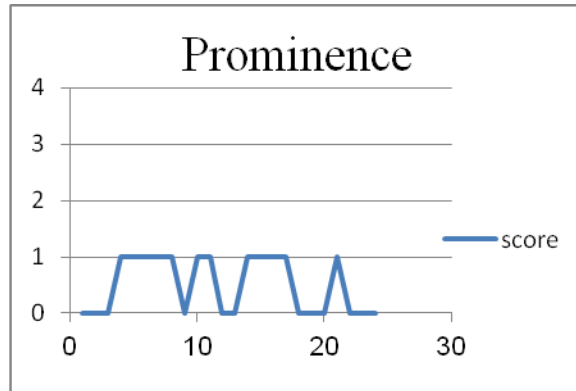


Figure 4.10.The Participants’ Performance on Contrastive Stress

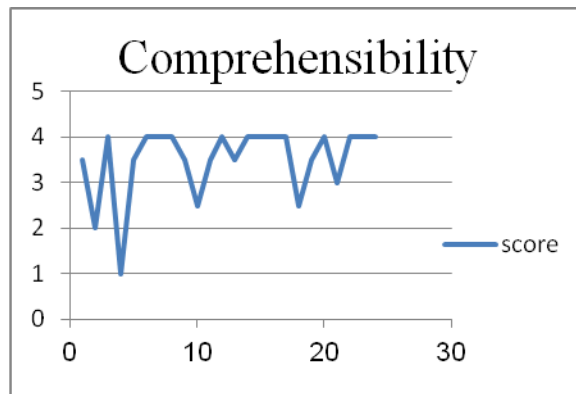
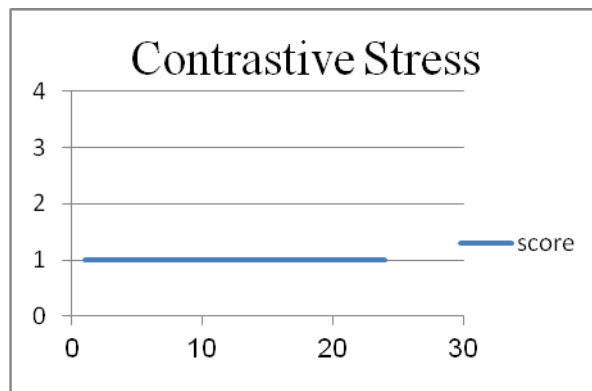


Figure 4.11.The Participants’ Performance on comprehensibility

Ho 3. The researcher-made pronunciation-teaching materials are not constructive for intermediate Persian-speaking EFL learners to build up accurate pronunciation of English language.

Pretest results

For the groups to be comparable and for an experiment like this to be meaningful, the experimental and control group were expected to indicate no significant differences concerning the phonological features under investigation at the present phase. In other words, members of the two groups were expected to enjoy the same level of knowledge regarding phonological features. In fact, this homogeneity among the participants let the researcher figure out whether the treatment yielded good results.

Thus, as it was mentioned in the previous chapter, at the beginning of the experiment a pretest was administered to meet the above-mentioned requirements. Table 4.6 below depicts the scores obtained by the Experimental and Control Groups.

Table 4.6 Scores Obtained from Both Groups on Pre-test

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Experimental Group	38	40	35	39	31	37	41	33	36	38	36	33	32	35	37	42	38	37	35	36
Control Group	40	43	36	33	35	36	39	32	35	36	38	31	35	40	37	34	39	36	32	31

