Available online at www.elixirpublishers.com (Elixir International Journal)

Language and Testing

Elixir Lang. & Testing 84 (2015) 33999-34006

ISSN: 2229-712X

# The Relationship between IPA and Correct Pronunciation

Zahra Ahmadi Foumani[1] and Shad, Parisa Farrokh[2]

[1]Department of English Language, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran.

[2]Department of English Translation, Lahijan Branch, Islamic Azad University, Lahijan, Iran.

**ARTICLE INFO**

**Article history:**

Received: 3 June 2015;

Received in revised form:

15 July 2015;

Accepted: 27 July 2015;

**Keywords**

Pronunciation,

IPA,

Suprasegmental Features,

Stress,

Sound articulation.

**ABSTRACT**

English is a vehicle for international communication. In order to meet the demands of modern society, English teachers need to pay more attention to the development of learners' competence and focus on a more effective and successful method. This paper aims at stressing current perspectives on pronunciation learning and teaching. It summarizes the background of pronunciation teaching, emphasizes the need for incorporating pronunciation into foreign language classes owing to regarding pronunciation as a key to gaining full communicative competence, The present study investigated the possible relationship between IPA, stress and pronunciation skill of Iranian EFL learners. Seventy Iranian intermediate EFL students were selected as the main sample based on their performance on Oxford placement test. All participants were given a test of IPA and word stress. There was also a pronunciation test which was performed orally to evaluate their total pronunciation proficiency. Two EFL teachers participated in the scoring procedure. Pearson correlation test was run to the results of different sections of the pronunciation test using SPSS 22 to answer the research questions and to investigate the possible relationship between IPA, stress, and pronunciation skill of Iranian EFL learners. The relationships between Iranian intermediate EFL learners' total pronunciation skill and two components of pronunciation skill of including IPA competence and knowledge of word stress, were examined through running Pearson correlation test. The results indicated that there was a significant correlation between IPA competence and total pronunciation test scores of Iranian EFL students. It was found that there was also significant relationship between students' English pronunciation test scores and their performance in word stress.



## Introduction

Language learning is found on two mediums, the spoken and the written. However, researchers have appreciated to inquire into the significance of speaking in second language learning. Good speech is vital because speaking has a great power which producing the desired effect on human beings in expressing their perceptive views. Romero (2006) claimed there are great differences between the pronunciation of native and non-native speakers of a language. In other words, a foreign accent is the constant occurrence of the phonetic differences from the norms of a language which L1 speakers of that language recognize as unfamiliar to their own language sound system. In fact, learners with a foreign accent may be unintelligible in the sense that they are often misunderstood, or they may be intelligible but understanding them requires more effort.

Therefore, pronunciation is a key element in learning a language without which comprehension would be hindered. In other words, having good pronunciation for EFL learners is critical. A major difficulty which almost any ESL/EFL learner faces, is the achievement of acceptable pronunciation that enables them to be understood by the L1 English speakers. In fact, many of these learners master the elements of language such as syntax, morphology, or even semantics to the level of almost native-like competence but often fail to master correct and acceptable pronunciation. Pronunciation has always been perceived as a difficult area by teachers and learners alike. Pronunciation difficulties may be due to various factors, one of which is the lack of correspondence between English spelling of a word and its pronunciation (Asghari, 1992; Sprenger-Charolles & Siegal, 1997). By contrast, the International Phonetic Alphabet (IPA) has some symbols used to characterize the set of distinctive sounds, or 'phonemes', of English.

Another difficulty in pronunciation that many EFL Learners have, is the accurate perception and production of word stress. Errors related to primary word stress are a common problem among EFL learners and have a great impact on students' pronunciation intelligibility and their perception skills (Celce-Murcia, Brinton, & Goodwin, 1996). Because of the importance of pronunciation, the present research is going to find out the possible relationship between IPA, stress, and pronunciation skill of Iranian EFL learners.

In this relation, the research questions have been formulated as follows:

1) Is there any significant relationship between Iranian EFL learners' IPA competence and their pronunciation skill?

2) Is there any significant relationship between Iranian EFL learners' knowledge of word stress in English language pronunciation and their total pronunciation skill?

## Review of Literature

Pronunciation plays an important role in our personal and social lives because we project our regional, social and ethnic identities through the way we speak and by means of our accent. It is also a major factor in our intelligibility to our listeners. According to Setter and Jenkins (2005), "pronunciation, then, plays a vital role in successful communication both productively

Tele:

E-mail addresses: farrokh_p@yahoo.com

and receptively". There have been many differences of opinion over the years about the role of pronunciation in language teaching and about how best to teach it. The grammar translation method and reading-based approaches have viewed pronunciation as irrelevant. In the direct method, pronunciation is very important; however, the methodology is primitive; the teacher is ideally a native or near-native speaker of the target language presenting pronunciation inductively and correcting through modeling. In the audio-lingual approach, pronunciation is likewise very important and there is a great emphasis on the traditional notions of pronunciation, minimal pairs, drills and short conversations (Celce-Murcia &Goodwin, 1991). Situational language teaching, developed in Britain between 1940 and 1960, also reflected the audio-lingual view of the pronunciation class (Richards and Rodgers 1986).

