

# A Gender-based Approach to Pronunciation Accuracy of Advanced EFL Learners

Shahrokh Jahandar, Morteza Khodabandehlou, Gohar Seyedi, Reza Mousavi Dolat Abadi

**Abstract**—Several variables that believed to be related to pronunciation accuracy have been investigated. However, very few studies have been carried out in this area of learning foreign languages. Subsequently, this study aims to investigate the impact of gender on pronunciation accuracy of advanced Iranian EFL learners and whether male or female learners will outperform in their performance of the pronunciation accuracy of phonological characteristics in their speech production. The pronunciation accuracy of the learners was assessed through reading aloud, a recorded oral test and learners' speech production. Fifty-three advanced EFL learners- including 21 male and 32 female were chosen randomly from among the junior undergraduate university students studying English in Rodaki Institute of Higher Education in Tonekabon, Iran and participated the study. Finally, the data gathered by the experiment of the study analyzed through SPSS software (version 17), and using Independent Samples t-test. The results revealed that female outperform male subjects in producing accurate consonants, but not vowels, that it is not significantly noticeable to result in complete superiority of female over male subjects.

**Key Words**—pronunciation Accuracy, Segmental features, Gender, EIL (English as an International Language)



## 1 Introduction

The main difficulties with which confront those who study foreign languages concern the problem of correct word pronunciation and obtaining good pronunciation skills. Konstantin (2007) cites that teaching a foreign language, often very little attention is paid to learning pronunciation. Indeed, it's very strange that this very important language skill is usually set aside as secondary important and when it comes to pronunciation we often have at best only basic oral skills and slight knowledge of phonetics.

Pronunciation instruction historically has emphasized mastery of individual sounds. With the advent of Communicative Language Teaching, the focus shifted to fluency rather than accuracy, encouraging an almost exclusive emphasize on suprasegmentals. However, pronunciation has emerged from the segmental/suprasegmental debate to a more balanced view, which recognizes that a lack of intelligibility can be attributed to both macro and micro features (Celce-Murcia 2005). As a result, accurate pronunciation involves discovering how sounds are articulated and pronounced for each letter or group of letters when vocalizing a word and to follow what is accepted as standard by native speakers. To have accuracy in pronunciation doesn't necessarily mean to have native-like accent but it's a subcategory of intelligibility.

Until very recently few teachers or learners really questioned the idea that in order to be understood when speaking English, students would need to get as close as possible in their pronunciation to one of the dominant native-speaker accents, such as Received Pronunciation (RP), the standard British accent, or GA (General American), the USA equivalent. The last decade, however, has brought about such a significant change in the role of English throughout the world that it is essential to re-examine this situation. English is currently regarded as the world's principal international language, as a result of which there are now more exchanges between non-native speakers of English, than between non-native speakers and native speakers (Walker 2001).

To this end, students were examined through different ways. All subjects are junior EFL students and trained in segmental/suprasegmental rules during their Phonetics and Phonology course.

It should be noted that the focus of this study is only on the segmental features of phonology which contribute to 'naturalness' and 'intelligibility' of the language. However, suprasegmental features have a contribution to intelligibility of L2 speakers which cannot be denied.

Some of the papers use the term sex and others the term gender. In general, gender is used to refer to social categories, while sex is used for biological categories. In this paper we will mostly use the term gender, without distinguishing between these aspects, unless explicitly stated. This is because some effects on speech may be biological and some social and it may be difficult to see which has the larger influence.

The study was designed to address the following specific questions:

- Does gender have significant impact on pronunciation accuracy?

• Assistant Professor of State Research Institute of Higher Education in Rodaki. ShahrokhJahandar@yahoo.Com

• Assistant Professor of State Research Institute of Higher Education in Rodaki. Dr.Morteza.Khodabandehlou@Gmail.Com

• An MA Graduate in TEFL, Islamic Azad University, Tonekabon Branch. Iran. Seyedig@yahoo.com

• An MA Student in TEFL. Rm14aaa41@gmail.com

- Whether male or female learners will outperform in pronunciation accuracy?
- In what fields of pronunciation accuracy (vowels, consonants ...) male/female learners will do better?

Following are some of the specific hypotheses formulated based on research questions:

H0.1: It's predicted that gender will be of no or less significant rather than other variables they discovered.

H0.2: It's predicted that female students will not outperform male students in their pronunciation accuracy and vice versa.

H3: Vowels are predicted to be outperformed by female as they believed to be more prestigious in their pronunciation, and male students as well as female will do well in consonants.

## Literature Review

The relationship between both extraversion/introversion and gender to the pronunciation accuracy of English as a foreign language is examined by Badran A. (2001) through a test. It was found that: (1) extroversion/introversion positively correlated with English pronunciation accuracy among Arabic speaking Egyptian college students; (2) male students outperformed female students in their performance of the pronunciation accuracy test; (3) extroverted students were more accurate in their English language pronunciation than introverted ones.