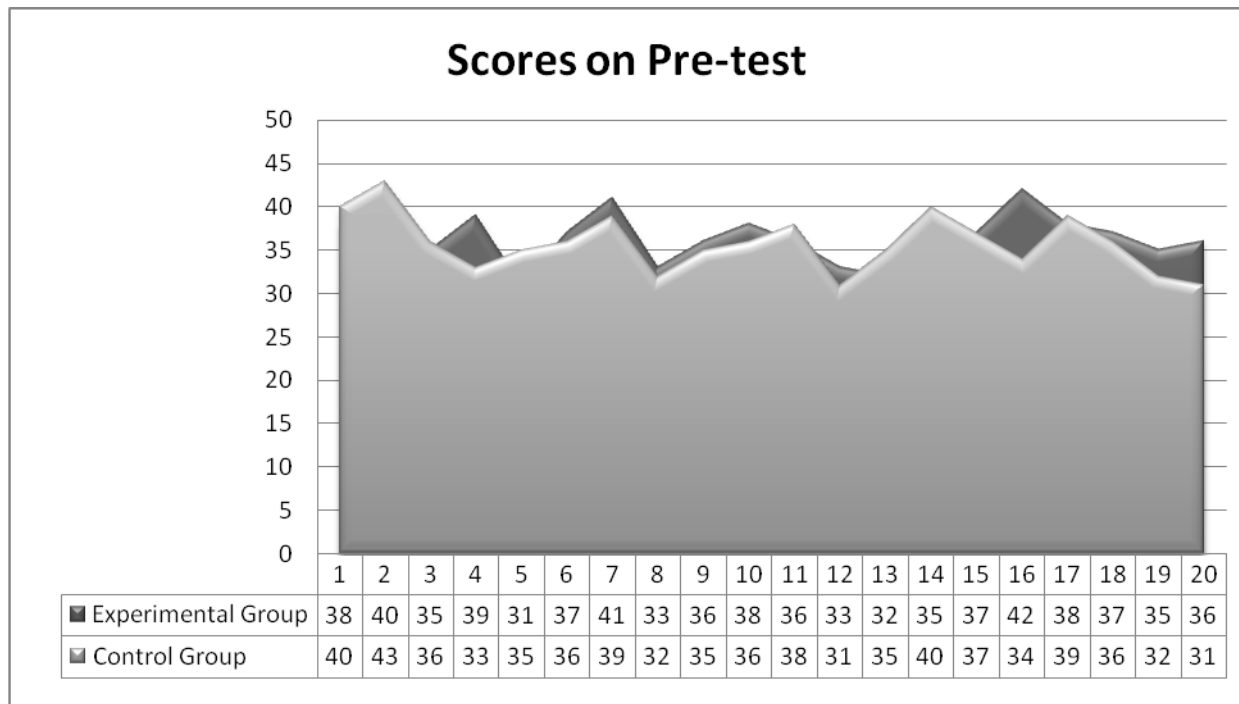


Figure 4.6 shows the graphical representation of the means.

Table 4.7 below indicates the descriptive statistics of the participants’ mean scores on the pretest across the two groups.

Table 4.7 Descriptive Statistics for the Pretest

Group	No.	Min	Max	Mean	SD
Experimental	20	31.00	42.00	36.45	2.8924
Control	20	31.00	43.00	35.90	3.2590

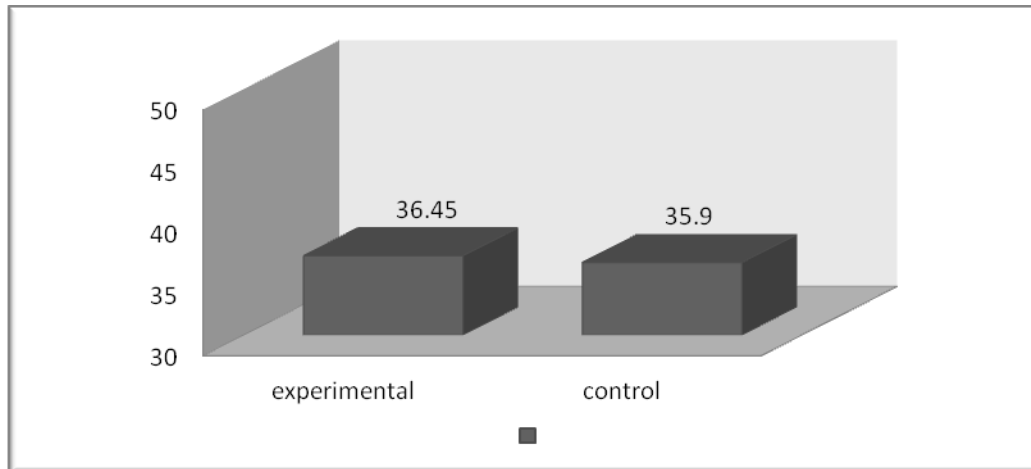
**Figure 4.7** Graphical Representations of the Means for the Pretest