Since the conventional wisdom of the late 1960's and early 1970's held that native-like pronunciation could not be totally taught anyway, the cognitive code approach de-emphasized pronunciation in favor of grammar and vocabulary. It was during these years that questions were asked about the role of pronunciation in the ESL/EFL curriculum, whether the focus of the programs and the instructional methods were effective or not.

In many language programs, the teaching of pronunciation was eliminated because many studies concluded "that little relationship exists between teaching pronunciation in the classroom and attained proficiency in pronunciation; the strongest factors found to affect pronunciation (i.e. native language and motivation) seem to have little to do with classroom activities" (Sutter, 2012). The Communicative Approach, which persists today with criticism from some quarters, sprung into prominence in the 1980's. This approach holds that oral communication is the primary use of language and therefore should be central to the mode of instruction. Though pronunciation is not an explicit feature in this mode of instruction, the prominence of pronunciation has been stressed by it (Carey 2002).

Students can be expected to do well in the pronunciation of English if the pronunciation class is taken out of isolation and becomes an integral part of the oral communication class (Morley, 1991). Moreover, the goal of pronunciation has changed from the attainment of 'perfect' pronunciation to the more realistic goals of developing functional intelligibility, communicability, increased self-confidence, the development of speech monitoring abilities and speech modification strategies for use beyond the classroom (Morley, 1991). The overall aim of these goals is for the learner to develop spoken English that is easy to understand, serves the learner's individual needs, and allows a positive image of himself as a speaker of a foreign language.

According to Horner (2010) the components which constitute the pronunciation skill are as follows:

•The sound-units (phonemes) of the language and their realization in particular contexts (allophones);

• The phonetic features which distinguish phonemes (distinctive features, e.g. voicing, rounding, nasality and …);

•The phonetic composition of words (syllable structure, the sequence of phonemes, word stress, word tones);

•Sentence phonetics (prosody) sentence stress and rhythm;

• Intonation;

• Features of linking: phonetic reduction, vowel reduction, strong and weak forms, assimilation, elision".

Based on Horner's idea, the importance of speech sounds as the basic component of pronunciation skill will be cleared. According to Horner's framework, it can be concluded that the distinctive features of phonemes – the production of speech sounds – and word stress are considered as essential ingredients of pronunciation skill. This paper is going to find whether the use of IPA will improve the pronunciation skill. Moreover the relationship between stress and pronunciation skill is investigated.

**Pronunciation skill, IPA and Stress**

Pronunciation deals with the phonological process that refers to the principles that determine how sounds vary and pattern in a language. There are two features of pronunciation; phonemes (segmental) and suprasegmental features. A speaker who constantly mispronounces a range of phonemes can be extremely difficult for a speaker from another language community to understand (Gerard, 2000).

Rivers (1968) contended the difficulty of non-native speakers is barely due to their lack of vocabulary and grammar, but primarily because of the sounds they produce are incorrect, the stress and the intonation seem strange. Celce-Murcia (1987) also commented that if a non-native speaker's pronunciation is under performed, he or she will not be able to communicate orally even though the mastery of vocabulary and grammar is good. Pronunciation is one of the most noticeable features of a person's speech, often it is not explicitly taught. According to Hammer (2001), almost all English language teachers get students to study grammar and vocabulary, yet some of these teachers make little attempt to teach pronunciation in any overt way and give attention to it in passing. Most teachers do not provide instruction at all and those few that do generally adopt a hit or miss approach, relying on materials that lack grounding and desired results (Fraser, 2002). Many of English language learners confront difficulties in learning English pronunciation (Gilakjani, 2011) and Iranian English learners are no exception. Despite the importance of pronunciation, the reality is that in many Iranian English language classrooms, little attention is paid to teaching pronunciation (ibid). Gilbert (2008) argues that teachers often find that they don't have enough time in the classes to give proper attention to this aspect of English instruction. Gilbert further states that, presentation and practice of a series of boring and seemingly unrelated topics, like drilling sounds over and over again (e.g. minimal pair work) often lead to discouraging results, and discouraged students and teachers end up wanting to avoid pronunciation altogether (ibid). The researcher also believes that the Iranian EFL teachers are not provided with suitable course books and materials that help them improve their pronunciation teaching, whereas according to Fraser (2000) teachers need to be provided with materials to help them improve their effectiveness in teaching pronunciation. In addition, many Iranian EFL teachers do not consider the role of IPA in learning correct pronunciation. Only 5 percent of the teachers who participated in Dahmardeh's research (2009), regarded teaching phonetic symbols and pronunciation as the main purpose and emphasized on specific text books of pronunciation. Having considered all mentioned points, the importance of pronunciation skill in second or foreign language learning will be clarified. Accordingly, the present study investigates the relationship between IPA and pronunciation.