Purcell, Suter (1976) and Piske et al. (2001) studied the correlations between English pronunciation accuracy scores and a battery of 20 variables for normative speakers of English and found some other variables in relation to pronunciation accuracy. Although he found that 12 of the 20 were significantly correlated with pronunciation accuracy, only four were indeed true predictors of high levels of pronunciation attainment, namely, learner's first language, aptitude for oral mimicry, years in an English speaking country and residence with native speakers of English, and strength of concern for pronunciation accuracy.

Byrd (1992) discusses vowel reduction, which is known to be affected by speech rate. Her experiments show that men, who speak faster, tend to reduce their vowels to schwa more often than women. She adds that there is a possibility that women use a different set of reduced vowels. The experiments of Whiteside (1995), Whiteside (1996) showed lower rates of syllables per second for women, realizing consonant clusters more fully. Simpson and Ericsson (2003), Simpson (2003) and she also found that men tend to elide or reduce vowels and consonants, which leads to shorter sentence durations. She interprets the fact that female speech segments were on average longer than those of men as evidence that women tended to realize speech segments more fully, which would support the thesis that women enunciate more clearly. Furthermore, Trudgill's (2005a) methodology was quantitative, based on a large-scale interview study (a random sample of sixty people). Looking at the variable (ng), for which there are

two pronunciations in Norwich English ('walking', the prestige form, and 'walkin'a) that supported the same view.

In Henton (1995) data from six phonetic studies on seven languages and dialects are discussed. She concludes that women produce more open-mouthed variants of vowels than men, which means that female speech is more phonetically explicit. She sees this in a socio-phonetic light, where greater articulatory distinctions may be the standard or prestige forms, which women try to guard, while men use more non-standard forms. They say that another possible reason for gender-specific durational patterns is the consequences of differences in male and female articulatory dimensions. They add that their results are contrary to other findings for English and German, where female sentence durations were longer than male.

We would think that some of these differences definitely are based on physical sex and general differences in the vocal organs of men and women. But we also think that there are additional aspects based on social gender. All of this interacts and that is why it is so difficult to pinpoint what the differences between male and female voices really are.

In this paper, unlike Badran's assumption and as it is expected from the literature review, we will argue that female will perform better in their pronunciation accuracy. I will present data that support the reverse assumption.

## Accurate Pronunciation

As it is mentioned in this paper, to have accuracy in pronunciation doesn't necessarily mean to have native-like accent but it's a subcategory of intelligibility, and is mastery of phonological characteristics in learners' speech production. Furthermore, being able to distinct vowels and consonants is important in EIL. According to Van den Doel (2007), for English as an International Language to function as an efficient medium, it would be advisable to take a broad rather than a narrow view of intelligibility. This means that EIL speakers attempt to make themselves understood not only to other non-natives, but also to native speakers and also to those non-natives who favor a native-like model. The extent to which worldwide intelligibility can be achieved depends on the needs, attitudes and demographic profile of the individual learner; however, it cannot be stressed enough that pursuing this goal is certainly in the learner's own interest. Speech perception research shows (as cited in Trudgill, 2005a, p. 219) that non-natives find it harder than natives to understand other speakers of English – especially non-native speech containing far less of the crucial phonological information. Native speakers are better able to use contextual information, whereas non-native speakers of English find it tougher to process another speaker merging minimal pairs. When Dutch businessmen talk about their earning their *celery* rather than their *salary*, this may be harder for Japanese non-natives than for Americans, whereas it's more difficult to deal with the confusion of *pork* and *fork* in Korean English.

Thus, learning to pronounce all crucial English phoneme contrasts is essential for improving the learner's ability to understand other speakers. Pitted against such a broad view of International English is a narrower view, which concentrates on non-native interaction only, and ignores the gravitational pull of native-speaker varieties. This kind of English as a Lingua Franca can afford to disregard native speakers, because it is hoped that, once it has drawn in enough adherents, the native speakers will simply follow suit and learn this slimmed-down version themselves. To quote Jenkins (2000, p. 227): "The perhaps unpalatable truth for 'N [ative] S [peaker]s' is that if they wish to participate in international communication in the 21st Century, they too will have to learn EIL."

It is actually unclear why native speakers have to acquire a model which is, in fact, grounded in native-speaker speech. After all, if any of Jenkins's recommendations lead to increased intelligibility among non-native speakers, this is because many of the features of the Lingua Franca core are derived from native-speaker models. One example is Jenkins's recommendation to preserve most English consonant sounds (Jenkins, 2000, p. 132). Doubtless this improves intelligibility – but some of the details are unclear, like the questionable insistence on aspiration of initial fortis plosives. Jenkins (2000, p. 140) claims incorrectly that it is "particularly important" for non-proficient non-native speakers to distinguish between [pæt] and [phæt], but this is simply not true. He found out that most of the errors that caused unintelligibility were segmental, a substantial minority consisted of intonational errors and, of these, almost all related to misplaced nuclear stress, particularly contrastive stress, either alone or combined with segmental errors. Yet again, this last finding provides evidence to support the view that the furthestmost phonological obstacles to mutual intelligibility between NSs-NNSs and NNSs-NNSs seem to be deviant sounds in combination with misplaced and/or misproduced nuclear stress. This surely holds only true for those whose L1s employ aspiration as an acoustic cue – speakers of Mandarin Chinese, for instance, as opposed to speakers of Malay, Indonesian, and the Dravidian languages of Southern Asia (Narasimhan, 2001, p. 245). Here are some other tips, which can help you to solve your pronunciation problems and obtain accurate pronunciation:

- Learn pronunciation rules and consult a pronunciation
- Use computer software programs to make language learning easier
- Record your speech and compare it with the original
- Read aloud to polish the pronunciation of difficult sounds
- Master your pronunciation skills uttering tongue twisters

(These tips are received from: <http://www.qwertystudios.com/sitemap>. Visit this site for more information and to download *Speaking Notepad* on-line, handy and multifunctional text to speech software presents the best pronunciation program)

While the discovery method has been intensely discussed in its application to grammar teaching (see Fortune, 1992), it seems to have been insufficiently developed for the needs of teaching pronunciation and phonetics. Though it is easy to find literature on learner-centered pronunciation teaching games (Bowen & Marks, 1992; Hancock, 1995), or proposals for closer links between phonetic research and teaching (Morley, 1994; Scarcella & Oxford, 1994), the methodology of the discovery technique, understood as a selection of creative, research-based tasks helping students to develop their own analytical thinking, has not been fully established (Makarova 1997).

Consequently, pronunciation is improved by repetition, minimal pair exercises, drilling and awareness of how sounds are produced, and this can be done without the help of a professor. Suter & Purcell (2006, 286) concluded that pronunciation practice in class and variables of formal training and the quality of training in pronunciation could affect the results but had little effect on the learner's pronunciation skills and furthermore, the attainment of accurate pronunciation in a second language is a matter substantially beyond the control of the educators'.

#### Vowel quantity

The distinction between long and short vowels is more important than exact vowel quality, and should be clear in speech. With diphthongs and triphthongs, just as with pure vowels, length should be our main concern rather than exact quality.

Vowels are often defined in relation to one another rather than to some fixed point. They are distinguished by tongue position (front/ central/ back), tongue and jaw height (high/ mid/ low), degree of lip rounding and the relative tension of muscles involved (tense versus lax vowels). Another challenge for learners is the fact that most vowels be spelled in many different ways. Learners who are used to a strict sound/ spelling correspondence in their L1 will often be misled by English spelling. For EFL learners, who often depend more on the written text than on what they hear, this can cause many pronunciation errors (Celce-Murcia and Goodwin 1996).

As with the differences in the consonant systems, there are also noticeable differences in vowel systems between Farsi and English. The tense/lax vowel pairs in English such as /I/ vs. /i/, /e/ vs. /ɛ/, /U/ vs. / u / do not exist in the six-vowel system of Farsi. However, according to Mirhassani (2003) although long vowels of Farsi are sometimes analyzed as having the same quality as English tense vowels, this claim is difficult to support because those vowels of Farsi are not always contrastive in nature as the English tense/lax vowel pairs. As opposed to English, Farsi does not have any variation in vowel length in formal speech. The fact that the Farsi vowel inventory is characterized as a typical six-vowel system suggests that Farsi speakers of English would have difficulties producing English vowels that do not exist in the Farsi vowel system. For instance, in Farsi, /i/ is similar to the close-front-tense /i/ in English but /I/, which is a half-close, front-lax vowel in English is absent in Farsi. Thus, the result will be the use of

/i/ instead of /I/ which would create misunderstanding and in some cases embarrassment for Farsi speakers of English. In addition, in English, /æ/ is an open-low-front vowel which does not correspond exactly with the Farsi equivalent. Therefore, Iranian Students tend to use /ä/ instead, in which the mouth is not as open as in English. Moreover, /š/ a mid-lax-central vowel; /é/ a mid-low-back vowel, and /l/ a high-back-lax vowel in English do not exist in Farsi. Finally, /e/ in Farsi corresponds to the English vowels /ε/ and /e/ depending on whether it is in either a stressed or an unstressed position.

### Consonant Conflations

When a consonant of English does not occur in a learner's mother tongue, the 'missing' sound is substituted with something similar from the speaker's first language. The substitution of one consonant for another can cause serious confusion for both NS and NNS listeners.

Celce-Murcia (2005) points out that consonant sounds are characterized by place of articulation, manner of articulation, and voicing. For consonants, in most cases, the orthographic letter is the same as the phonetic representation. However, for certain sounds (this, thumb, shop, decision, butcher, pageant, long), a single letter that represents the most common spelling is not available.

A second consideration is that the articulation of a consonant varies, depending on its environment. For example, the sound /p/ occurs twice in the word *paper*, but the first /p/ is accompanied by a small puff of air called aspiration while the second /p/ is not. This and other examples of positional variation reflect sound system rules that native speakers have command of but rarely any conscious knowledge of until it is pointed out to them. Clustering is a third feature of English consonant that represents a challenge to our students. Since many other languages never allow two, much less three or four, consonants in sequence, learners from such a language background struggle with words like *strength* or *texts*. Our learners need to know how consonant clusters function in English and also that there are acceptable consonant reductions for some forms. For example, in the phrase: *The facts of the case are...*, many speakers would pronounce *facts* as *fax*, omitting the /t/ without any loss of intelligibility.