Table 4.8 and Figure 4.8 tell us that the means are statistically very close to each other ($36.45 \approx 35.90$). Therefore, it could be concluded that the learners in the two groups did not differ greatly from one another in terms of their knowledge of phonological features. That is, the participants' prior knowledge of segmental and suprasegmental features was statistically almost equal. In order to make sure that there is no significant difference between these means, a *t* test was applied. Table 4.8 presents the results of this *t*-test.

Table 4.8 The Results of the *t*-test on the Pre-test Scores

Group	No.	Mean	SD	<i>t</i>	df	P
Experimental	20	36.45	2.89237	.564	38	.576
Control	20	35.90	3.25900			

One can easily understand from the above table that the *t* observed is not high enough to be significant at $p = .05$ level (t observed = .564, $p = .576$). Therefore, it can be concluded that the two groups under investigation were homogeneous at the beginning of the experiment.

The next analysis was conducted to find out whether or not the experimental group and the control group performed differently after conducting the experiment. For this reason, a posttest was administered to both groups upon the completion of the experiment.

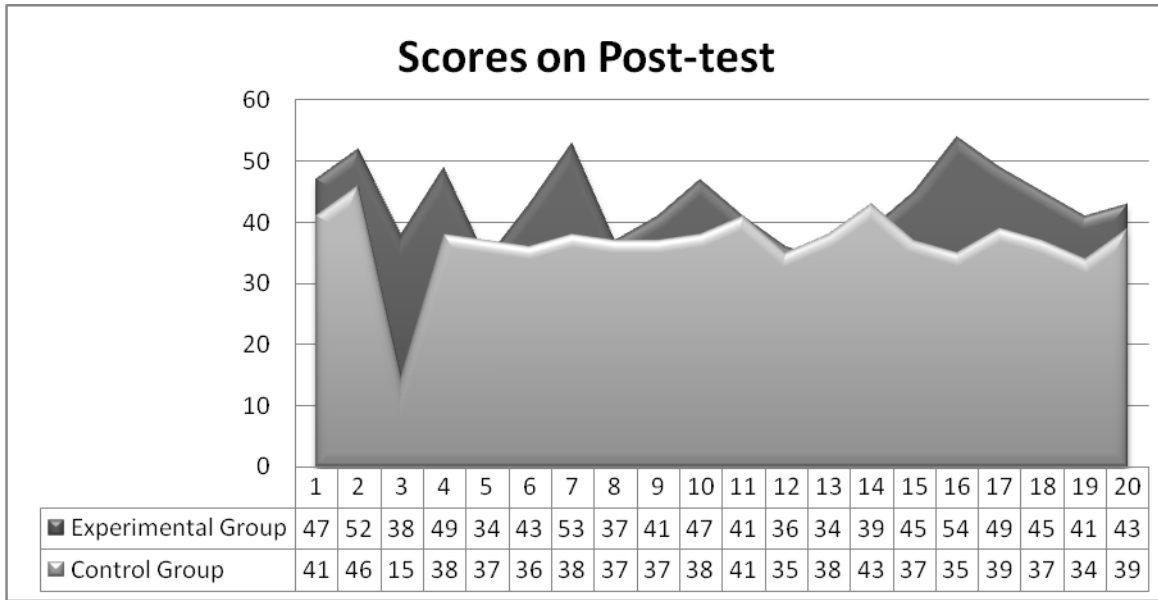


Figure 4.8 Scores Obtained from Both Groups on Post-test

As it's self-evident in figure 4.8 mean score obtained on the post-test is higher than that of pre-test only for the experimental group.

