

The Effect of Phonetic Transcription of TV News on Iranian Intermediate EFL Learners' Pronunciation Accuracy at Word Level

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Abstract

This study aimed to investigate the effect of phonetic transcription of TV news on Iranian intermediate EFL learners' pronunciation accuracy at the word level. The question of this study sought to answer whether or not the phonetic transcription of TV news improves the pronunciation accuracy of Iranian EFL learners at the intermediate word level. To answer this question, the selection of participants was done among 30 intermediate language learners in Erfan Academic in Ramsar. They were divided into two groups with equal numbers of control and experimental group. Both of these groups received pretest and posttest of pronunciation which included twenty words. The experimental group practiced pronunciation via phonetic transcription of TV news while the control group practiced through the conventional method. After 5 sessions, the posttest was administered to both groups of study. Finally, the data were analyzed via applying an independent sample-T-test. The results of the study indicated that the mean of these two groups was significantly different ($\text{sig} \leq 0/05$) and the results can be of significance for language teachers, language learners, as well as language material designers.

Keywords: [phonetic transcription](#), [pronunciation accuracy](#), [word level](#), [TV news](#)

1. Introduction

It is quite natural that the learners of English as a second or foreign language encounter problems in their pronunciation (Begum & Hoque, 2016; Haghighi & Rahimy, 2017). Pronunciation is the act or manner of pronouncing words; utterance of speech, a way of speaking a word, especially a way that is accepted or generally understood, and a graphic representation of the way a word is spoken, using phonetic symbols (Ahmad, 2012; Pourhosein Gilakjani, 2016, 2017). Even though English pronunciation is very important for oral communication and communicative competence, it is sometimes neglected in many languages teaching programs (Pourhosein Gilakjani & Sabouri, 2016). Arashina and Shahrokhi (2016), Farhat and Dzakiria, (2017), Pourhosein Gilakjani (2018), and Pourhosein Gilakjani, Namaziandost, and Ziafar (2020) mention that the study of pronunciation had been a relatively neglected issue in the foreign/ second language acquisition literature. Likewise, in classroom contexts, pronunciation has received less attention as compared to the other language components and skills with the belief that it is peripheral to successful communication.

Jahan (2011) claims that accurate pronunciation helps students to achieve the goal in communication, i.e. their utterances can be understood by the audience clearly and easily and they will also be able to understand native speakers' conversations. Learners may have acquired perfect reading and writing skills while still being unable to communicate functionally in the second language (L2) (Vafaei & Sadeghpour, 2013). Phonetic transcription is a very important and crucial research issue in phonetic science. It is the process to represent speech information in terms of the sequence of some phonetic symbols. These symbols inherently capture the information about the manner and the place of articulation for the production of a particular speech sound. Ideally, the sequence of phonetic symbols should be unique for a given speech signal (e.g., in manual transcription). A phonetic transcription can be used directly, to show students how a given word or phrase should be pronounced (Patil et al., 2012).

Foreign language acquisition must inevitably start with phonetics, an aspect of language whose importance is matched only by its neglect. Different research studies have shown how the systematic teaching of pronunciation is beneficial not only because it aids the comprehension of messages and their expression, but also because it diminishes the anxiety which students feel when communicating orally. Furthermore, pronunciation is the first indication of social identity, with all that means for one's integration in or exclusion from a speech community. Nevertheless, phonetics practice takes a back seat in foreign language teaching programs in teacher training, teaching material, and, above all, research work (Canales, 2013).

Correct pronunciation of English sounds is crucially important in terms of communication since in the majority of cases the replacement of one sound for another will result in changes in meaning and hence will affect the flow of communication. Therefore, the main goal for the teachers must be training the students to pronounce which sounds the same way as native speakers of the target language. The fact that few second language learners have acquired high levels of proficiency has caused many researchers as well as teachers to assume that the goal of acquiring native-like pronunciation is a difficult one for learners to get to. However, one of the objectives most second language learners set once they start learning a second language is improving their proficiency in pronunciation. In effect, they consider pronunciation as important as what is more significant than, other aspects of language such as grammar. That's why many of them, when asked, argue that they like to achieve native-like proficiency in L2 pronunciation, and it is for the same reason that they usually like their phonological errors to be corrected by the teacher (Khanbeiki, 2015).