Despite these isolated difficulties, instruction should always focus on sounds in context. How a particular sound is articulated in real speech, or how crucial it is to intelligibility, will become evident only when embedded in spoken discourse.

Learners will usually have difficulty with sounds that don't exist in their L1, such as the two *th* sounds or the *r* and the *l* sounds. In considering the phoneme /r/, there are three different allophones for this phoneme in Farsi: the most common is [R], an unvoiced variant which occurs in final positions; e.g. [pæR] meaning feather; [ř] a flap variant which occurs inter-vocally; e.g. [bäřän] meaning rain and [r] a trill allophone which occurs initially and medially, e.g. [ruz] meaning 'day' and [mærd] meaning man. Finally, there is also phoneme /l/ which is mainly considered as a clear /l/ in Farsi and has dental-alveolar

articulation, and the approximant /j/ which is complex and voiced. In the case of Farsi learners of English, if they have a problem producing the interdental fricatives, (θ and ð), and substitute them with alveolar fricatives and stops (s, t, d, z), this is not because they are doing this deliberately or consciously; rather, they have not learnt how to produce the English sounds. Thus, they revert back to the comfort of their L1 Farsi sounds.

A comparison between the Farsi consonant system and that of the English consonant system reveals noticeable differences in consonantal distribution between the two languages (Yavas, 2006, p. 197). To start with the plosives, /p/ and /b/ are respectively voiceless and voiced in Farsi and English, but /p/ in Farsi is strongly aspirated in all positions. The stops /t/ and /d/ are respectively voiceless and voiced plosives in both languages, but as far as the position of the tongue is concerned, they both have dental articulation in Farsi and /t/ can also be dentalized in English [t̪]. Moreover, /t/ in Farsi is strongly aspirated in all positions. The velars /k/ and /g/ are voiceless and voiced plosives respectively in Farsi and English and they can be identified as mediovelar in Farsi, but postvelar in English. Moreover, they are strongly palatalized initially and medially before front vowels in syllabic-final position in Farsi; whereas, in English, they are slightly palatalized before front vowels. /ŋ/ is absent in Farsi; however, [ŋ̠] as an allophone of /ŋ/ does exist as in 'nan' [nɑŋ̠] meaning bread. In considering the fricatives, /f/ and /v/ are voiceless and voiced respectively in Farsi and English; however, in Farsi, a larger part of the lower lip touches the upper teeth in articulating these phonemes. The fricatives /s/ and /z/, voiceless and voiced, fricatives appear in both languages: In English they have alveolar articulation, but in Farsi they have dental articulation. The fricatives /θ/ and /ð/ are voiceless and voiced post-alveolar respectively in both languages which are produced in the same way. The phoneme /h/ also exists in both languages as a voiceless glottal fricative which is articulated in the same way. Moreover, the fricatives /x/ and /ð/ are absent in English. Another problem that comes from the lack of particular consonants in Farsi which exist in English is the pronunciation of approximant-velar /w/. Thus, Farsi speakers of English usually replace the English vowel /w/ with /v/, which results in the production of an inaccurate word. For example, 'west' and 'vest' may be pronounced /vest/ in both cases by some Farsi speakers of English.

### Segmental vs. Suprasegmental Features

The segmental features of speech, generally determine which sounds of the language (phonemes) are being represented, and therefore also determine which words are being represented. In such languages, prosodic variables, or suprasegmental features as they are sometimes referred to, such as sound intensity (loudness), intonation (the variation of voice pitch on the perceptual level, or voice fundamental frequency on a physical level), variations in the rate of speech (usually referred to as the 'duration' variable), and voice source quality primarily determine the



stress patterns in a sentence and convey emotional factors and secondarily interact with the segmental features to influence meaning.

There is agreement among current proponents of the teachability of L2 pronunciation that suprasegmental errors have more serious effect on intelligibility than segmental errors (Anderson-Hsieh, Riney, and Koehler, 1994; Anderson-Hsieh, Johnson, and Koehler, 1992; Morley, 1994; McNerney and Mendelsohn, 1992; and Celce-Murcia, et al., 1996). Anderson-Hsieh, et al. (1992), in reviewing the literature, state that this is because "prosody provides the framework for utterances and directs the listener's attention to information the speaker regards as important"(p. 531). This view is also widely held among teachers and textbook writers; on the other hand, Suter (1976) concludes from the data that most of the pronunciation problems can be attributed to the difficulty in producing segments. She goes on to argue that although the most problems derive from the combination of both segmentals and suprasegmentals, instruction in segments should be prioritized.

More specifically, Jenkins advocates the pronunciation goal towards which teacher should work in their EFL classrooms is mutual intelligibility between NNSs, rather than between NS-NNS interaction. In its entirety, her proposal is twofold: First, the model for EIL should be now based on what NNS learners do in interlanguage talk, instead of making NS English as a model; and second, most of the intelligibility problems can be attributed to the difficulty in producing segments. She goes on to argue that although the most problems derive from the combination of both segmentals and suprasegmentals, instruction in segments should be prioritized.