This alphabet has been used to represent the English language since 1476 when William Caxton opened his printing press in London, England. The problem was that the Latin alphabet has only 26 symbols. English as spoken language has been developing since 450 AD and commonly uses 40 sounds. The Latin alphabet has never accurately represented the English spoken language. In 1886, an international group developed an

enormous bank of symbols to represent every sound in human speech. It was a great idea, and it was called International Phonetic Alphabet (IPA). The International Phonetic Alphabet was created soon after International Phonetic Association was established in the late 19th century. It was intended as an international system of phonetic transcription for oral language, originally for pedagogical purpose. The association was established in Paris in 1886 by French and British language teachers led by Paul Passy.

However, the first issue the English language has with IPA is that is based on French language. The use of phonetic transcription in the teaching of English as a second or foreign language (using the IPA symbols) is a suitable method for improving pronunciation. English is the most widely taught language in the world, and the IPA is the most widely used alphabet for phonetic transcription. Phonetic transcription is nothing more than a written record of the sounds of spoken language.

The relationship between phonetic transcription and spoken language is very similar to that between a printed musical score and a musical performance. Transcription separates pronunciation from actual audio recording. In reality it has many advantages for teaching spoken language and pronunciation. There are two kinds of transcriptions: 1.Phonemic or broad, and 2.Narrow or phonetic transcription. In broad transcription the phonemes are represented; however, in narrow transcription, finer points of pronunciation are shown. The alphabet has under gone a number of revisions during its history. Five versions of the IPA are in current use: 'revised to 1951', 'revised to 1979', revised to 1989', 'revised to 1993' and 'revised to 1996'. However, there are few differences between them in terminology.

Fortunately, the IPA is easy to learn, despite the daunting appearance it might have at first, because there is an exact one to one correspondence between written symbols and spoken sounds. According to Horner (2010) speaking with an accurate pronunciation is the most important aspect of language communication ability and it is possible for students to learn and acquire the sound correctly but still be unable to use and communicate the words and sound correctly. By the study of Nakashima (2006) teaching of the IPA symbols is the most important aim of language teaching. In teaching pronunciation, it is useful to list and define the sounds and morphemes of the target language by writing them down with phonetic representation help EFL learners to gain or get correct and standard accent in English. The learners having accurate pronunciation are expected to be sensitive at least about two concepts, i.e. the sounds of language or phonology and stress, etc. (ibid).

The prime purpose of the alphabet is to handle the notion of phonemes in the 3000 or so languages which exist in the world. In addition, however, the alphabet has also developed a range of diacritics which allow it to be used for allophonic as well as phonemic transcription. But even without diacritics in can still handle many allophonic variants. This is because phonemes in one language may well be simply allophones in another. For example, the /m/ in symphony is often given a labio-dental articulation because of the influence of the following sound. That is bottom lip, instead of touching the upper lip, touches the upper teeth. This allophone is symbolized as [m]. Students sometimes think the IPA had the capacity to symbolize any human speech sound. It's important to recognize that it doesn't. The fact that the symbols (with or without diacritics) can also be used for an allophonic transcription is a valuable extra.

In this research, one important suprasegmental feature affecting on the correct and proper pronunciation, ` "stress" is also studied. In linguistics, stress is the relative emphasis that may be given to certain syllables in a word, or to certain words in a phrase or sentence. Stress is typically signaled by such properties as increased loudness and vowel length, full articulation of the vowel, and changes in pitch. The stress placed on syllables within words is called word stress or lexical stress. Some languages have fixed stress, meaning that the stress on virtually any multi-syllable word falls on a particular syllable, such as the first or the penultimate. Other languages, like English, have variable stress, where the position of stress in a word is not predictable in that way. Sometimes more than one level of stress, such as primary stress and secondary stress, may be identified. Accordingly, the present study investigates the relationship between IPA, stress and pronunciation skill.

## Materials and Methods

### Subjects

This study was conducted with randomly- selected English translation students from Islamic Azad University (Rasht Branch). One hundred fifty- five English translation students, with the age range of 18-43, took part in the first phase of the study. Seventy Iranian intermediate English translation students (50 females and 20 males) were selected as the main sample based on their performance on Oxford placement test.

### Instruments

Four tests were used in the present study: Oxford Placement Test (OPT), IPA test, stress test and pronunciation test. The first test was used to measure the participants' language proficiency; the second and the third ones were used to assess the students' knowledge of IPA and stress, and the last one was used to evaluate their total pronunciation proficiency. OPT test comprised three sections and the participants took the structure, vocabulary, and reading comprehension segments of the test with a maximum possible score of 50 points. It was developed in order to measure students' proficiency level (Appendix A). This test includes 40 multiple-choice tests that consists of grammar and vocabulary questions. In addition, it includes a reading text with 10 comprehension questions. The last part of this test contains an optional writing activity, however, nobody answered it. Seventy students whose score fell within the range of + 1SD from the mean score were selected as the main sample for the present study.

IPA test contained 20 questions, 10 multiple choice tests and 10 transcription of words which taken from "Mastering the international phonetic alphabet" book. Stress test involved 20 words which their stress should be determined. The book of "Pronounce it perfectly in English" was used (Appendix B). Based on Farhady et al (1999) pronunciation tests attempt to assess the examinees' ability to recognize and produce the sounds, stress patterns, and the tunes of the language in a phonemically acceptable way. Therefore the best way to test one's ability in pronunciation skill is testing production of segmental and supra-segmental phonemes. Two EFL teachers participated in the scoring procedure of pronunciation test.