Pronunciation teaching has not always been popular with teachers and theorists. However, to communicate effectively, learners need to become proficient in using the phonological elements of the language being learned. This need is two-fold: learners' pronunciation is responsible for intelligibility, plus, pronunciation plays a central role in the way learners identify their membership in a special community. Pronunciation is the language feature, which easily distinguishes native speakers from non-native speakers of languages in general and English in particular. Although pronunciation teaching has placed much emphasis on the articulation of consonants and vowels in the past, the emphasis has recently shifted to a more comprehensive scope to include suprasegmental features (Moghaddam et al., 2012).

Pronunciation in general and stress, in particular, have been neglected in Iran's EFL academic and scholastic institutions for years. Iranian EFL learners tend to place the primary stress on the final syllable of words due to transfer and overgeneralization of the Persian language accentuation habits into English. This misplacement can disturb communication or lead to miscommunication (Ghorbani, 2019). English pronunciation is a salient element of language learning, all English learners need to acquire good pronunciation while it is crucial for those who are learning

English as a major subject. However, pronunciation is affected by different factors, which make it difficult for the students of English to have a good command of pronunciation (Abayazeed & Abdalla, 2015). Teaching pronunciation through phonetic websites is effective because it can improve the students' pronunciation ability and intrinsic motivation. Besides, because of limited time, the teacher should teach pronunciation effectively or the goal of pronunciation teaching will not be achieved (Sadeghi & Mashhadi Heidar, 2016). Lintunen (2013) focuses on the development of pronunciation awareness and how it is affected by phonetics teaching.

Some Iranian learners do not have a fixed idea of the English sound system and unfamiliarity with the English phonological rules is one of the factors that affect learners' error in pronunciation (Navehebrahim, 2012). Broadcast news transcription is a challenging task due to the spontaneous nature of the input speech and the richness of the language in the news domain. The best resource for temporal adaptation would be the transcription of the news programs broadcasted during the same period as the news program being recognized. However, the correct transcription of the most recent news programs is quite costly to obtain. One practical alternative resource would be online news articles which can be collected automatically. The transcription of broadcast radio and television news poses several challenges for large vocabulary transcription systems. The data in broadcasts is not homogeneous and includes several data types for which speech recognition systems trained on reading speech corpora such as the WSJ corpus have high error rates. A typical news broadcast may include data of different speech styles (read, spontaneous, and conversational); native and non-native speakers; high or low bandwidth channels either with or without background music or other background noise. Solving these problems will be of great utility in dealing with both the broadcast news problem and more general transcription of found speech (Woodland et al., 1997).

1.1 Research Question

The question of this study is as follows:

Does phonetic transcription of TV news have any significant effect on Iranian intermediate EFL learners' pronunciation accuracy at the word level?

1.2 Hypothesis of the Study

The hypothesis of the study is as follows:

H0: Phonetic transcription of TV news does not have any significant effect on Iranian intermediate EFL learners' pronunciation accuracy at the word level.

2. Review of the Literature

Most language instructors struggle to include the necessary grammar, vocabulary, culture, and four skills practices in their classes without worrying about including pronunciation instruction as well. Many assume that students will eventually learn the pronunciation on their own with more input in L2, or will acquire it at some future point, while others question if it is even worth the time and effort to teach the phonological principles of a foreign language. Yet the sound system of a language is often the most salient feature in the speech of a foreigner: Speakers with perfect grammar and broad vocabulary will still immediately be recognized as foreigners or outsiders if their pronunciation does not match the native norm. At the same time, the growing achieving demand for global competence and international communication and collaboration in today's world makes proficiency in a second or foreign language increasingly more important, and this proficiency needs to include not just vocabulary and grammar, but accurate and acceptable pronunciation as well (Lord, 2008).

English as an international language (EIL) deals with the use of English in wider communication, both global and local contexts. In an EIL context, people with different mother tongues (L1) use English to share ideas and culture. That is why intelligible English which should be no longer norm bound is needed. Teaching pronunciation for EIL especially should provide a variety of English accents. English teachers should be flexible to the modification needed and fully informed of what, why, and how to teach and assess comprehensible English. Unfortunately, teaching English pronunciation has always been challenging for non-native English teachers (Nangimah, 2020). A lot of students think that the learning of phonetics and phonology is boring because of the many theories and technical terms that they need to remember and/or understand. The introduction of the vocal tract chart and the various articulatory organs may even turn a phonetics lesson into biology like a lesson, which many linguistics students are sick of. How to make a phonetics and phonology lesson interesting is, thus, a difficult task for many linguistics teachers (Chan, 2013).