In accordance with the different approaches to teaching pronunciation, the bottom-up approach, on the one hand, begins with the articulation of individual sounds and works up towards intonation, stress and rhythm. On the other hand, the top-down approach begins with patterns of intonation and brings separate sounds into sharper focus as and when required. In the bottom-up approach, the central idea is that if you teach the segments first, the suprasegmental features will be subsequently acquired without the need of formal instruction. In the top-down approach, however, the assumption is that once the prosodic features are in place, the necessary segmental discriminations will follow accordingly (Dalton and Seidlhofer, 1994). Close examination of these controversial beliefs may lead us to think that a reasonable aim would be to establish a degree of segmental-suprasegmental balance through which learners, for personal or professional reasons, are allowed to choose whether they wish to sound as close as possible to native speakers of English or not (Roach, 1983).

However, Suter also found that those who reported that as students they had received both segmental and

suprasegmental feedback on their pronunciation had higher accuracy than those who reported having received only either type of pronunciation instruction. This finding is encouraging to the effect that instruction may have had some influence, although it has to be tempered by the caveat that it was a conclusion drawn only from self-report in a questionnaire, not from direct empirical study.

### **Method**

Subjects are 53 advanced EFL learners, including 32 female and 21 male, that are chosen randomly from among the undergraduate university students studying English in Rodaki Institute of Higher Education in Tonekabon, Iran and participate the study. All subjects are junior EFL students and trained in segmental/suprasegmental rules during their Phonetics and Phonology course. They are informed of the purpose of the research.

### **Material**

The experimental content consists of exercises grouped into three units containing:

- An exercise in the form of a story containing words and expressions to practice their pronunciation and reading it aloud that is recorded to be corrected later by the researcher.

- A 50-item exercise consisting of individual words that has to be pronounced by male and female speakers. This exercise includes several minimal sets that the students have to read it and choose one of the words that is pronounced differently from others.

The students got familiar with phonetics and phonology rules that were presented in their course during the years of study.

Furthermore, the pronunciation corrected on the basis of transcription of the words in the Longman Dictionary of Contemporary English, New Updated Edition.

### **Procedure**

The learners were assessed in different ways. First, a story passage containing problematic words was given to practice for about 5-10 minutes. Then, they were asked to read it aloud out of the class setting in isolation to the teacher to minimize the effect of environment. This was recorded to be scored later by the researcher. The teachers were asked not to correct students' mistakes or errors. After that, a list of about 50 item sets that considered being the most problematic phonemes and words to choose the word that they are pronounced differently from others. In addition, the students were examined many times during their course by their teacher while reading a passage. All through assessment of students by their teachers, the researchers observed the classes.

The data gathered by the experiment of the study was analyzed through an independent samples t-test that will be discussed below.

The independent samples t-test results have been indicated in Table1:

### **Result**

subject to be 1.810 that is not high enough to reject the null hypothesis of the study in the  $P > 0.05$ , which approves that the effect of gender on pronunciation accuracy is of less or no significance. So, an independent sample t-test reveals a statistically reliable difference between the mean score of male has Mean=72.14, SD=10.67 and female has Mean=76.68, SD=5.30,  $t=1.810$ ,  $P=0.082$ ,  $\alpha=0.05$ .

Table1 (a)  
Independent Samples T-Test Statistics

Group Statistics					
	Gender	N	Mean(%)	Std. Deviation	Std. Error Mean
PA	Male	21	72.1429	10.67373	2.32920
	Female	32	76.6875	5.30634	.93804

Table1 (b)  
Independent Samples T-Test of the Study based on Subjects' Pronunciation Accuracy

Independent Samples Test										
Levene's Test for Equality of Variances					t-test for Equality of Means					
95% Confidence Interval of the Difference										
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
PA	Equal variances assumed	7.404	.009	-2.059	51	.045	-4.54464	2.20761	-8.97661	-.11267
	Equal variances not assumed			-1.810	26.563	.082	-4.54464	2.51099	-9.70074	.61146

As is seen in Table1 (a), the mean for the pronunciation accuracy of female group is about 76.68, and for the male group is 72.14 respectively. This shows that pronunciation accuracy of the first group has more mean score which proves better performance of the female subjects of the study, but these differences in these two groups are not significantly noticeable and meaningful to result in complete superiority of female over male subjects.

Table2 (b) illustrates the main result of Independent Samples T-Test of the impact of gender on pronunciation accuracy of learners. P value of 'Levene's test for Equality of Variance' is less than  $\alpha$  level (0.05), then the null hypothesis that the variability of two groups is equal can be rejected, implying that variances are unequal. Accordingly, the t-observed of pronunciation accuracy for female and male is

Table2 (a)  
Independent Samples T-Test Statistics

Group Statistics					
	Gender	N	Mean(%)	Std. Deviation	Std. Error Mean
Consonant	Male	21	71.57	10.829	2.363
	Female	32	78.06	7.886	1.394
Vowel	Male	21	76.57	13.223	2.886
	Female	32	77.44	6.440	1.139

Table2 (b)  
Independent Samples T-Test Based on the Subjects' Vowel & Consonant Scores