Table 4.9 Descriptive Statistics for the Posttest

Group	No.	Min	Max	Mean	SD
Experimental	20	34.00	54.00	43.40	6.1164
Control	20	15.00	46.00	37.05	5.9070

Table 4.9 depicts that the means of the two groups were different. To ensure whether this difference between means was significant, another *t* test was employed. Table 4.11 shows the results of this *t*-test.

Table 4.10 The Results of the T-test Obtained from the Post-test

Group	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>df</i>	<i>P</i>
Experimental	20	43.4000	6.11641	3.340	38	.002
Control	20	37.0500	5.90695			

The last column represents the probability value. If this value is less than 0.05 (the critical value), then it can be concluded that there is a significant difference between the two sets of scores.

By looking at Table 4.6, it can be understood that the difference between the two means is statistically significant (*t* observed= 3.340, *p* = .002); in other words, probability value is much less than the critical value, which means the experimental group who received the intended

experiment outperformed the control group on the post-test. Therefore, the null hypothesis stating that the researcher-made pronunciation-teaching materials are not constructive for intermediate Persian-speaking EFL learners to build up accurate pronunciation of English language can safely be rejected. Put it differently, the researcher-made materials helped improve the Persian-speaking EFL learners' pronunciation regarding both segmental and suprasegmental features.

Discussion of results

What is inferred from the results obtained from the questionnaire is as follows:

I. Pronunciation is as significant as other components of language for EFL learners.

II. It seems that a lot more should be done to refine the pronunciation status in Iran.

III. It is undeniable that the effects (whether positive or negative) of Persian as the mother tongue for Iranian EFL learners is even tangible for the students. Accordingly, it should not be disregarded in textbooks anymore.

IV. It is implied that the dissatisfaction of pronunciation in Iran is not fully attributed to textbooks. What can be interpreted from this result is that probably the ignorance of pronunciation teaching is the pivotal reason and not the materials per se.

The other probable interpretation is that what is presented in the pronunciation books is authentic enough, but for whom they are developed is under question.

V. Undoubtedly, the overall tendency is towards American accent of English language in Iran.

It is widely recognized that suprasegmental features play a key role in EFL learners' intelligibility and should be in focus as far as pronunciation is concerned. This idea got on in late twentieth century and it was commonly claimed that prosodic errors have more serious consequences on the intelligibility/ comprehensibility of spoken English than segmental phonological ones (Lanham, 1978).

This study was brought into line with the contemporary perspective towards pronunciation, and suprasegmental features were considered the most important. However, segmental features were not deadly overlooked. The first phase of the present study looked into those segmental features which needed to more attention and training. In the first place mistakes were classified alphabetically in order for the researcher to see any potential extraordinary behavior regarding the beginning letters in words on the part of participants. As it was mentioned in detail in chapter four of this study (see section 4.3.), a wide difference was discovered among the categories based on beginning letters. Interestingly, the frequencies of mispronounced words beginning with S and C were by far and away more than the frequency of words beginning with most of other letters, and the least number of words begin with X and Z. to put the discussion on a concrete footing, the obtained data must be compared to the frequency of each English letter in the initial position in words.

Later in the study, the researcher embarked on classifying the observed mistakes based on the parts of speech for each word. Interestingly, it was found that nouns were by far and away more intricate for Iranian EFL learners to pronounce and accounted for approximately 52 percent of the mistakes. The figure rose to a bit more than 63 percent taking into consideration those nouns which have other parts of speech as well. Comparing the obtained results with the actual percentage of each part of speech clarifies the cause of such dissimilarity. AskOxford.com (2010) tentatively asserts that no exact data can be gathered in this regard. Still, it claims that over half of the English words are nouns. Such information suffices to come to this conclusion that the obtained data in this study is not deviant from the actual frequency of parts of speech in English. Moreover, it confirms the utilization of such distribution in the material development process.