One of the traditional exercises in pronunciation teaching by phonetic methods is that of phonemic transcription, where every speech sound must be identified as one of the phonemes and written with an appropriate symbol. There are two different kinds of transcription exercise: in one, transcription from dictation, the student must listen to a person, or a recording, and write down what they hear; in the other, transcription from a written text, the student is given a passage written in orthography and must use phonemic symbols to represent how she or he thinks it would be pronounced by a speaker of a particular accent. In a phonemic transcription, then, only the phonemic symbols may be used; this has the advantage that it is comparatively quick and easy to learn to use it. The disadvantage is that as you continue to learn more about phonetics you become able to hear a lot of sound differences that you were not aware of before, and students at this stage find it frustrating not to be able to write down more detailed information (Roach, 2009).

Ashby (2016) claims that linguistics input to phonetics in the late nineteenth and early twentieth century was first and foremost a philological one, and it was from such a background that a group of European teachers of modern foreign languages came who had for some time been experimenting with the use of phonetic transcription in teaching pronunciation. They had also been working to develop a new phonetic alphabet for transcribing in particular the three main European languages of the time, French, German, and English. Phonetic transcription, of course, was not a new idea at all, but technological developments in printing and the advent of the typewriter imposed new constraints on alphabets. These teachers needed to ensure that their phonetic alphabet could not only be handwritten but was also accessible to printers for replication in textbooks, academic papers, journals, dictionaries, and the like. It needed to be agreed upon and codified.

Ghorbani et al. (2016) investigated the effect of explicit pronunciation instruction on undergraduate English as a Foreign Language (EFL) learners' vowel perception enhancement. The nonequivalent group, pretest-posttest design was employed to study two classes of English literature and English teaching students at Kosar University of Bojnord (KUB) as the experimental group (EG) and control group (CG) respectively. After the pretest administration, both groups were exposed to the same activities; however, only the EG received the treatment regarding explicit pronunciation instruction. The results of the independent samples t-test from the posttest revealed that the EG had a better performance than the CG suggesting that EFL learners' vowel perception can improve if they are explicitly made aware of their pronunciation errors.

Chitulu and Njemanze (2015) researched poor English pronunciation among Nigerian Students. The results of this study indicated that using various digital techniques can effectively solve poor English pronunciation among Nigerian students. Yunus et al. (2016) investigate Iranian EFL teachers' cognition, particularly in terms of the pronunciation techniques they apply in the oral communication classrooms and their knowledge about their language learners' characteristics. The cognitions of five teachers in the oral communication classrooms were investigated. Two semi-structured interviews were used to get the data about teachers' cognitions on pronunciation techniques. Students were asked to fill out a questionnaire to express their ideas regarding the techniques used by their teachers during pronunciation instruction. The results revealed that there was an intricate relationship between language teachers' experience with their cognitions about their language learners. Teachers who were in higher-level courses were represented to have broader cognitions about both the techniques they applied in classes and the learners' characteristics.

Shabani (2017) tried to identify the most frequent techniques of teaching pronunciation used by Iranian EFL teachers and to find out any relationship between teachers' extroversion/introversion personality type and their techniques of teaching pronunciation. 60 teachers out of 200 took part in this research. The results of descriptive analysis displayed that from among 19 pronunciation teaching techniques, listening and imitating and reading aloud and recitation were the most frequent ones used by both introverted and extroverted teachers. The results also indicated a significant relationship between the extroverted and introverted teachers in using pronunciation techniques and that the extroverted teachers significantly used more of the mentioned techniques than the introverted teachers.

Ahangari et al. (2015) emphasized pronunciation accuracy practice can improve the listening comprehension of EFL learners. Pourhossein Gilakjani and Sabouri (2016) revealed that due to the lack of pronunciation knowledge, lack of institutional resources, insufficiency of suitable pronunciation materials, fear of producing English words incorrectly, lack of training, insufficiency of time, and lack of motivation and confidence, EFL teachers do not like to teach English pronunciation in their classes. EFL teachers should increase their motivation and confidence using listening to the different accents of native speakers of English. EFL teachers should increase their pronunciation knowledge through participating in training courses that universities hold for their teachers. Wallace (2016) proved that students who do

not have a heavily-accented speech must improve their spoken English intelligibility. Google Web Speech (GWS), an ASR-based transcription tool, can be used to increase awareness of potential oral communication problems. As research has indicated, automatic speech recognition (ASR) serves as a tool to improve students' autonomy in learning and ultimately can help students improve unclear pronunciation.