Independent Samples Test										
Levene's Test for Equality of Variances					t-test for Equality of Means					
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Consonant	Equal variances assumed	1.357	.249	-2.525	51	.015	-6.491	2.571	-11.652	-1.330
	Equal variances not assumed			-2.366	33.710	.024	-6.491	2.744	-12.069	-.914
Vowel	Equal variances assumed	3.130	.083	-.318	51	.751	-.866	2.720	-6.326	4.594
	Equal variances not assumed			-.279	26.301	.782	-.866	3.102	-7.239	5.507

Table3 (b) indicates the Independent Samples T-Test of male and female on pronunciation accuracy of learners both in vowels and consonants. P value of 'Levene's test for Equality of Variance' is more than  $\alpha$  level (0.05), and then the null hypothesis that the variability of two groups is equal can be supported, implying the variances are equal. The t-observed of the pronunciation accuracy of consonants for female and male subjects to be 2.525 ( $P=0.015$ ) that is high enough to reject null hypothesis of the study in the  $P < 0.05$ , which confirms that the effect of gender on pronunciation accuracy of subjects concerning consonants is of noticeable significance [ $t(\text{observed}) > t(\text{critical})$ ].

It also expresses the Independent Samples T-Test t-observed of pronunciation accuracy of vowels for female and male subjects to be 0.318 ( $P=0.751$ ) that is not high enough to reject the null hypothesis of the study which reveals that the effect of gender on pronunciation accuracy concerning vowels is of less or no significance.

Figure1. Mean Score/Gender Diagram of the Study

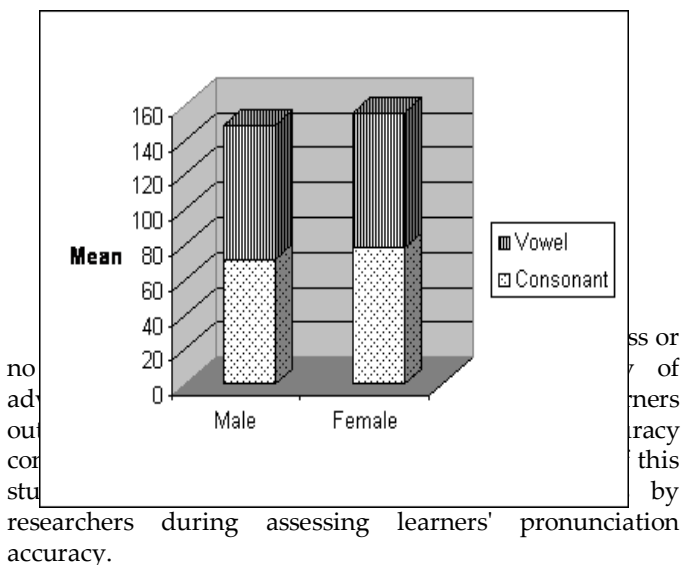


Figure1, also, points that the pronunciation accuracy of vowels for both male and female is not of significant difference and are almost the same. In the contrary, female outperform male subjects in producing accurate consonants, but it is not significantly noticeable to result in complete superiority of female over male subjects that confirms gender is of little significance concerning the pronunciation accuracy

*principal-reception*. Other challenge with consonants for learners is [ch] that females tend to pronounce it as /tʃ/ in word like *chemistry-character* and males mostly pronounce it as /k/ as in word like *channel-champion*, although it pronounced as /k/, /tʃ/ and /ʃ/ respectively in words *character-champion* and *mustache*. The other one is the letter [g] that female subjects tend to pronounce it as /dʒ/ and male subjects pronounce it as /g/. The other phonemes that are problematic for learners are -ssi-, -si- that are pronounced as /ʃ/ or /z/ based on its context as respectively in *mission-vision*, that are pronounced both as /tʃ/ and /z/ in different words that respectively are *signature-treasure*.

There is no difference or contrast in some sounds, lexical items, or structures between the two languages, so the learner will face no difficulties learning these elements of the L2. Examples can be found in the following phonemes in Farsi and English: /b, f, m, ʃ, tʃ, o, i, u/. Moreover, the other most common phoneme errors of the pronunciation are replacement, deletion, and insertion.

The observations demonstrated that the phonemes and consonant clusters which do not exist in the Farsi sound system and syllable structure caused difficulties for Farsi speakers of English to a varying degree. Moreover, unlike many languages like Turkish and Farsi, consonant clusters in English are not limited to two consonants, but they permit up to three consonant clusters initially and four finally. Thus, "initial consonant clusters in English words are broken up by vowel epenthesis." According to Shademan (2002), if a consonant's features are compatible with the vocalic features of spreading, the inserted vowel is a copy of the following vowel (i.e., the vowels share their features). However, when a consonant's features are not compatible with the feature(s) being spread, the default vowel /e/ will be inserted. It should be noted that all SC (S+ Consonant) clusters have epenthetic /e/. Thus, in these cases, it is consistently observed that the epenthetic vowel is located before the /s/ which may cause problems for Farsi speakers of English for example: *ski* that pronounced /eski/. On the other hand, in non-SC clusters, if the second member of the cluster is either /l/ or /r/. In these cases, if the

The challenge arise for learners because sometimes the same vowels in words are pronounced differently like /u/ as in *Dutch-cute-cruel-fur-crush* or different vowels that are pronounced the same in words such as *first-turn-word-learn-term*. In general, they tend to pronounce the phonemes in words just the same as it is written.