### Procedure

The OPT of the current study administered for measuring the proficiency level of participants. Administrating the OPT was about an hour. The IPA test was the transcription of words. In the stress test the participants should determine the stress of words. The time for the IPA and stress tests was an hour. In pronunciation test, the examinees are asked to retell a story, they are given to read prior to being tested. The reading texts were taken from the "Oral Reproduction" book. Evaluation was

mainly focused on the testees' pronunciation of speech sounds and stress. The maximum possible score for the OPT was 50 points. The criterion for scoring all the IPA, stress, and pronunciation tests was the maximum of 20.

**Data Analysis**

The data obtained from hypothesis testing of the study was analyzed via applying Pearson correlation test and SPSS 22 to the results of different tests of the study, in order to answer the research questions and to investigate the possible relationship between IPA, stress, and pronunciation skill of the participants. Moreover, the reliability of the instruments namely pronunciation test and OPT test was established through running Cronbach's Alpha to the results of the tests in a pilot study.

**Results and Discussion**

**Pilot Study**

**Reliability Analyses of the OPT test and Pronunciation Test**

The reliability of the pronunciation test and OPT test were estimated through running Cronbach's Alpha to the results of the tests in a pilot study on (15) English translation students. The results are presented in Table 1.

The values of reliability were explained according to the reliability standards suggested by Barker, Pistrang, and Elliott (1994). The values of Cronbach's Alpha for the pronunciation test and OPT test were (.820), and (.761), respectively that were both acceptable indicating that the instruments could be considered as reliable tools for the main study (table 2).

**Inter- Rater Reliability Analysis of the Pronunciation Test scores**

In assessing each participant's pronunciation performance, two different scorers who were experienced foreign language teachers took part in the scoring procedure. The consistency of the two scorers' evaluations was checked using correlation analysis that denoted a relatively high level of inter-rater reliability index for the pronunciation test scores in the pilot study. The established reliability index for the two raters was (r1= .805):

Table 3 depicted the results of the Pearson product moment correlation for the two raters' scores of the pronunciation test. The value of correaltion coeficienct reported amounted to (.805) offering that there was an acceptable correlation between the two raters who took part in scoring procedure of the pronunciation test ( $P \leq .01$).

**Main study**

**General Foreign Language Proficiency Test (Oxford Placement Test)**

To pick out the main sample and to make certify that the subjects were approximately at the same level of general foreign language proficiency at the beginning of the study, Oxford placement test (OPT) was administered to 155 of English translation students. The test comprised three sections and the participants took the structure, vocabulary, reading comprehension, and writing segments of the test with a maximum possible score of 50 points. Seventy students whose score fell within the range of + 1SD from the mean score were selected as the main sample for the present study. The results of the OPT test for 155 students are presented in the following table:

Table (4) revealed the results of group statistics and numerical information for the OPT test scores which were directed for choosing uniform sample of English translation students. Measures of central tendency comprising the mean ( 31.52), the median( 32), the mode (35) and measures of scattering particularly the range(19), the variance(29.75), and the standard deviation (5.45) together with measures of distribution such as Skewness (-.459) and Kurtosis (-.921) were displayed for the OPT test. The above descriptive statistics was reported for the 155 participants. For the present study, the main sample including 70 homogeneous participants were selected from among those whose score fell within the range of + 1 SD from the mean score (31.5290 + 5.45502, 31.5290-5.45502). Therefore, a cut-point of (26.7) to (36.97) was set and 70 learners were selected.

**Assessing Normality**

The main statistical techniques employed in this study namely Pearson correlation test assumed that the distribution of scores was 'normal'. Normal is used to describe a symmetrical, bell-shaped curve, which has the greatest frequency of scores in the middle with smaller frequencies towards the extremes (Gravetter & Wallnau, 2004, p.48). Consequently, Normality was estimated by betting Kolmogorov- Smirnov test, Skewness and kurtosis values and using the Explore procedure. In so doing, the normality of the distribution of scores for the students' Total pronunciation score, IPA, and word stress were assessed. The results are presented in table (5):

In table 5, descriptive statistics and other information concerning the variables were provided. To obtain the 5% Trimmed Mean, the top and bottom 5 percent of the cases were removed and a new mean value was computed. The original means and the new trimmed means were compared for all the tests and it was found that extreme scores were not having a strong impact on the means. This means that, since the trimmed mean and means values were not very different and the two mean values were very similar for the tests, the values were not too different from the remaining distribution and thus these cases were kept in the data file. In addition, Skewness and kurtosis values were also provided as part of this output that were within the range of + 2 and confirmed the normal distribution of scores in all tests (table (5).

In table (6), the results of the Kolmogorov-Smirnov statistic were given. This assessed the normality of the distribution of scores for the tests. The non-significant results (Sig. $\geq$ .05) indicated normality of distributions (table 6). The actual shapes of the distribution for the tests were also displayed and supported by the normal probability plots (labeled Normal Q-Q Plot). In these plots, the observed value for each score was plotted against the expected value from the normal distribution. The reasonably straight lines suggested normal distributions. The Normal Q-Q Plots were obtained by plotting the actual deviation of the scores from the straight line.