3. Methodology

3.1 Design of the Study

This study followed a pretest-posttest intact group design. 30 intermediate English language learners from Erfan institute (Kish Away) in Ramsar were selected in the form of intact groups. The participants were divided into two equal groups as experimental group and control group and each of the groups had 15 participants. Then a test of pronunciation accuracy as a pretest was administered to both groups of study. The test consisted of 20 words that were chosen from TV news. And then the experimental group received treatment via phonetic transcription of TV news, while the control group received placebo (teaching pronunciation via exciting method).

3.2 Participants

The participants were 30 Iranian English learners in Erfan (Kish Away) institute as foreign language learners. They were selected in the form of intact. This study involved both genders, 20 participants were female and 10 were male. The participants' age range was between 15 and 17. They had been studying English for at least 4 years. The students were assigned to two groups of the experimental and control group.

3.3 Materials

This study follows pretest and posttest. It was needed because the researcher wanted to determine participants' pronunciation accuracy before and after treatment for the experimental and control group. The pretest and posttest were in oral and written form. Twenty words were selected from TV news. The oral and written test was the researcher-made test and the reliability of the oral test of the study was estimated via an inter-rater method. Two raters rated participants in oral form. The written test was construed multiple-choice question of Keshavarz' phonology book 1994. The reliability of the multiple-choice test of the study was estimated at 0.74 ($\alpha = 0.74$) using the Chronbach Alpha correlation. Other materials were Tests, Note-Taking, Sampling, Data Banks, Computer Networks, and Internet.

3.3.1 Material for Treatment

In this study, participants were selected into two groups as the control group and the experimental group randomly. The participants who were in the experimental group had treatment. They listened to the TV news, which was recorded and selected from CNN news, and then they were encouraged to transcribe the phonetics of words. The experimental group received 5 sessions of teaching English pronunciation through phonetic transcription of TV news while the control group received a placebo (teaching English pronunciation via an existing method).

3.3.2 Material for the Pretest

The pretest of pronunciation was administered to both group experimental and control groups. It included a test of pronunciation of twenty words in oral and written forms. In oral form, participants read each of the words aloud which was selected from TV news. And then 2 raters scored them. The written form of the pretest was constructed from Phonology book of Mohammad Ali Keshavarz in 1994 and participants answered the multiple-choice test of phonetics of twenty words.

3.3.3 Material for the Posttest

The posttest of pronunciation was administered to investigate the effect of phonetic transcription of TV news and included 20 words. It was administered to both groups. It was in two forms: oral and written. Like pretest, participants read the words aloud in oral test and two raters scored them. The written form of the pretest was constructed from Phonology book of Mohammad Ali Keshavarz in 1994 and like pretest participants answered the multiple-choice test of phonetics of twenty words. The characteristics of the posttest of the study resembled those of the pretest.

3.4 Procedure

First, there was an intact subject selection of intermediate EFL learners who were learning English in the Erfan (Kish Away) institute. Second, the participants were divided into two groups: experimental and control. They were selected in a convenient sampling method. A pretest of English pronunciation accuracy was administered to both groups of the study and then, the experimental group received 5 sessions of teaching English pronunciation through phonetic transcription of news while the control group received a placebo (teaching English pronunciation via an existing method). Next, a posttest of English pronunciation was administered to both groups of the study, and finally, the data was statistically analyzed.

3.5 Methods of Analyzing Data

This study was analyzed via applying an independent sample- T-test between the posttest scores of both groups and using two paired-sample T-tests between the pretest and posttest scores of each group for determining the degree of progress of the participants from the pretest to the posttest. In addition, descriptive statistics to classify the data was used.

4. Findings

The descriptive as well as the inferential analysis of the obtained data in the current study are as follows:

Table 1. Descriptive results of the experimental group of the study

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	POSEX	15.5000	15	1.46385	0.37796
	PREEX	7.1000	15	1.89407	0.48905

Table 1 represents the descriptive statistics of the pretest and posttest among the experimental group participants. There were participants in each group (NC 15; NE= 15). The analysis indicates that the mean of the pretest of the experimental group is 7.1000 and the mean of the posttest of the experimental group is 15. 5000, the standard deviation of the pretest is 1.89407, and the standard deviation of the posttest is 1.46385.