Both group of subjects tend to replace short vowel with long vowels; in other words, they tend to pronounce lax vowels as tense like *look-good-book-wood-foot* that mostly they pronounce them as /lu:k/, /gu:d/ /bu:k/, ... instead of /lʊk/, /gʊd/, /bʊk/, .... Moreover, learners pronounce /a/ instead of /æ/ in word *pal*. The other challenge for them is their failure to pronounce diphthongs and triphthongs that they pronounce them as single vowel like *allow* and *poor* that pronounce them as /əle/ and /pə/. Furthermore, female subjects tend to produce more open, spread, high and round vowels rather than male.

Both groups of subjects have the same problem with consonants such as [gh] when it is pronounced as /f/ in words like *tough-rough* because most of the time in words such as *though-through* [gh] is not pronounced. Sometimes the letter [c] is also problematic for learners that they mostly tend to pronounce it as /k/ in words like *cereal-*

cluster is followed by a high vowel, then there is copy epenthesis. For example: *clean*→ [kilin]. Furthermore, if the cluster is followed by a low vowel, then /e/ is inserted. For example: *traffic*→ [teræfik]. Finally, if the cluster is followed by a mid vowel, then there is copy epenthesis if the second member is /r/, and default epenthesis if the second member is /ɪ/ as in *press*→ [peres].

To support this view further, Swan and Smith (1987, p. x) suggest that the pronunciation errors made by L2 learners are considered not to be just random attempts to produce unfamiliar sounds, but rather reflections of their L1 sound system. Some studies try to explain these differences with sociophonetics, there have also been several studies that attribute this phenomenon to physiology.

## Conclusion

Vowel and consonant confusion may lead to more serious problems, so they should be our main concern, in spite of the fact that often very little attention is paid to learning pronunciation. To this end, this study attempts to investigate the impact of gender on pronunciation accuracy of Iranian advanced undergraduate university students and whether male or female outperform in accurate pronunciation of phonological characteristics in their speech production.

The statistical analyses reveal that gender does not affect pronunciation accuracy of learners considerably and the pronunciation accuracy of vowels for both male and female is not of significant difference and are almost the same. Meanwhile, female outperform male subjects in producing accurate consonants, but it is not significantly noticeable to result in complete superiority of female over male subjects.

In addition, the most problems derive from the combination of both segmentals and suprasegmentals and learners will usually have difficulty with sounds that don't exist in their L1.

### =Implications and Further Research

In this study there are implications for:

a) English teachers to pay much more attention to pronunciation by teaching phonetic rules with regard to the value of the strategy training in the language classes to enable students to learn more efficiently. It may allow teachers to obtain an awareness of the likely problems to be incurred by the learners' lack of familiarity with the phonetic differences between the learners' own pronunciation and more intelligible models, which would enable the learners to detect their own pronunciation errors and subsequently work towards correcting them.

b) Students to know how to carry out this task and obtain an accurate pronunciation to be understood by others. It can also assist learners who may not realize the extent to

which L1 English speakers misunderstand them as they have not been familiarized with the phonetic differences between the models of English pronunciation that they were taught and more intelligible models.

c) Syllabus designers not to ignore this task and set a place for it in English classes. This may lead to curriculum innovation studies in order to a more coherent picture of this area in relation to foreign language classes.

This could be attributed to EFL/ESL learners both in local schools and English schools. Accurate pronunciation generally meets with active cooperation from students.

The main pedagogic aim underlying my proposal is that, upon the implementation of a new methodology for teaching pronunciation, which combines fluency- with accuracy-focused tasks, students are expected to develop a highly acceptable phonological competence to become fluent bilingual speakers, a fact which will enable them to communicate in EFL (English as a Foreign Language), ESL (English as a Second Language) and EIL (English as an International Language) contexts.

We suggest that the door is now open and there is a scope for the development of future research in this area with regard to speech perception of learners and other variables that have significant influence on pronunciation such as: age, learner's first language, proficiency level, aptitude for oral mimicry, years in an English speaking country and residence with native speakers of English, and strength of concern for pronunciation accuracy that attempted to be controlled and homogenized in this study. In addition, the scope of this research could be enlarged to investigate the suprasegmental features of phonology as well rather than only focusing on segmental features.

## Acknowledgement

We would like to thank all of our colleagues in Rodaki Institute of Higher Education, Research Department of Applied Linguistics have helped to examine learners for the study and are grateful to those learners who have participated in our study.

## References

- [1] Anderson-Hsieh, J., Riney, T., Koehler, K. (1994). Connected speech modifications in the English of Japanese ESL learners. *Issues and Developments in English and Applied Linguistics* (IDEAL) 7, 31 - 52.
- [2] Badran A., H. (2001). Extraversion/Introversion and Gender in Relation to the English Pronunciation Accuracy of Arabic Speaking College Students. Retrieved April 2007 from <http://www.eric.ed.gov/contact/>. P. 34.
- [3] Bowen, T., & Marks J. (1992). *The pronunciation book: Student-centered activities for pronunciation work*. Harlow: Longman.
- [4] Byrd, D. (1992). Preliminary results on speaker-dependent variation in the TIMIT database. *Journal of the Acoustical Society of America*, 92(1):593-596.
- [5] Celce-Murcia, M., Brinton, D. M., Goodwin, J. M., (1996). *Teaching pronunciation: A reference for teachers of English to speakers of other languages*. Cambridge University Press,



Cambridge. Cruttenden, A., 2001. *Gimson's pronunciation of English*. Arnold, London.