What should not be forgotten at this stage is that the statistics observed in this the study are by no means exact either because only one form of a derivation family_ the most common word or the observed one_ is chosen, or because of the creativity of English language and its changes, words may be used with new parts of speech; **represent** and **progress**, respectively, are the examples in this regard.

As it was, the main question to answer in the first phase of the study was which suprasegmental features need to be allocated more time in classrooms. To respond such question, it sure is indispensable to figure out the main causes of mispronunciation concerning individual words. In general what is important is to find out whether Persian as the mother tongue is a contributing factor of mispronunciation or not. The results obtained from this study revealed that interlingual causes of mispronunciation which have formerly gotten little attention in teaching pronunciation carry even more weight than intralingual causes of mispronunciation, though the difference is not very significant. As a final point, the idea is supported that pronunciation materials need to be prepared locally as opposed to globally.

As it was mentioned earlier, suprasegmental were considered important in pronunciation training from the very outset of this study. However, what is learned is learned, which means not all suprasegmental features need to be taught directly specifically those features which had been learned previously through the learners' mother tongue. Anyway, whiteness of these features was still under question. Second phase of the study supported the above-mentioned idea with the fact that all suprasegmental features need to be taught and improved owing to the poor performance of the Persian speaking EFL learners observed in this study. Nevertheless, the observed performance was by no means the same for various features. While intonation, sentence stress and contraction yielded average scores, scores concerning reduction and linking sounds were generally much below average. On the contrary, contrastive stress was the only feature which yielded satisfactory scores.

Conclusion

In conclusion, those material developers who are to develop foreign language educational materials specifically for Persian speaking EFL learners must contain all suprasegmental features in the course books, but much more emphasis should be placed on reduction and linking sounds. Still later in the study, some pronunciation teaching draft was developed in line with the what was discovered in the study in order to help Persian speaking EFL learners improve their pronunciation. The last phase of this study put the efficacy of such materials into question and supported the idea that teaching such materials helped those certain learners make headways regarding pronunciation. The progress was at a slow pace, though. Surely, an abrupt improvement in pronunciation after a short course is hard to presume. However, long-term persistence may hopefully earn the learners satisfactory pronunciation.

As far as the materials are concerned, what is developed by now should still be undergoing subsequent modifications for long time before it will be published. One modification, for example, is that the material developer needs plenty of time to develop at least five quizzes in order to find out what students learn and what they fail to learn in relation to what has been planned since it is really important for to monitor assess and evaluate the learners' progress.

The prepared pronunciation pamphlet in this study was initially intended to help Persia-speaking EFL learners take the initiative of pronunciation learning both by introducing phonetic symbols and by persistently exposing them to various words whose pronunciation may not be as predictable as imagined.

It is obvious that teaching efforts are always made for positive virtues, but the extent of benefits that the learners may receive is what should be taken into account. Albeit not pretty well, the participants of this study progressed in pronunciation after only a little less than nine hours of training during twenty-six sessions. For one thing, each unit of the pamphlet requires at least an hour to be taught, which means more or less three times as much time to teach pronunciation is required to cover the materials the best. Still, the results obtained from the pre- and post-test of the study across both experimental and control group prove that it is undoubtedly worthwhile making time to teach pronunciation in classrooms in Iran.

To end with, it should be restated that no effort should be spared to help the EFL learners replace their discouraging despair with encouraging aspire. Fortunately, empirical evidence of this study indicated that the materials developed in this study afforded quite some advantages for the learners.

What is implied from the first phase of the present study is that since mother-tongue plays as important a role in pronunciation training as the target language in and of itself does, EFL learners with different linguistic backgrounds must undergo different training courses.

It is also implied from the second phase of the study that phonological features vary in difficulty for EFL learners. Therefore, not all pronunciation features must be considered the same in material development.

The last but not necessarily the least, it is almost time English teachers got engaged in the process of material development rather than browse the net to find the latest publications of well-known press. Therefore, teachers should forget their traditional role and think of implementing special plans contingent upon the needs of those for whom they are preparing materials.

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