Table 2. Descriptive results of the control group of the study

		Mean	N	Std. Deviation	Std. Error Mean
Pair 2	POSCON	12.0000	15	1.45160	0.37480
	PRECON	10.8500	15	1.76220	0.45500

Table 2 shows the control group performing on the pretest and posttest of pronunciation. Similar to the experimental group, there were 15 participants in the control group. The mean of the pretest of the control group is 10. 8500 and the mean of the posttest is 12.0000. The standard deviation of the posttest is 1.45160 and the standard deviation of the pretest is 1.76220. The standard deviation of the group pretest is less than that of the posttest which implies a more homogenous performance compared to their posttest performance.

Table 3. Independent Samples T-test result of the study

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
Pronunciation	Equal variances assumed	6.575	28	0.000
	Critical Value of t	2.048	28	0.000

Table 3 indicated the data of the independent sample T-test. In this table, observed t is 6.575 and the Critical T is 2.048. It is shown that the observed t is higher than the critical t. The degree of freedom is 28 and the sig is 0.000. This result proved phonetic transcription of TV news has an effect on Iranian EFL learners' pronunciation accuracy at the word level.

Table 4. Paired Samples T-test result for the experimental the study

		t	df	Sig. (2-tailed)
Pair 1	POSEX – PREEX	13.852	14	0.000
	Critical Value of t	2.145		

Table 4 states the T-test result of the pretest and posttest of the experimental group in this study. The observed t is 13.852 and the critical t is 2.145 and the degree of freedom is 14 (df =14). It is shown that the observed t is higher than the critical t. The significance level of the experimental group equaled 0.00.

Table 5. Paired Samples T-test result for the control the study

		t	df	Sig. (2-tailed)
Pair 2	POSEX – PREEX	2.143	14	0.050
	Critical Value of t	2.048		

Table 5 represents the paired sample analysis of the pretest and posttest of the control group. The observed t of pretest and posttest of the control group is 2.143. The degree of freedom for the control group is 14. The level of significance for the control group is 0.050.

5. Discussion

The significant finding of analysis illustrated in Tables 1 to 5 showed that and proved that phonetic transcription of TV news has a significant effect on Iranian intermediate EFL learners' pronunciation accuracy at word level and it leads to their improvement in pronunciation level and the hypothesis which was the phonetic transcription of TV news does not have a significant effect on Iranian intermediate EFL learners' pronunciation accuracy at world level is rejected. This result was demonstrated through the mean score of the posttest from the experimental group. But the results of the pretest for both groups illustrated no significant statistical differences between the experimental and control group. This showed that before treatment and posttest, both groups of the experimental and control group were the same in pronunciation level and they had no big difference in pronunciation.

The findings in this study supported that, participants in the experimental group who received treatments could get higher scores in post-test than those who were in the control group and received placebo. The innovative aspect of the current study lies in the fact that it can be considered a mild contribution to the latest theories and models of teaching L2 pronunciation to Iranian EFL learners. This includes the investigation of the effectiveness of phonetic transcription, which is supposed to lead to a communicative and interactive way of teaching L2 pronunciation. Another aspect of the results of such is that it seems to be more practical and compatible with an Iranian situation of foreign language learning, particularly for those who encounter problems regarding their L2 pronunciation accuracy.

This is in keeping with [Ghorbani's \(2019\)](#) findings, in which findings suggest that EFL learners' phonetic transcription can facilitate the process of lexical stress learning. The findings are also in line with [Fiktorius's \(2020\)](#) study that EFL teachers are often reluctant to use phonetic transcription because they are unfamiliar with it. Additionally, the odd appearance of the International Phonetic Alphabet makes it seem complicated to them. However, the IPA is very easy to learn and in many situations, the use of phonetic transcription can save time and facilitate the teaching of concepts related to the spoken language. If we have not previously used phonetic transcription, it takes only a few hours to learn the IPA and a few more to understand the basic concepts, which we will rapidly gain back as time and energy are saved in teaching our students.