[6] Celce-Murcia, M. (2005). *Teaching English as a second or foreign language*. third edition. United states: Heinle & Heinle, Thomson learning.

[7] Clarkson, R. (2006). *Great Tips to Achieve Accuracy in Pronunciation*. Retrieved Oct 05, 2009 from <http://www.eslonline.com>.

[8] Dalton, C. & Seidlhofer, B. (1994). *Pronunciation*. Oxford: Oxford University Press.

[9] Henton, C. (1995). Cross-language variation in the vowels of female and male speakers. In *Proceedings of the XIIIth International Congress of Phonetic Sciences (ICPhS 95)*, 420-423.

[10] Hancock, M. (1995). *Pronunciation games*. Cambridge: Cambridge University Press.

[11] Jenkins, J. (2000). *The phonology of English as an international language: new models, new norms, new goals*. Oxford: Oxford University Press.

[12] Konstantin, A. (2007). *How to Attain Accurate Pronunciation*. Retrieved February 28, 2007 from <http://EzineArticles.com/css/style.css?v=20100623>

[13] Makarova, V. (1997). 'Discovering Phonetics. *Journal on-line*. Document URL. Retrieved March 19, 1997 from <http://www.jaltpublications.org/tlt/files/97/mar/phonetics.html>

[14] Mirhassani, A. (2003). *A Contrastive Analysis of Persian and English Parts of Speech*. Tarbiat Modarres University: Tehran.

[15] Morley, J. (1994). *Pronunciation pedagogy and theory: New views, new directions*. TESOL, Alexandria, VA.

[16] Narasimhan, S. (2001). Speakers of Dravidian languages: Tamil, Malayalam, Kannada, Telugu. In M. Swan & B. Smith (Eds.), *Learner English: A teacher's guide to interference and other problems* (pp.244-250). Cambridge: Cambridge University Press.

[17] Piske Th., Ian R. A. MacKay and James E. F. (2001). Factors affecting degree of foreign accent in an L2: a review. *Journal of Phonetics*. 29(2), 191-215.

[18] Purcell, Suter, R. W. (1976). Predictors of pronunciation accuracy in second language learning. *Language Learning* 26, 233 - 253.

[19] Purcell, Edward T., Richard W. Suter. (2006). "PREDICTORS OF PRONUNCIATION ACCURACY: A

REEXAMINATION." *Language Journal-Online*. 30(2), 271 – 287.

[20] Roach, P. (1983). *English phonetics and phonology: A practical course*. Cambridge: Cambridge University Press.

[21] Scarcella, R. C., & Oxford, R. L. (1994). Second language pronunciation: State of the art in instruction. *System*, 22 (2), 221-230.

[22] Shademan, sh. (2002). *Epenthesis Vowel Harmony in Farsi*. Masters of Arts Dissertation: University of California. Retrieved March 15, 2007, from <http://www.linguistics.ucla.edu/people/grads/shademan/ShademanThesis.pdf>.

[23] Simpson Adrian P. and Christine Ericsson. (2003). Sex specific durational differences in English and Swedish. In Proc. XVth ICPhS, 1113-1116, Barcelona.

[24] Simpson, Adrian P. (2003). Possible articulatory reasons for sex-specific differences in vowel duration. In Proc. 6th International Seminar on Speech Production, Sydney.

[25] Swan, M., & Smith, B. (Ed.). (1987). *Learner English: A Teacher's Guide to Interference and Other Problems*. Cambridge: Cambridge University Press.

[26] Trudgill, P. (2005a). Finding the speaker-listener equilibrium: segmental phonological models in EFL. In K. Dziubalska-Kořaczyk & J. Przedlacka (Eds), 213-228.

[27] Trudgill, P. (2005b). Native speaker segmental phonological models. In K. Dziubalska-Kořaczyk & J. Przedlacka (Eds.), (pp. 77-98).

[28] Van den Doel, R. (2007). International Intelligibility in EIL. *Asian EFL Journal*. 9(4).

[29] Walker, Robin. (2001). *Pronunciation for International Intelligibility*. *Karen's Linguistics Issues on-line*: Retrieved from <http://www.012guestbook.com/cgi-bin/code.js>.

[30] Whiteside, Sandra P. (1995). Temporal-based speaker sex differences in read speech: A sociophonetic approach. In *Proceedings of the XIIIth International Congress of Phonetic Sciences (ICPhS 95)*, 3, 516-519.

[31] Whiteside, Sandra P. (1996). Temporal-based acoustic-phonetic patterns in read speech: Some evidence for speaker sex differences. *Journal of the International Phonetic Association*, 26(1), 23-40.

[32] Yavas, M. (2006). *Applied English Phonology*. Malden: Blackwell. <http://www.qwertystudios.com/sitemap>