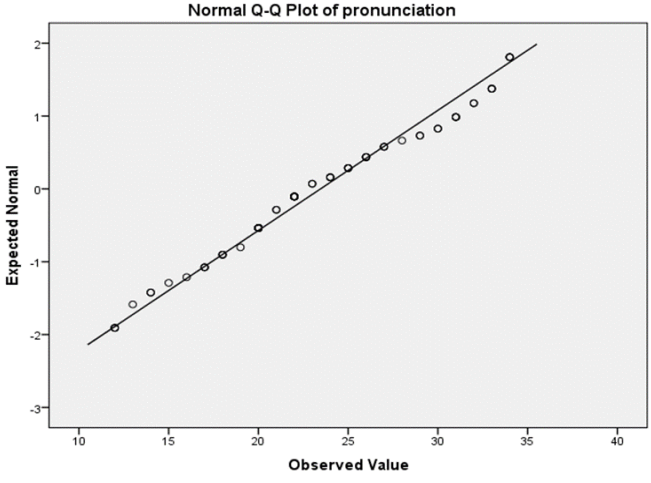


**Figure 1. Normal Q-Q Plot for Total Pronunciation Test Scores**

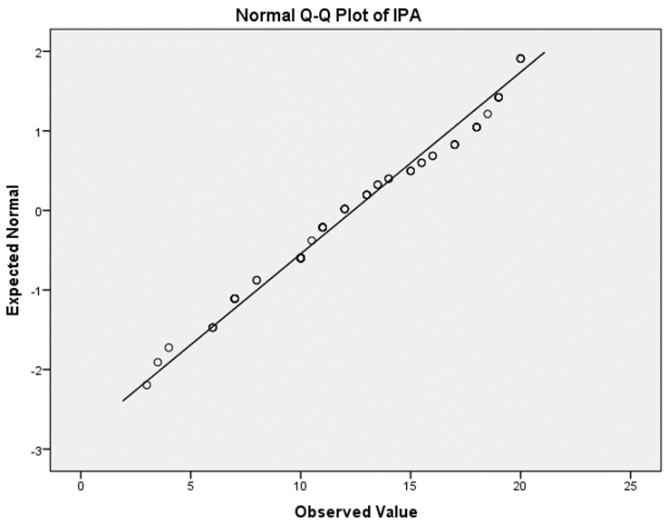


**Figure 2. Normal Q-Q Plot for IPA Scores**

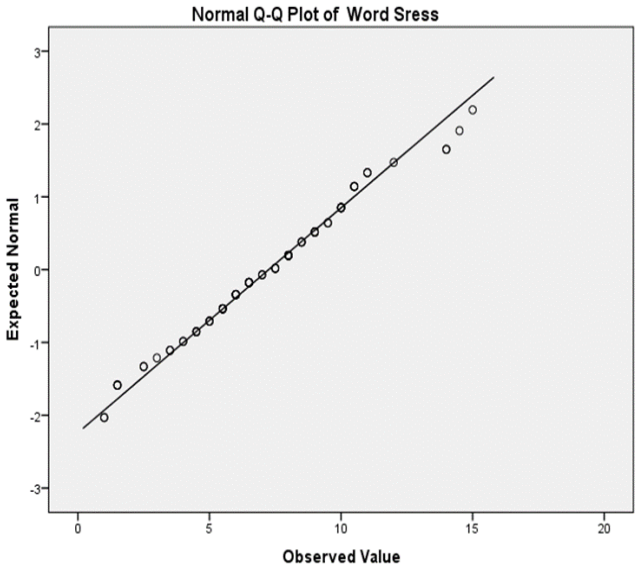


**Figure 3. Normal Q-Q Plot for Total Word Stress Test Scores**

**The First Research Question**

RQ1: Is there any significant relationship between Iranian English learners' IPA competence and their pronunciation skill?

The following null hypothesis was formulated:

H01: There is no significant relationship between Iranian English learners' IPA competence and their pronunciation skill.

To provide answer for the first research question, Pearson Correlation Test was run to the mean scores of the IPA section and total pronunciation test scores obtained for the individuals. The output generated from this procedure is presented in table (7) below:

SPSS output supplied a table giving the correlation coefficient between IPA section and total pronunciation test scores of Iranian English translation students, the significance level and the number of cases. The Pearson correlation coefficient value (r= +.556) was positive, indicating a positive correlation between IPA section and total pronunciation test scores of Iranian EFL students. This value indicated the strength of the relationship between the two variables. The higher the participants performed in IPA section, the better their total pronunciation scores were.

The result of Pearson correlation test was interpreted based on Cohen's (1988) classification. Cohen (1988, pp. 79–81) recommended the following guidelines for interpreting the results of the correlation coefficient:

The above guidelines were applied to interpret the(r) value found in the present study. There was a "large" correlation between the two variables (r= .556). Calculating the Coefficient of Determination for the Relationship between IPA and Total Pronunciation Test Scores.