As reported by [Werfel \(2017\)](#), phonetic transcription training appears to be an effective method of increasing explicit phonemic awareness in adults, and initial skill level is not related to gains as a result of phonetic transcription training. The findings are in line with [Sadeghi and Mashhadi Heidar's \(2016\)](#) study that the access phonetic websites and teaching of phonemic symbols in these websites have paved the way for EFL learners to improve their pronunciation skills. [Safary et al. \(2013\)](#) conducted a research and found that using phonetic transcription of words as footnotes has an effect on Iranian EFL learners' pronunciation improvement. They are, furthermore, in alignment with [Ping Por's \(2011\)](#) findings that signify the potentialities of phonetic symbols that are applicable to the pronunciation of all the words of human languages.

Finally, the result of this study also was supported by the result of [Pelttari's study in \(2015\)](#) which argued that phonetic transcription can also be used to teach suprasegmental features such as linking sounds and weak and strong forms of words. In addition, the result of this study is in agreement with [Irawan and Tampubolon's \(2020\)](#) study findings that they believed Phonetic transcription was able to improve students' pronunciation by improving segmental features of pronunciation and helping the students to learn suprasegmental features of pronunciation such as word stress and sentence stress. However, it was almost in contrast with intonation. They found that it did not significantly improve another suprasegmental feature of pronunciation which is intonation. The findings also support [Riza and Kawakib's \(2021\)](#) study that believed, how beneficial is to utilize the phonetic transcription of IPA (International Phonetic Alphabet) to avoid EFL students' mispronunciation.

6. Conclusion

The investigation of this study can be useful and motivate language learners, language teachers, and material designers. Language learners can practice and improve their pronunciation through phonetic transcription of TV news. They can listen to the TV news everywhere they are. Listening to the news is not boring to learners. They can record TV news for themselves and listen to it again and again. Then they can transcribe the phonetics of TV news and learn the accurate pronunciation of the words. Phonetic transcription can be useful to language teachers. Teaching pronunciation is sometimes more difficult for teachers than teaching other skills. By phonetic transcription of TV news, they can teach pronunciation through phonetics. It can be useful to material designers to design and produce materials for teaching and learning pronunciation. They can design some materials that are more effective and enjoyable.

There are some limitations to this study. In this study, students did not like to pronounce some words which they do not know. Students preferred to pronounce words than answer written tests. Phonetic symbols were sometimes unfamiliar to students and most of the students did not like their pronunciation to undergo measurement in public. This study has limitations in participants so it cannot be generalized. The delimitations of this study were, first, this is delimited to TV news since transcription of news is a very common practice at institute and university levels. The second delimitation is that the study was delimited to the intermediate learners since levels lower than intermediate could not do transcription practices. There are some suggestions for further studies. It can be used to other levels such as advanced. This study suggests further research about why most of the learners got lower scores in the written test than an oral test. This study suggests further research about phonetic transcription of movies.

References

- Abayazeed, S., M. N., & Abdalla, A. Y. (2015). Investigating the causes behind pronunciation problems facing Sudanese university students majoring in English: A case study of Khartoum University Faculty of Arts, English department. *International Journal of Science and Research (IJSR)*, 6(6), 147-150. <https://www.ijer.net/archive/v6i6/ART20174125.pdf>
- Ahangari, S., Rahbar, S., & EntezariMaleki, S. (2015). Pronunciation or listening enhancement: Two birds with one stone. *International Journal of Language and Applied Linguistics*, 1(2), 13-19.
- Ahmad, H. (2012). *Relationship between watching films and students' pronunciation mastery among seventh-grade students at SMPN1 Pakem in the academic year of 2011/2012*. S1 thesis, UNIVERSITAS NEGERI YOGYAKARTA. <http://eprints.uny.ac.id/id/eprint/9077>
- Arshina, M., & Shahrokhi, M. (2016). Mobile-assisted language learning: English pronunciation among Iranian pre-intermediate EFL learners. *Journal of Applied Linguistics and Language Research*, 3(4), 149-162. <http://www.jallr.com/index.php/JALLR/article/view/334>
- Ashby, P. (2016). Sound foundations. What's general in applied phonetics? Isei-Jaakkola, T. (ed.) *ISAPh 2016: The first International Symposium on Applied Phonetics*. Chuba University, Nagoya, Japan. 25-28 Mar 2016 ISCA. <https://doi.org/10.21437/ISAPh.2016>
- Begum, A., & Hoque, M. A. (2016). English pronunciation problems of the tertiary level students in Bangladesh: A case study. *Researchers World-International Refereed Social Sciences Journal*, 7(4), 50-61. [doi:10.18843/rwjasc/v7i4/06](https://doi.org/10.18843/rwjasc/v7i4/06)
- Chan, A. Y. W. (2013). *Make your phonetics and phonology lessons interesting*.
- Canals, A. B. (2013). Training and research in phonetics for Spanish as a second language with technological support. *The EUROCALL Review*, 21(2), 3-26. [doi:10.4995/eurocall.2013.9787](https://doi.org/10.4995/eurocall.2013.9787)
- Chitulu, O. M., & Njemanze, Q. U. (2015). Poor English pronunciation among Nigerian ESL students; the ICT solution. *International Journal of Language and Literature*, 3(1), 169-179. <http://ijll-net.com/vol-3-no-1-june-2015-abstract-22-ijll>
- Farhat, P. A., & Dzakiria, H. (2017). Pronunciation barriers and computer assisted language learning (CALL): Coping the demands of 21st century in second language learning classroom in Pakistan. *International Journal of Research in English Education*, 2(2), 53-62. [doi: 10.18869/acadpub.ijree.2.2.53](https://doi.org/10.18869/acadpub.ijree.2.2.53)
- Fiktorius, T. (2020). Phonetics transcription in English language teaching (ELT): Implications for English language teachers. *Journal of Linguistics, Literature, and Culture*, 2(2), 58-63. [doi:10.12928/notion.v2i2.2068](https://doi.org/10.12928/notion.v2i2.2068)
- Ghorbani, M. R. (2019). The effect of phonetic transcription on Iranian EFL students' word stress learning. *Journal of Language and Linguistic Studies*, 15(2), 400-410. [doi:10.17263/jlls.586079](https://doi.org/10.17263/jlls.586079)
- Ghorbani, M. R., Neissari, M., & Kargozari, H. R. (2016). The effect of explicit pronunciation instruction on undergraduate English as a foreign language learners' vowel perception. *Language and Literacy*, 18(1), 57-70. [doi:10.20360/G2XW2K](https://doi.org/10.20360/G2XW2K)
- Haghighi, M., & Rahimy, R. (2017). The effect of L2 minimal pairs practice on Iranian intermediate EFL learners' pronunciation accuracy. *International Journal of Research in English Education*, 2(1), 42-48. <http://ijreeonline.com/article-1-32-en.html>
- Irawan, B., & Tampubolon, M. A. (2020). Using phonetic transcription to improve students' pronunciation skills. *Jurnal Edulingua*, 7(2), 1-12. [doi:10.34001/EDULINGUA.V7I2.1325](https://doi.org/10.34001/EDULINGUA.V7I2.1325)
- Jahan, N. (2011). Teaching and learning pronunciation in ESL/EFL classes of Bangladesh. *Journal of Education and Practice*, 2(3), 36-45. <https://www.iiste.org/Journals/index.php/JEP/article/view/198>
- Khanbeiki, R. (2015). The effect of explicit vs. implicit instruction on the learnability of English consonant clusters by Iranian learners of English. *Advances in Language and Literary Studies*, 6(2), 103-112. <https://eric.ed.gov/?id=EJ1128324>