To get an idea of how much variance the two variables shared, the coefficient of determination was calculated. The (r) value was squared and then converted to 'percentage of variance'; 100 then multiplied it. In this study, the participants' performance on IPA section and their total pronunciation test scores correlated (r=.556) shared (30.91%) of their variance. Thus, there was an acceptable overlap between the two variables. This meant that the participants' performance on IPA test helped to explain nearly (30.91%) of the variance in their foreign language pronunciation test scores. Therefore, a large, positive correlation was found between the two variables, (rho = +.556, n = 70, p ≤. 01). This rejected the first null hypothesis suggesting that there was a significant correlation between IPA competence and total pronunciation test scores of Iranian English translation students. The following figure further depicts the correlation between EFL learners' IPA and their total pronunciation test scores:

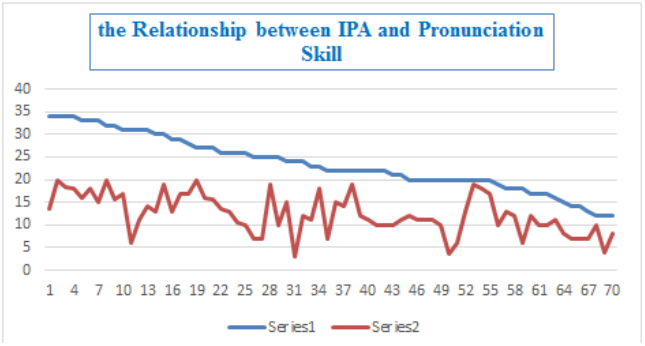


**Figure 4.The Correlation between IPA and English language Pronunciation Skill of Iranian EFL Students**

As it is illustrated in the above figure, the higher the participants performed on IPA test, the better their total pronunciation test scores were and vice versa.

**The Second Research Question**

RQ2: Is there any significant relationship between Iranian English learners' knowledge of word stress in English language pronunciation and their total pronunciation skill?

The following null hypothesis was formulated:

H02: There is no significant relationship between Iranian English learners' knowledge of word stress in English language pronunciation and their total pronunciation skill.

To provide answer for the second research question, Pearson Correlation Test was run to the mean scores of the word stress section and total pronunciation test scores obtained for the individuals. The output generated from this procedure is presented below.

Pearson correlation test provided a table giving the correlation coefficient between the pair of variables (word stress and total pronunciation test scores), the significance level, and the number of cases. The direction of the relationship between the variables was also considered. There was a positive correlation between the two variables (i.e. the participants' high scores on word stress section were associated with high scores on their performance in pronunciation test). In table 9, the Pearson correlation coefficient (+.505) indicated a positive correlation between the two variables.

**Table 1. Reliability Statistics for the Pronunciation Test and OPT test**

| | Cronbach's Alpha | N of Items |
|---|---|---|
| pronunciation test | .820 | 30 |
| OPT test | .761 | 20 |

**Table 2. Suggested Standards for the Reliability Index (Adopted From Barker, Pistrang, and Elliott, 1994**

| Interpretation | Reliability indices |
|---|---|
| Good | .80 |
| Acceptable | .70 |
| Marginal | .60 |
| Poor | .50 |

**Table 3. Correlations between the Two Raters' Scores (Inter- Rater Reliability Analysis)**

| | | Rater B |
|---|---|---|
| Rater A | Pearson Correlation | .805** |
| | Sig. (2-tailed) | .000 |
| | N | 15 |

** Correlation is significant at the 0.01 level (2-tailed).

**Table 4. Group Statistics for the Results of the OPT Test**

| OPT | | |
|---|---|---|
| N | Valid | 155 |
| | Missing | 0 |
| Mean | | 31.5290 |
| Std. Error of Mean | | .43816 |
| Median | | 32.0000 |
| Mode | | 35.00 |
| Std. Deviation | | 5.45502 |
| Variance | | 29.757 |
| Skewness | | -.459 |
| Std. Error of Skewness | | .195 |
| Kurtosis | | -.921 |
| Std. Error of Kurtosis | | .387 |
| Range | | 19.00 |
| Minimum | | 20.00 |
| Maximum | | 39.00 |
| Sum | | 4887.00 |

**Table 5. Descriptive Statistics for Total Pronunciation Score, IPA, and Word Stress**

| | | | Statistic | Std. Error |
|---|---|---|---|---|
| Total pronunciation score | Mean | | 23.4571 | .72480 |
| | 95% Confidence Interval for Mean | Lower Bound | 22.0112 | |
| | | Upper Bound | 24.9031 | |
| | 5% Trimmed Mean | | 23.5000 | |
| | Variance | | 36.773 | |
| | Std. Deviation | | 6.06412 | |
| | Skewness | | .081 | .287 |
| | Kurtosis | | -.769 | .566 |
| IPA | Mean | | 12.3929 | .52316 |
| | 95% Confidence Interval for Mean | Lower Bound | 11.3492 | |
| | | Upper Bound | 13.4365 | |
| | 5% Trimmed Mean | | 12.4524 | |
| | Variance | | 19.159 | |
| | Std. Deviation | | 4.37706 | |
| | Skewness | | -.029 | .287 |
| | Kurtosis | | -.736 | .566 |
| Stress | Mean | | 7.2500 | .38700 |
| | 95% Confidence Interval for Mean | Lower Bound | 6.4780 | |
| | | Upper Bound | 8.0220 | |
| | 5% Trimmed Mean | | 7.1865 | |
| | Variance | | 10.484 | |
| | Std. Deviation | | 3.23785 | |
| | Skewness | | .139 | .287 |
| | Kurtosis | | -.134 | .566 |

**Table 6. Kolmogorov- Smirnov for Test of Normality**

| | Kolmogorov-Smirnov | | |
|---|---|---|---|
| | Statistic | df | Sig. |
| Total pronunciation score | .109 | 70 | .078 |
| | | | |
| IPA | .096 | 70 | .178 |
| Stress | .063 | 70 | .200 |

| | | IPA |
|---|---|---|
| pronunciation | Pearson Correlation | .556** |
| | Sig. (2-tailed) | .000 |
| | N | 70 |

**. Correlation is significant at the 0.01 level (2-tailed).

**Table 8. Cohen's Guidelines for Interpreting the Results of the Correlation Coefficient**

| Interpretation | Correlation value |
|---|---|
| Small correlation | .10 to .29 |
| Medium correlation | .30 to .49 |
| Large correlation | .50 to 1.0 |

**Table 9. Correlation between Knowledge of Word Stress and Total Pronunciation Skill**

| | | Word Stress |
|---|---|---|
| Total Pronunciation scores | Pearson Correlation | .505** |
| | Sig. (2-tailed) | .000 |
| | N | 70 |

**. Correlation is significant at the 0.01 level (2-tailed).

The size of the value of the correlation coefficient was also measured. Regarding the interpretation of the findings of Pearson correlation, Cohen's classification (1988, pp. 79–81) was employed (table 8). These guidelines were applied to interpret the findings. In this study, there was a large correlation between the two variables suggesting quite a strong relationship for students' total pronunciation scores and their performance in word stress test. Calculating the Coefficient of Determination for the Relationship between Word Stress test and total Pronunciation Test Scores

To get an idea of how much variance the two variables shared, the coefficient of determination was calculated. The r-value was squared and in order to convert this to 'percentage of variance', it was multiplied by 100. The two variables correlated (r=.505) shared .505 × .505 = .2550* 100 = 25.50 percent of their variance. There was an acceptable overlap between the two variables. The students' word stress scores helped to explain nearly (25.50) percent of their performance in pronunciation. The relationship between students' English total pronunciation scores and their performance in word stress test was investigated. The Pearson product-moment correlation coefficient was used. Preliminary analyses were performed to ensure no violation of the assumptions of normality (section 4.2.2). There was a large, positive correlation between the two variables, r = +.505, n = 70, p < .01, with high English pronunciation scores associated with higher performance in word stress test. Thus, the second null hypothesis was rejected, implying that there was significant relationship between students' English pronunciation test scores and their performance in word stress.

The relationships between Iranian intermediate English learners' total pronunciation skill and two components of pronunciation skill of including IPA competence and knowledge of word stress were examined through running Pearson correlation test. It was found that the highest degree of correlations were between "IPA competence", "word stress" and total pronunciation skill.

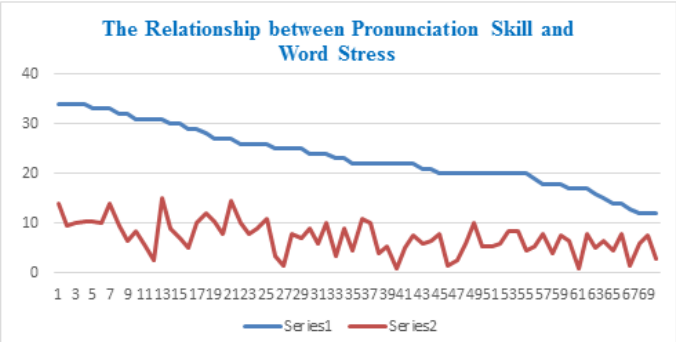


**Figure 5. The Correlation between Word Stress and Pronunciation Skill of Iranian English Translation Students**

**Conclusion**

To master a language, one has to learn which sounds occur in the language and how they pattern according to the rules of that language. Perfect or near perfect mastery of the foreign language sound system i.e., phonetically acceptable, is a desirable goal. The findings of the present study revealed that using IPA in teaching and learning of pronunciation skill could result in a better performance of language learners. Therefore it confirms Hancock's research result that the IPA appears to help learners learn and remember the pronunciation of new words. Moreover, it is more useful and effective than repetition of sound segments. This research discusses the use of phonetic transcription in the teaching of English as a second or foreign language (ESL/EFL), using the International Phonetic Alphabet (IPA). It should be mentioned that despite its crucial role in teaching correct pronunciation to a great extent, ignored in EFL classrooms in Iran. This may be resulted from the fact that in teaching pronunciation, there is not a lesson in English textbooks that would be only focused on pronunciation practice and teaching the IPA symbols since pronunciation is taken as an additional practice in all course books. Therefore devoted time to teaching the pronunciation skill and the IPA is so limited that many Iranian English learners are not familiar with the IPA