- Lintunen, P. (2013). *The effect of phonetic knowledge on evaluated pronunciation problems*. University of Turku, Finland.
- Lord, G. (2008). Podcasting communities and second language pronunciation. *Foreign Language Annals*, 41(2), 364–379. doi:10.1111/j.1944-9720.2008.tb03297.x
- Moghaddam, M. S., & Nasiri, M., Zarea, A., & Sepehrinia, S. (2012). Teaching pronunciation: The lost ring of the Chain. *Journal of Language Teaching and Research*, 3(1), 215-219. doi:10.4304/jltr.3.1.215-219
- Nangimah, M. (2020). How should we counter challenges in teaching pronunciation for EIL? *Journal of English Teaching*, 6(1), 24-39. <https://files.eric.ed.gov/fulltext/EJ1266041.pdf>
- Navehebrahin, M. (2012). An investigation on the pronunciation of language learners of English in Persian background: deviation forms from the target language norms. *Procedia-Social and Behavioral Sciences*, 69(24), 518-525. doi: 10.1016/j.sbspro.2012.11.441
- Patil, H. A., Madhavi, M. C., Malde, K. D., & Vachhani, B. B. (2012). *Phonetic transcription of fricative and plosives for Gujarati and Marathi Languages*. 2012 International conference on Asian language processing. 177-180. doi:10.1109/IALP.2012.59
- Pelttari, J. (2015). *Use of phonemic transcription as a teaching method in Finnish schools*. <http://jultika.oulu.fi/files/nbnfioulu-201602031104.pdf>
- Ping Por, F. (2011). Towards information: The power of phonetic symbols embedded in a multimedia learning Management System. *English Language Teaching*, 4(1), 167–173. <https://pdfs.semanticscholar.org/2626/4989ede4a7fcc472e0c8ad3352766349abbd.pdf>
- Pourhosein Gilakjani, A. (2016). English pronunciation instruction: A literature review. *International Journal of Research in English Education*, 1(1), 1–6. <http://ijreeonline.com/article-1-21-en.html>
- Pourhossein Gilakjani, A. (2017). English pronunciation instruction: Views and recommendations. *Journal of Language Teaching and Research*, 8(6), 1249–1255. <https://doi.org/10.17507/jltr.0806.30>
- Pourhosein Gilakjani, A. (2018). Teaching pronunciation of English with computer technology: A qualitative study. *International Journal of Research in English Education*, 3(2), 94–114. <http://ijreeonline.com/article-1-119-en.html>
- Pourhosein Gilakjani, A., Namaziandost, E., & Ziafar, M. (2020). A survey study of factors influencing Iranian EFL learners' English pronunciation learning. *International Journal of Research in English Education*, 5(2), 103-123. doi: 10.29252/ijree.5.2.103
- Pourhossein Gilakjani, A., & Sabouri, N. B. (2016). Why is English pronunciation ignored by EFL teachers in their classes? *International Journal of English Linguistics*, 6(6), 195-208. <http://dx.doi.org/10.5539/ijel.v6n6p195> doi:10.5539/ijel.v6n6p195
- Riza, A., & Kawakib, A. N. (2021). Utilizing the phonetic transcription of IPA (International Phonetic Alphabet) to avoid EFL students miss-pronunciation. *Advances in Social Science, Education and Humanities Research*. volume 529. Proceedings of the International Conference on Engineering, Technology and Social Science (ICONETOS 2020). <https://www.atlantispress.com/article/125955680.pdf>
- Roach, P. (2009). *English phonetics and phonology*. A Practical Course. Fourth edition.
- Sadeghi, M., & Mashhadi Heidar, D. (2016). The effect of phonetic websites on Iranian EFL learners' world-level pronunciation. *International Journal of Research in English Education*, 1(1), 31–37. <http://ijreeonline.com/article-1-26-.pdf>
- Safari, H., & Jahandar, S., & Khodabandehlou, M. (2013). The effect of using phonetic transcription of words as footnotes on Iranian EFL learners' pronunciation improvement. *Indian Journal of Fundamental and Applied Life Sciences*, 3(2), 11–24. https://www.cibtech.org/J-LIFE-SCIENCES/PUBLICATIONS/2013/Vol_3_No_2/JLS...04-012...Hediyeh%20Safari...The%20Effect...Improvement.pdf

- Shabani, K., & Ghasemian, A. (2017). Teachers' personality type and technique of teaching pronunciation. *Cogent Education*, 4(1). doi:10.1080/2331186X.2017.1313560
- Vafaei, L., Sadeghpour, M., & Hassani, M. T. (2013). The effect of stress pattern on Iranian English language learners' pronunciation. *International Journal of English Language Education*, 1(3), 198–207. doi:10.5296/ijele.v1i3.4011
- Wallace, L. (2016). Using Google web speech as a springboard for identifying personal pronunciation problems. *Proceedings of the 7th Pronunciation in Second Language Learning and Teaching Conference October 2015* (pp. 180-186). Ames, IA: Iowa State University.
- Werfel, K. L. (2017). Phonetic transcription training improves adults' explicit phonemic awareness: Evidence from undergraduate students. *Communication Disorders Quarterly*, 39(1), 281–287. doi:10.1177/1525740117702456
- Woodland, P. C., Hain, T., Johnson, S. E., Niesler, T. R., Tuerk, A., Whittaker, E. W. D., & Young, J. (1997). *The 1997 HTK broadcast news transcription system*. Cambridge University Engineering Department.
- Yunus, M. M., Salehi, H., & Amini, M. (2016). EFL teachers' cognition of teaching English pronunciation techniques: A mixed-method approach. *English Language Teaching*, 9(2), 20-42. doi:10.5539/elt.v9n2p20