symbols even at advanced level. Moreover, the most frequent strategy in teaching the pronunciation skill is drills which may lead to discouraged students and teachers who both want to avoid learning and teaching pronunciation. Furthermore, the results of this study indicated that there is a significant relation between the stress knowledge and the acceptable pronunciation. However, stress patterns are neglected by most of the Iranian English learners, unfortunately. The possible differences between the stress pattern of Persian and English have a great potential to affect the production of English by Persian speakers. Inadequate stress can significantly alter meaning and the ability to communicate in a language. The language learner who does not learn appropriate stress can experience constant misunderstandings and may even at times appear abrupt or rude.

**Acknowledgement**

Hereby, I would like to express my heartfelt and gratitude to Ms. Parisa Farrokh, cooperating in this study especially in data analysis, for her insightful recommendations and encouragement. Besides, I wish to express my appreciation to the students for their contribution in this study.

**References**

Asghari, Z. (1992). An intralingual analysis of Iranian EFL learners' difficulties caused by the inconsistency between spelling and pronunciation International journal of educational investigations,1(1) , 134-147.

Barker, CH , Pistrang,N. & Elliott, R. (1994). Research methods in clinical psychology: An Introduction for students and practitioners ( pp.78-109). USA: Wiley.

Carey, J.(2002) Teaching native speakers to listen to foreign accented speech. Journal of Multilingual and Multicultural Development, 23 (4),245-259.

Celce-Murcia, M.(1987). Teaching English as a second or foreign language (pp.123-134). Boston: Heinle & Heinle

Celce-Murcia,M., Brinton, D.M. & Goodwin, J.M. (1997). Teaching pronunciation (pp.87-103). Cambridge: Cambridge University Press.

Celce-Murcia,M. & Goodwin,M. (1991). Teaching English as a Second or Foreign Language (pp.136-149). Cambridge: Cambridge University Press.

Cohen,J. (1988).Statistical power analysis for the behavioral sciences (pp.77-165). Mahwah, NJ: Lawrence Erlbaum Associates.

Dehmardeh, M. (2009). Communicative textbooks: English language text books in Iranian Secondary School. Linguistic online40, 4/09.www. Linguistik online.com/40-09/ dahmardeh.html.

Farhady, H. , Jafarpour,A. , Birjandi,P. (1999). Testing language skills from theory to practice (pp. 199-211). Tehran: SAMT

Fraser,H. (2000).Teaching Pronunciation: A Handbook for Teachers and Trainers Department (pp.33-54). Department of Education Training and Youth Affairs. (DETYA)

Fraser,H. (2002). ESL pronunciation teaching: Could it be more effective?,Australian language matters, 7(4), 7-8.

Gerad,E. (2000).Speech rhythm in world English: The case of Hong Kong. TESOL, 28 (4), 1-20.

Gilakjani, A. (2011). A study on the situation of pronunciation instruction in ESL/EFL classrooms. Journal of Studies in Education, 1(1) , 1-15.

Gilbert,J. (2008). Second language accent and pronunciation teaching: A research-based approach. TESOL, 39(3) , 379– 397.

Gravetter,F. , Wallnau.,L. (2004). Statistics for the behavioral sciences. USA: Wardsworth

Hammer, R.(2001). Pronunciation priorities, the lingua franca core, and monolingual groups. Speak Out, 18 (1) , 4-9.

Hancock, M.(2010). On using the phonemic script in language teaching. ELT Journal, 60(2) , 143-150.

Horner,G. (2010). How to teach pronunciation (pp.66-88). Oxford: Oxford University Press.

Morley, K. (1991).The relationship between native speaker judgments of nonnative pronunciation and deviance in segmentals, prosody, and syllable structure. Language Learning, 42 (4),529-555.

Nakashima, H.N. (2006).Using Learning strategies in pronunciation train for non English major students. Journal of Language and Linguistic Studies, 3(1), 5-10.

Richards,J. & Rodgers, T. (1986). Approaches and methods in language teaching (pp.68-90). Cambridge: Cambridge University Press.

Rivers, W.M. (1986). Teaching Foreign Language Skills (pp.104-134). Chicago: Chicago University Press.

Romero,A. (2006). The relationship between native speaker judgments of nonnative pronunciation and deviance in segmentals, prosody, and syllable structure. Language Learning, 42 (4) , 129-155.

Setter, J. & Jenkins,J. (2005). Pronunciation. Language Teaching, 38(1) , 1–17.

Sprenger-Charolles,L. & Siegal,L.S.(1997). A longitude study of the effects of syllabic structure on the development of reading and spelling skill. Applied Psycholinguistics, 18(2) , 485-505.

Sutter, J. (2012).Suggestions for beautifying the pronunciation of EFL learners in Turkey. Journal of Language and Linguistic Studies, 2(1) , 111-125.